

SELF STUDY REPORT

(A comprehensive report containing the Executive Summary,
Profile of the Institution, Criteria wise Inputs and Evaluative report of the Departments)

Submitted to

**NATIONAL ASSESSMENT & ACCREDITATION COUNCIL
BANGALORE**

(An Autonomous Institution of the University Grants Commission)

Re-Assessment



NITTE

N.M.A.M. Institute of Technology

(An Autonomous Institution affiliated to VTU, Belagavi)

NITTE – 574 110, Karkala Taluk, Udupi District

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March 2017

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PREFACE

In 1979, **NITTE EDUCATION TRUST** was founded by late **Justice K. S. Hegde** at Nitte village. Justice Hegde, after holding the position of senior most Judge of the Supreme Court of India and also the constitutional position of speaker in sixth Loksabha, came from the capital of the country and settled in the Nitte village. It was rather strange for the person who enjoyed the lime light being in judiciary and in public administration, coupled with the comfort that comes with the position for about 50 years, to decide to come back and settle in a remote village which was bereft of basic civic amenities and communication. Justice Hegde dreamt of an empowered society and thought that education and health care were pivotal to achieve this. He also believed that education was the prime indicator of the socio-economic development of a society in general and rural population in particular.

Justice Hegde established '**NITTE EDUCATION TRUST**' (**N.E.T**) with a sole aim of imparting education to the socially and educationally marginalised people of south-west Karnataka. With foresight and dedication and local support, and with the contribution of the present trustees, teachers and supporting staff, Nitte Education Trust has grown from strength to strength.

The legacy and traditions of Justice Hegde and his colleagues, are being continued by his son **Sri N. V. Hegde**, who is deeply influenced and inspired by the work done by the elders. He has decided to follow the same path and has not only continued their initiatives but also has further widened the scope of the activities and also excelled them to match with the global standards.

Sri N. V. Hegde is the Chancellor of Nitte University & **President of Nitte Education Trust**. He has been awarded the D.Sc. (Honoris Causa) by the Mangalore University. He was Chairman, Board of Governors, National Institute of Technology, Karnataka (NITK) appointed by the MHRD; was the Chairman, Coastal Agenda Task Force, appointed by the Govt. of Karnataka, for economic, infrastructure and human resource and poverty alleviation planning of two coastal districts of the state; was a Member, Senate and Academic Council, Mangalore University; is Member Vision Group, Karnataka 2020 appointed by the Govt. of Karnataka for overall economic planning of Karnataka. He is the Vice-President Consortium of Medical, Engineering and Dental Colleges, Karnataka (COMEDK), which is the Govt. recognized body for admission to Medical, Dental and Engineering courses in private colleges in Karnataka. He is also the Chairman of Lamina Group of Companies, engaged in manufacture of automobile springs. He has been honored with the prestigious "**Technology Excellence Award**" as an appreciation and recognizing his outstanding contribution & achievement in the fields of Industries and Engineering Education during **Indian Technology Congress (ITC) 2016 Bengaluru**, organized by Foundation for Educational Excellence, IE India National Research Form, Indian Institution of Production Engineers. He also received "**Best Educationist Award**" for recognizing the yeoman services rendered to technical education system at 4th National Summit on Sustainable Institute-Industry Partnership at India International Centre, New Delhi on 21st July 2016 organized by the Society for Educational and Entrepreneurship Development in partnership with National Institute of Technical Teachers' Training and Research, Board of Apprenticeship Training and Ministry of Micro Small and Medium Enterprises (MSME).

Today, **Nitte Education Trust** has **36 institutions** ranging from primary to tertiary levels and offering programmes in Health Sciences, Engineering & Technology, Pharmacy, Business Management, Hospitality Management and Liberal Education.

Sl. No	Name	Year of Establishment	Location
1.	Dr. NSAM Pre-University	1980	Nitte Post – 574 110, Karkala Taluk, Udupi District
2.	NRAM Polytechnic	1982	Nitte Post – 574 110, Karkala Taluk, Udupi District
3.	MRP Industrial Training Institute	1984	Mulki
4.	A. B. Shetty Memorial Institute of Dental Sciences	1985	Deralakatte, Mangalore
5.	N.M.A.M. Institute of Technology, Nitte	1986	Nitte Post – 574 110, Karkala Taluk, Udupi
6.	Dr. NSAM First Grade College	1988	Nitte Post – 574 110, Karkala Taluk, Udupi
7.	Dr. NSAM English Medium School	1989	Nitte Post – 574 110, Karkala Taluk, Udupi
8.	Nitte Usha Institute of Nursing Sciences	1992	Mangalore
9.	Sarosh Institute of Hotel Administration	1992	NH-17, Nitte campus, Kannur Post, Mangalore-575007
10.	Nitte Gulabi Shetty Institute of Pharmaceutical Sciences	1993	Kotekar – Beeri, Paneer, Mangalore – 574 160
11.	Dr. MRSM English Medium School	1995	Thokur, Mulki
12.	Dr. NSAM Higher Primary School	1995	Bolakodi
13.	Nitte Institute of Physiotherapy	1997	Deralakatte, Mangalore
14.	Nitte Institute of Medical Laboratory Science	1998	Deralakatte, Mangalore
15.	Dr. NSAM Pre-University	1998	Mangalore
16.	Dr. NSAM Memorial College	1998	Mangalore
17.	K. S. Hegde Medical Academy and College	1999	Deralakatte, Mangalore
18.	Dr. NSAM First Graduate College	1999	Yelahanka, Bangalore
19.	Justice K.S.Hegde Charitable Hospital	1999	Deralakatte, Mangalore
20.	Nitte Rural Satellite centre	1999	20 Locations
21.	Nitte Meenakshi Institute of Technology	2001	Yelahanka, Bangalore
22.	Nitte Meenakshi Institute of cleft & Craniofacial Surgery, Mangalore	2001	Deralakatte, Mangalore
23.	Nitte Institute of Speech & Hearing	2007	Mangalore
24.	Nitte International School	2007	Bangalore
25.	Nitte School of Management	2009	Govindapura, Gollahalli, Yelahanka, Bangalore-560064
26.	Nitte Institute of Communication	2012	Deralakatte, Mangalore
27.	Sarosh Institute of Banking and Finance	2012	Mangalore
28.	Kaudur Gopal Hegde and Smt Monorama Hegde Hospital Bailur	2012	Bailur, Udupi

29.	Nitte University Centre for Science Education and Research	2013	Deralakatte, Mangalore
30.	Centre For Animal Research and Experimentation	2013	Deralakatte, Mangalore
31.	Leela Narayana Shetty Memorial Cancer Institute Mangalore	2013	Deralakatte, Mangalore
32.	Nitte Gajria Hospital Karkala	2013	Karkala
33.	KSHEMA -IVF Fertility and reproductive medical Centre	2013	Deralakatte, Mangalore
34.	Nitte University Centre for stem cell research and regenerative medicine	2013	Deralakatte, Mangalore
35.	Nitte Rural Psychiatry Centre	2013	Nitte
36.	Nitte Institute of Architecture	2015	Deralakatte, Mangalore

In view of the excellent tradition and academic track record of institutions, the Ministry of Human Resource Development, on the advice and recommendation of the University Grants Commission, vide their Notification No. F.9-13/2007-u-3(A), dated 4th June 2008 accorded Deemed to be University status to NITTE UNIVERSITY, comprising of

- **A. B. Shetty Memorial Institute of Dental Sciences**
- **K. S. Hegde Medical Academy and Justice K. S. Hegde Charitable Hospital**
- **Nitte Usha Institute of Nursing Sciences**
- **Nitte Gulabi Shetty Memorial Institute of Pharmaceutical Sciences and**
- **Nitte Institute of Physiotherapy**

All the five colleges are also recognized by the respective statutory councils. The degrees awarded by the University are also recognized by the University Grants Commission.

Nitte Mahalinga Adyanthaya Memorial Institute of Technology (N.M.A.M. Institute of Technology) a self-financing private Engineering college was established in the year 1986 by N.E.T with a motto of “Strive for Excellence”. The college is an autonomous institution from the year 2007 and is affiliated to Visvesvaraya Technological University (VTU), Belagavi, in Karnataka. The Institution is recognized by the All India Council for Technical Education, New Delhi.

With the increased emphasis on expanding the frontiers of technical education to meet the ever increasing demand for qualified manpower to propel the growth engine, N.M.A.M. Institute of Technology (NMAMIT) has utilized immense opportunities for realizing its dreams of expansion and excellence. The Institute with its proven track record and internal strength of visionary management, infrastructural advantages and committed faculty can further excel and seize the opportunities ahead.

NMAMIT offers 7 undergraduate and 11 postgraduate Engineering programs along with MCA and MBA programs. The institution also offers Doctoral programs through 10 research centers under various departments approved by VTU. All its UG programs and a few PG Programs are accredited by the National Board of Accreditation (NBA), New Delhi from the year 2001. The college has about 4500 students and 292 faculty members ably supported by another 111 technical, 343 non-teaching & administrative staff. All programmes are permanently affiliated to VTU Belagavi.

The Institute after accredited with ‘B’ grade by National Assessment and Accreditation Council (NAAC) in December 2014, has made improvements in curricular aspects, research activities, Governance related issues and innovative methods.

We wish to have re-assessment of our Institute by the experts with regards to the Quality in overall education delivery process and look forward to get highest grade in NAAC assessment. This enables us to strengthen our collaborations with leading Indian and Foreign Universities.

I have a great pleasure in welcoming the NAAC peer team to N.M.A.M. Institute of Technology, Nitte for their kind observation and interactions.

Dr. Niranjana N. Chiplunkar,
Principal
N.M.A.M. Institute of Technology
NITTE

Declaration by the Head of the Institution



NMAM INSTITUTE OF TECHNOLOGY

An Autonomous Institution Under VTU, Belagavi
(A Unit of Nitte Education Trust)

NITTE - 574 110, UDUPI DIST., KARNATAKA

Approved by AICTE, New Delhi

AWARDED ISO 9001-2008 CERTIFICATE BY DEKRA - NETHERLANDS



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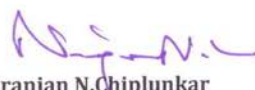
Declaration by the Head of the Institution

I certify that the data included in this Self Study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the faculty of the institution and no part thereof has been outsourced.

I am aware that the Peer Team will validate the information provided in this SSR and also note the enhancement/improvement under all the seven parameters that might take place after the submission during the Peer Team visit.




Dr. Niranjan N. Chiplunkar
Principal

Principal,
N.M.A.M. INSTITUTE OF TECHNOLOGY,
NITTE, KARKALA - 574 110.

Certificate of Compliance



NMAM INSTITUTE OF TECHNOLOGY

An Autonomous Institution Under VTU, Belagavi

(A Unit of Nitte Education Trust)

NITTE - 574 110, UDUPI DIST., KARNATAKA

Approved by AICTE, New Delhi

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Ref. :

Date:

Certificate of Compliance

(Affiliated/Constituent/Autonomous Colleges and Recognized Institution)

This is to certify that N.M.A.M. Institute of Technology, Nitte fulfils all norms.

1. Stipulated by the affiliating University and /or
2. Regulatory Council/Body (such as UGC, NCTE, AICTE, MCI, DCI, BCI, etc.) and
3. The affiliation and recognition (if applicable) is valid as on date.

In case the affiliation/recognition is conditional, then a detailed enclosure with regard to compliance of condition by the institution will be sent.

It is noted that NAAC's accreditation, if granted, shall stand cancelled automatically, once the institution loses its University affiliation or Recognition by the Regulatory Council, as the case may be.

In case the undertaking submitted by the institution is found to be false then the accreditation given by NAAC is liable to be withdrawn. It is also agreeable that the undertaking given to NAAC will be displayed on the college website.


Dr. Niranjan N. Chiplunkar

Principal
Principal,

N.M.A.M. INSTITUTE OF TECHNOLOGY,
NITTE, KARKALA - 574 110.

Date : 28-2-2017

Place : Nitte



SECTION A

EXECUTIVE SUMMARY SWOC ANALYSIS

SECTION A

EXECUTIVE SUMMARY

Nitte Education Trust was established by late Justice K.S.Hegde in 1979 with an aim of providing education to the socially and educationally marginalized people of south west Karnataka. With the foresight of Justice K.S.Hegde, dedication of Sri N.V.Hegde and the support of the trustees, the Trust has grown from strength to strength. Today, it has 36 institutions ranging from primary level and offering programmes in Health Sciences, Engineering, Pharmacy, Business Management, Hospitality Management and Liberal Education. In view of the academic track record of the Institutions, Nitte University has been granted 'Deemed to be University' status in 2008.

N.M.A.M. Institute of Technology was established by Nitte Education Trust in 1986 with a motto "Strive for Excellence". The Institute is recognized by the All India Council of Technical Education, affiliated to Visvesvaraya Technological University, Belagavi and is autonomous since 2007. The institution has established processes compliant to ISO 9001:2008 and the requirement of NAAC to offer quality education. This executive summary provides a bird's eye view of the various processes implemented to meet the 5 core values and 7 criteria of NAAC requirements

The Institute offers under-graduate programs in 7 branches of Engineering, Electronics & Communication Engineering, Computer Science & Engineering, Civil Engineering, Electrical & Electronics Engineering, Information Science & Engineering, Mechanical Engineering and Biotechnology. It also offers post-graduate programs, M.Tech. in Construction Technology, Energy Systems Engineering, Machine Design, Power Electronics, Digital Electronics & Communication, VLSI Design & Embedded Systems, Computer Science & Engineering, Computer Networking, Software Engineering, Structural Engineering, Industrial Biotechnology, in addition to MCA and MBA programs. All under-graduate and a few post-graduate programs are accredited by the National Board of Accreditation. The Institute also offers doctoral programs in all related specialized areas. The degrees are awarded by VTU, Belagavi.

FEW NOTABLE FEATURES OF THE INSTITUTE

- Lush green campus at Nitte spread over a total area of 118 acres and **50.33 acres** earmarked exclusively for NMAMIT with a built up area of **98119 Sq.m.**
- Recognized as a lead Institution under **TEQIP** – Phase I and Phase II.
- Recognized as one of the 5 lead institutions (first among the unaided colleges) under Technical Education and Quality Improvement Program phase-1(TEQIP-I) of MHRD, Govt. of India – World Bank Project. With the very successful implementation of TEQIP-I, the Institute has been granted financial assistance under TEQIP-II also
- Best College **award by KSCST**, Govt. of Karnataka in 2004, 2007 and 2009.
- The Institution has total student strength of **4322**. The institution offers **07** undergraduate, **13** postgraduate and **10** research programmes.
- With **faculty strength of 292**, nearly 22% of the faculty members possess **Ph. D** degrees.
- **Partnership with some major industries** has been utilized in framing courses.
- Campus provides **hi-speed internet with 310 Mbps and Wi-Fi facilities** to enable students and faculty members to have easy access to teaching-learning and research related information.

- **Nodal Centre** for Satellite-based Technical Programs of the University through **EDUSAT**.
- **Nodal Centre of Virtual Lab** (MHRD Initiative) has been set up in the college, in association with NITK Surathkal.
- Institution has "**Spoken Tutorial Project of IIT Mumbai**" centre (VTU approved) for Udupi District.
- NMAMIT has been granted **NPTEL Nodal Centre** in 2017 and more than 860 students and faculty have registered.
- The institution has an **Internal Quality Assurance Cell** for assisting in enhancing the quality of teaching-learning and research activities.
- College has an "**Engineering Education Research Forum**" for trying and reporting the impact of various educational reforms.
- One among **3 NBA Nodal Centres** in Karnataka.
- All undergraduate programs were accredited for 3 cycles by National Board of Accreditation before 2015. Two undergraduate (UG) and three Postgraduate (PG) programmes are provisionally **accredited by NBA** as per Outcome Based Education (OBE) and application for accreditation of remaining programmes are under preparation.
- Student-centric learning with the introduction of Choice based Credit System wherein the students choose the elective courses and register for 20-30 credits in a semester.
- Courses on Biology for engineers, Engineering Skill Development, Enhancing Self Competence and Employability Skill Development have been introduced.
- Introduction of Project Based Learning in addition to the conventional Class Based Learning to enhance the learning outcomes.
- Provision is made for audit, value added courses and research experience options for fast learners.
- All programmes are offered with enhanced teaching-learning process to meet stipulated standards incorporating ICT.
- Infrastructural facilities including **90 class rooms** (including 6 gallery types), 9 tutorial rooms with 1:1 ratio of number of sections and number of class rooms have been created.
- **Excellent laboratory** facilities, 66 in all, to cater to the needs of the students, for routine experiments as well as for executing innovative projects
- Industry-sponsored laboratories to strengthen the teaching learning process.
- State-of-art central library facility with more than 74652 books, 1395 printed journals, digital Library with 6197 e-Journals, 13139 e-Books and CD-ROMs.
- Library has 3100 M² area with a seating capacity of 750 Nos. and space allocated for discussions, digital library and audio visual facilities
- Various financial support schemes to students. It also includes support for students from the low income group and other under privileged sections of the society
- MoU with various National and International Institutes and Industries for promoting various types of collaboration and student / faculty exchange programmes.
- The college has MoU with Penn State University USA, Ritsumeikan University Japan, Makerere University Uganda, Rotterdam School of Management, National University of Singapore, AMD University, for faculty / student exchange and research collaborations.
- Association with institutions like HCL, HP, Infosys, TCS, Wipro, Robosoft, ISRO, etc. for students project work.
- Collaboration with industries such as IBM, INTEL for setting up laboratories for teaching and research.

- NMAMIT has instrumentation facility for research and student projects. The instruments are also used by the companies and researchers from other organizations.
- **On campus accommodation** facilities for faculty and students to carryout research
- Financial support from **Department of Science and Technology** (Government of India) under the FIST programme.
- NMAMIT has carried out 24 funded **research projects**. 20 of them have been completed successfully and 04 projects are ongoing with a total outlay of Rs. 236.69 lakhs in the last 5 years
- Organisation of several National as well as International **workshops, conferences and seminars** for exposing the students / faculty to the advances in the relevant fields.
- Publication of 139 **Scopus indexed research papers**, during the last five years with h-index 12.
- The college extensively promotes extra-curricular activities on campus like **Technidarshan, Anandotsava, Nitte Utsav and Semaphore** are organized every year.
- Student participation and leadership qualities are enhanced by their involvement in various **student clubs and chapters** and winning **Awards and prizes**.
- The NMAMIT has created state-of-the-art infrastructure '**B.C.Alva Sports Complex**' with indoor and outdoor facilities of International Standards. The facilities include play grounds (Cricket/Hockey/Football/Basketball), Indoor stadium, Multi-Gym, Yoga centre etc. The National Badminton team has received training in the sports complex.
- '**Mission Prerana for change**' and counselling by Student welfare department for overall personality development of students.
- '**Crack the campus**' where the placed senior students train the pre final year students to improve their confidence while facing campus interviews.
- Over **75 corporates visiting the Institute** for placement of graduating students.
- NMAMIT has secured **727** job offers for BE & MCA and 95 offers for MBA graduating students in the year 2016-17.
- **Entrepreneurship Development Cell (EDC)** conducts regular training programmes to promote entrepreneurship skills among students
- **New Age Incubation Network (NAIN)** and **Ministry of Micro Small and Medium Enterprises (MSME)** offer incubation facilities for start-up business proposals.
- The ICT facilities and other e-Learning resources are adequate to cater the academic and administrative needs of the Institute
- The **Centre for Biodiesel demonstration**, Running buses for school children free of cost, Nere-Kere-Kshema, plays a pivotal role in realizing the objectives of the NMAMIT's Institutional Social Responsibility.
- Involvement of students in social welfare programmes through **NSS, Green Cell, Annadana, Samvedana** etc
- Implementation of various measures for the welfare of staff and faculty members.
- Primary health centre with 24 hour emergency unit and ambulance facility which provides access to Doctors. Permanent Medical and Para medical staff have been appointed to offer treatment free of cost.
- Nitte Rural Psychiatry Centre, Nitte-Gajria Hospital, Nitte University (K. S. Medical Academy and A.B. Memorial Institute of Dental Sciences offer medical consultancy/treatment at subsidised cost.
- The college has taken steps to make the campus **green and pollution free**.
- The institution has **sewage treatment plants** and power houses

- On-campus facilities such as banking, ATMs, Post Office, Co-operative book store, Xerox centres, canteen and refreshment stalls to ensure a conducive ambience for students, faculty and staff.
- Dedicated maintenance department supervised by Resident Engineer to maintain the entire campus

CRITERIA WISE SUMMARY WITH NEW INITIATIVES

CRITERION I: CURRICULAR ASPECTS

- The vision of the Institute is “Pursuing excellence, empowering people, partnering in community development”.
- The mission statement of the Institute is “To develop NMAMIT, Nitte as a Centre of Excellence to impart quality education, to generate competent, skilled and humane manpower, to face emerging scientific, technological, managerial and social challenges with credibility, integrity, ethics and social concerns”.
- The Institute is committed to provide education as per a carefully evolved curriculum to make our students comparable with the best in the world with built-in core values of ethics, honesty, loyalty, professional integrity and team work.
- The curriculum of all the programs are designed keeping in mind the Graduate Attributes (GA) defined by NBA, namely, engineering knowledge, problem analysis, design & development of solutions, investigation of complex problems, usage of modern tools, concern for society, environment, ethics, team work, project management and finance management, efficient communication and continuing learning.
- While designing the courses, the contents of similar courses offered by IITs, NITs, AICTE, IIM, ASME, IETE etc. are considered and incorporated appropriately to enrich the courses.
- Necessary laboratory training is imparted to the students to make them ready for further studies involving research, to initiate an entrepreneurial career or to become suitably qualified to take up an engineering profession.
- The Institution has evolved a structure to ensure that the curriculum developed and approved by the relevant bodies is implemented effectively.
- In view of the rapid advancements and developments happening in all areas of engineering, the Board of Studies will meet every year in the month of May, to review and recommend changes to the curriculum. The inputs of the expert members from industry and academia are deliberated and incorporated for curriculum enrichment. In general, there will be minor revision of syllabus in core and basic courses every year, if necessary. Major changes and/or inclusion of new courses will be encouraged in the category of discipline specific and open electives.
- In interdisciplinary post-graduate programs, students can choose courses of relevance from other programs.
- Interdisciplinary courses help the students to work in multidisciplinary collaborative environments.
- The design and development of curriculum particularly addresses the aspects of employability, innovation and research. A course on “Employability Skill Development” has been introduced as a part of the curriculum. Presence of industry representatives in Academic Council and Board of Studies adds to the efforts of the Institute to enhance employability.
- Innovation and research are major components in the evaluation of the project work taken up by the students as a part of their course requirement. Students are encouraged to attend and present papers at National and International Conferences.

- The Institute has an efficient feedback system to collect the opinion of the students regarding the course and teaching. The feedback is collected from each student on each course that he has undergone at the end of every semester. The same is analysed by the Head of the Department and Dean (Academic) and necessary action is taken.
- The faculty members are encouraged to attend National and International Conferences, Workshops and Faculty Development Programs to improve not only the curriculum but also the quality of teaching.
- The overall analysis of the academic processes is done by IQAC and academic auditing is done as per the NAAC and ISO 9001-2008 requirements.
- The students also participate in various curricular, co-curricular and extra-curricular activities under the guidance of professional societies such as ACM, CSI, IET, IEEE, ISTE, IIPM, ACM-W, WIE, etc.
- The students are also encouraged to participate in activities of social concern like health awareness camps, blood donation camps, rural & community intensive camps, etc.

Post Accreditation Initiatives:

Response to the recommendations of previous NAAC peer team of assessment and accreditation.

- **Real Time Projects**
 - o Students have developed some real time projects : Eg: Mobile App development for Community Health care, Application development in Kannada language for Anganavadi Ration distribution system, Application development for NET Students' Cooperative Society, Software development for online Venue/Guest room Booking, and Production of Paver blocks by using different materials.
 - o The students develop the projects related to social concern such as "Agrimitra", "Quad copter for pesticide spray", multipurpose tiller related to farming, food vending machine, waste disposal ATM and multi-seed decorticator.
- In **Choice Based Credit system**, the students can choose electives of their choice and register for 20-30 credits in a semester to have academic flexibility.
 - o 14 Audit courses are offered in last 2 years for BE students. 2 Audit courses are being offered for M.Tech students
- **Professional Skill Development and Programming Skill Development**
 - o Employability skill development course has been introduced in 3rd year for all undergraduate students
 - o Enhancing Self competence course has been included for all 2nd year students
 - o 04 more open elective course are introduced in last 2 years across the departments
 - o 25 electives are introduced in last 2 years across the departments
 - o Through an initiative called 'Pride Abhyuday', inputs and practice on higher level programming skills are organized.

Other Initiatives:

- College has an "**Engineering Education Research Forum**" for trying and reporting various educational reforms.
- Creative thinking and Communication are introduced to address the placement needs. Industry experts as visiting/adjunct faculty ensure relevant industry inputs.
- NAIN and MSME provide entrepreneurial opportunities to students.

CRITERION II: TEACHING-LEARNING AND EVALUATION

- Admission to the under-graduate and post-graduate courses are governed by the policies of the Government of Karnataka. The seats are allotted through common entrance tests conducted by Karnataka Examination Authority (KEA) and Consortium of Medical, Engineering and Dental Colleges of Karnataka (COMED-K) and partly by Management on the basis of merit.
- Students belonging to various categories like SC/ST, OBC, Women, differently enabled persons, economically weaker sections, outstanding achievers in sports and other extra-curricular activities are eligible to **reservation as per Government rules** and are provided concessions/exemptions in various fee as applicable.
- Students take admission from different parts of the country and with different backgrounds. An **orientation program** makes them familiar with the rules & regulations pertaining to the academics and also the facilities available in the campus.
- **“Mission Prerana for Change”** A personality development program is conducted for all first year students as a confident building measure. These measures have resulted in students with better percentage of marks seeking admission in the institution.
- To make up for the differences in the performance of various categories of students, remedial classes/bridge courses are offered in various subjects.
- Institution encourages faculty for attending Faculty Development Programme (FDP), conference, Seminars, Workshops, by providing financial support. Faculty member are Sponsored for higher studies (Ph.D. and M.Tech) on full time basis.
- The teaching is streamlined and offered as per a well-defined plan. The faculty prepares a course plan giving details of topics to be covered from the syllabus in each hour. The faculty also maintains a dairy in which the actual teaching work conducted is recorded. The syllabus covered is continuously monitored by the HoD and Dean (Academic).
- The attendance details and the performance of the students are entered into the ‘**Smart Campus**’ and may be accessed by the students/ parents on the Institute’s network. Shortage of attendance and poor performance in internal assessment will be promptly reported to the parents to take corrective steps.
- There is an arrangement of providing additional aids to poor-performing students through counsellors, mentors and faculty advisors.
- Nodal Centre for Satellite-based Technical Programs of the University through **EDUSAT**.
- In addition to the conventional teaching activities, additional inputs are provided through audio visual aids, course materials from **NPTEL/EDUSAT** and other e-resources.
- Remedial classes are arranged for the students who have scored less than 50% marks in the first Mid Semester Exam through student monitoring cell. Bridge Courses are offered at College level for weak students at first and second semester level to make up for their deficiencies and to bring them on par with others. Bride course on Mathematics is arranged for Lateral entry students.
- All these initiatives foster an inclusive academic ambience.
- Laboratory training includes simulation based tools using programming languages like MATLAB, LABVIEW, PSIM, PSCAD, ANSYS, etc., designing and drafting software like AUTOCAD, CATIA etc.
- The evaluation process is made known to the students and their parents through the College calendar which is made available to all the students in the beginning of each academic year.
- The evaluation comprises of Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) with equal weightage. Continuous evaluation includes mid semester

examinations, tasks, assignments, seminars and mini projects spaced evenly throughout the semester.

- The reforms like **Bloom's Taxonomy in grading the questions**, online exams, coding and masking are brought in the examination system.
- The entire examination process and declaration of results are computerized
- The performance of the students is regularly posted to the parents through mail and SMS. Regular **parent-teacher meetings** are arranged to appraise the parents about the progress of their wards.
- There is a provision to apply for revaluation of the Semester End Examination and Supplementary Examination answer papers. The students can see their answer scripts and compare their answers with the ones given in the scheme of valuation. Their concerns will be addressed by relevant committees.
- Achievement of learning outcome is assessed through Program Exit Survey done at the end of the program.
- Funded projects through incubation centre, KSCST, VGST, NAIN and MSME.
- Students are encouraged to participate in co-curricular and extra-curricular activities and register for audit courses, value added courses, skill development programs. They are offered training for GATE, Civil Services Examination and other competitive tests in collaboration with professional agencies.
- The students are encouraged to participate in technical conferences, seminars, skill development programs, short term training programs through Incubation Centre to enhance the employability.

Post Accreditation Initiatives:

Response to the recommendations of previous NAAC peer team of assessment and accreditation.

- The college is encouraging and guiding students in enrolling for GATE exams and students receive guidance for preparation from faculty members and also through an outside agency GATE FORUM.
- Students who opt for seeing the answer papers of semester end examinations are given a provision to do so.

Other Initiatives:

- Answer sheets are coded before the valuation to maintain confidentiality
- Project based learning is introduced in every department.
- **Nodal Centre of Virtual Lab** (MHRD Initiative) has been set up in the college, in association with NITK Surathkal
- Institution has "**Spoken Tutorial Project of IIT Mumbai**" centre (VTU approved) for Udupi District.
- NMAMIT has been granted **NPTEL Nodal Centre** in 2017 and more than 860 students and faculty have registered.
- 40 faculty members were given 5 days training on 'Instructional Design and Delivery' conducted by Society for Education and Entrepreneurship Development (SEED) chennai in the college. Micro teaching exercise is conducted to improve the teaching skills of selected teachers.
- Videos of selected lecture classes by our own faculty are captured as a pilot project initiative and are stored in the college intranet repository for the benefit of students.
- At PG level, continuous internal evaluation scheme is improved by having weekly tests instead of having 2 tests per semester.

- 85 faculty members are pursuing research in the Research centers approved by VTU.
- During last two years, 10 teachers with Ph.D. qualification are appointed.

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

- The Institute has constituted a Research Advisory Committee and a Research Executive Committee to monitor the research activities of the Institute. The research activities are undertaken on the recommendations of the committee.
- The Institute provides monetary incentives for research activities like procuring a research grant, publication of research work and patents obtained. Best Researcher Award has been instituted to encourage the activities of faculty. Financial support is provided to faculty to attend and present papers in National/International Conferences, Workshops and Faculty Development Programs.
- The institution has 10 research centres recognized by VTU.
- Incentives are also given in terms of promotions for exceptional research activities of the faculty.
- Research grants of Rs. 236.69 lakhs have been received from various financing agencies like DST, DAE, CSIR, AICTE, VGST, Ministry of Finance, ICSSR, IIBF, IT-BT (GoK), KSBDB, KSCST, VTU, etc.
- Institution's research has contributed for establishing research centres by the industry in the institution. College in collaboration with industries such as IBM, INTEL etc. has set up some state of the art labs exclusively for strengthening teaching learning and research.
- Faculty members have published 20 book chapters, 22 books with ISBN numbers and 3 books have been edited.
- 301+ papers published in peer reviewed journals and 310+ conference papers have been published in the last five years
- The institution has collaboration with Infosys, Microsoft, SPAN Infotech, Robosoft, NVIDIA, Mission-10X, Hexmoto, TTH Consultancy Ahmadabad and Kanara Small Industries Association, for curriculum development and internship.
- The institution has specialized research centres in 1) Tool Based Micro Machining Research 2) System design- fabrication and testing 3) Condition Monitoring 4) I.C. Engines Research 5) High Performance Computing (CHPC) 6) Tissue Culture & instrumentation Lab 7) Research And Innovation Centre (RIC). The instruments available in these Labs are utilized by other Institutions also for their research activities. There are many types of equipment in other Departments which are useful for the research work of the faculty members.
- The faculty members of the Institute are engaged in consultancy projects in government and private organisations.
- The college has MoU with Penn State University, Ritsumeikan University, Japan, Makerere University, Uganda, Rotterdam School of Management, National University of Singapore AMD university, for faculty / student exchange and research activities
- The faculty and the students are encouraged to get involved in extension work involving community development and social responsibility.

Post Accreditation Initiatives:

Response to the recommendations of previous NAAC peer team of assessment and accreditation.

- 24 Scopus Indexed journal papers were published by the faculty members in two years. Scopus Indexed research papers with good IPP are being considered for awarding research incentives.

- During last 2 years, 140+ Journal papers and 120+ conference papers have been published/ presented by our faculty.
- Rs.100 lakhs have been kept in the annual budget for the R&D activities during 2016-17
- The Institute has started taking full time research scholars with research fellowship/stipend.
- Software worth about Rs.50 lakhs and Research Equipment worth about Rs. 20 lakhs have been procured during last 2 years.
- Seed money of about Rs.1.00 lakh each is provided for selected faculty members who are pursuing research.
- The existing MoUs with Industries/Universities/Govt. Organizations are reviewed and the active ones have been renewed.
- **Outcome of Collaborations:**
 - o Interactions with industries such as Ashok Leyland, Indian Welding Society of BHEL, Bureau of Indian Standards, Electronics Corporation of India Ltd, Electronics Sector Skills Council of India, Lamina Foundries and Lamina Suspension Products Ltd have been initiated for strengthening Curriculum, Faculty/student development, Internships and teaching learning process.
 - o Research oriented projects are being taken now by our PG students. In last two years, 4 students have taken up their M.Tech projects in Ritsumeikan University Japan.
 - o Two teams of 10 undergraduate students and 2 faculty members have visited Ritsumeikan University in last 2 years.
 - o Under “Student Exchange Program- Project Based Learning” of Ritsumeikan University, a team 13 undergraduate students (11 boys and 2 girls), one male graduate student (as a teaching assistant) headed Prof. Yukihiro Hirose (15 in total) visited NMAMIT, Nitte during February 3 – 10, 2017.

Other Initiatives:

- Establishment of a Research & Innovation Centre is pursued by the Institute and a separate **Research and Innovation Centre (RIC)** of about 8000 sq. area to carryout frontier research is constructed.
- Director (R&D), a Senior Researcher has been appointed to guide interdisciplinary research activities and he has been selected as Distinguished Lecturer by the IEEE Power Electronics Society.
- 7 faculty members are deputed to pursue full time Ph.D. in premiere and renowned Institutions with full salary in last 2 years
- The number of faculty members who have registered for Ph.D. studies has gone up to 85 during the last two years.
- Research oriented faculty development programs and student training programs are being organized. In last 2 years, 21 FDPs and 29 Student Training Programs have been conducted.
- Professors and Associate Professors for guiding research candidate are given remission in teaching workload and incentives for research outcomes.
- One Post graduate student from Belgium, one from France and one undergraduate student from Japan carried out their minor project works at our College under our faculty guidance.
- 5 patents have been filed by our faculty in last 2 years
- Through **New Age Incubation Network** centre funded by Govt. of Karnataka, 20 student teams have been identified and given funding and support to develop their ideas. Some of these ideas have been converted into prototypes and have been displayed in state level exhibitions.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

- Nitte campus is spread over a total area of 118 acres with a built-in area of about 1 lakh sq. m. The institute is committed to provide best infrastructural facilities for Class Rooms, Laboratories for teaching work and R & D, Seminar Halls, Library, Auditoriums, Sports and Fitness facilities, Health Care, Hostels and other essential facilities like Bank, Post Office, Co-operative Stores, Canteen, etc.
- Considering the specialization of the faculty, necessary Laboratory facilities are provided for Research & Development activities. Members of the teaching staff are provided cabins with computers and internet connection to assist in their daily work.
- All class rooms are equipped with LCD Projectors and audio systems to encourage faculty to use necessary teaching aids for effective teaching learning process.
- Spacious Library accommodates reference section, Reading Room, Periodicals Section, Stack area for Books, Audio Visual Section, Digital Library and office area.
- The Library subscribes to many print journals and e-journals on various research areas of interest of the faculty.
- The Institute has computation facility with 310 Mbps Leased line from BSNL. The faculty and the students get access to the internet through cable network and Wi-Fi access points provided over the entire campus.
- All Class rooms have ICT Enabled with internet connections, LCD Projectors. Audio systems are provided wherever necessary and on demand basis.
- The infrastructure facilities are reviewed on a regular basis and the Management is keen to provide for improvement and enhancement of the facilities to ensure betterment of teaching learning process.
- The requirements of additional facilities are constantly reviewed and are placed before the Governing Council for approval.
- College has state of the art play grounds (Cricket/Hockey/Football/Basketball), Indoor stadium, Multi-Gym, Yoga centre etc., Students practice and also participate in Sports and games at all levels and won accolades at University level every year.
- The maintenance team maintains and arranges for the repairs of the buildings and takes care of Water supply, Rain Water harvesting and Electricity. The College has a Sewage Treatment Plant (STP) and treated water is used for Gardening and Flushing purposes.
- The Institution has created Good ambience in the campus, by creating Garden, Lawns, Playgrounds, Parking area and a Temple

Post Accreditation Initiatives:

Response to the recommendations of previous NAAC peer team of assessment and accreditation.

- UV filtering facility for drinking water has been erected in the Hostels during 2015.
- Books with 2174 titles and 5800 volumes by leading authors have been procured since 2014.
- Software worth about Rs.50 lakhs has been procured in last 2 years for circuit branches.

Other Initiatives:

- Internet bandwidth has been increased from 100Mbps to 310Mbps.
- The college has enhanced IT infrastructure and at present 07 high end servers and 1529 computers are in operation.
- New Centre for Research and Innovation with 8000sq.ft has been constructed during 2016

- Construction of new PG Hostels for Men and Women with a capacity of 450 and 350 respectively has been completed in last year
- New Sports Complex with separate cricket field, football ground and Hockey ground has been constructed in last 2 years. Wooden court for basketball has been laid. National basket team received coaching for about 15days using this new facility

CRITERION V: STUDENT SUPPORT & PROGRESSION

- Mentoring of the students is an important responsibility of any Institution. At NMAMIT, this responsibility is shouldered by “**Abhyuday**” the Department of Student Welfare, Training & Placement. The Department is headed by a qualified and experienced mental health professional and is ably assisted by faculty coordinators from various Departments.
- In addition to providing the psychological support to the students, the Department also takes care of career counselling, soft skill development, enhancing self-competence and improving the spoken and writing capabilities of the students.
- Socially and economically backward students, students with disabilities and other physical and/or psychological problems are assisted and guided to face the challenges.
- Institution provides adequate student welfare measures (scholarships, free-ships etc.). In the last year, 760 students have received scholarships from Government and about 300 from institution on merit cum means basis up to the tune of Rs 2.5 crores per year.
- Progress of students is monitored regularly and feedback of poor performers is sent to the parents. Remedial classes are conducted to reduce the dropout and improve the performance of Poor performers
- The institution has Anti ragging committee to monitor the student interactions effectively.
- The institution has ‘Prevention of Sexual Harassment (PrOSH)’committee to address students’ grievances.
- Students are encouraged to take part in sports and other activities to keep them in good mental and physical health.
- Excellent sports facilities are provided for indoor and outdoor games.
- The college provides funds for student activities of the college.
- Institution encourages overall development of students by participation in State, National level sports, cultural and academic activities.
- College is one of the top-ranked institute in University sports securing several trophies in successive years and recipient of grants from the university
- For the benefit of students, personality enhancement and development Schemes and clubs like ‘Mission Prerana for change’, ‘Kalanjali’ ClicZ, Aura & Hands of Hope, Grey matter, the Quiz club, Thorana, Stereo Club .Taaleem, Silver Screen , SACA, a soft skills & Communication Association, Rachna and Yoga for health, Various branch associations, robotics & aero club and SAE Baja ensure ample opportunity for students participation in co-curricular and extracurricular activities
- Socially and economically backward students are provided assistance as per norms.
- Students with language problems are guided through Soft skills and Communication Association (SACA), structured and informal Programmes, Language lab etc.
- Academic mentoring is in place. Many activities are organized by Team Abhyuday like Pride of NMAMIT, Peer Assistance, Seniors Assistance, Buddy, Classes on Computer language by maintaining student resource directory.
- Placement cell will address the employment related needs and the students are oriented towards employability through, IEL classes, Enhancing Self Competence (ESC), Employability Skill Development (ESD), Crack the campus.

- The placement records of the college is quite encouraging, always more than 70% students are selected in campus interview by nearly 75 companies who visit the institution regularly for selection.
- EDC, NAIN and MSME cater to the Entrepreneurial needs of students.
- Student Chapters of Technical Societies and Associations of different branches also contribute in shaping the students.
- The college offers value added courses, Skill development programs audit courses which help them to be the responsible citizens accepted by the society.
- Institution facilitates student participations in publication of college magazine and department level association reports
- The Institution has a registered alumni association which actively interacts with the students in providing necessary guidance through information on higher studies and employment opportunities
- Coaching classes for various competitive examinations are conducted in association with professional trainers.

Post Accreditation Initiatives:

Response to the recommendations of previous NAAC peer team of assessment and accreditation.

- Companies offering excellent pay package are visiting the college for campus placements. In the current year 2 students have been offered a CTC of Rs.13 lakhs per annum. One student received offer for an internship with a stipend of Rs. 60,000 per month. In total about 727 employment offers have been received by BE & MCA and 95 offers for MBA graduating students in the year 2016-17.

Other Initiatives

- Through New Age Incubation Centre funded by Govt. of Karnataka, 20 student teams have been identified and given funding and support to develop their ideas. Some of these ideas have been converted into prototypes and have been displayed in state level exhibitions.
- Summer Research Internships are offered to students.

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

- Nitte Education Trust has undertaken to develop NMAMIT, Nitte as a Centre of Excellence to impart quality education, to generate competent, skilled and humane manpower, to face emerging scientific, technological, managerial and social challenges with credibility, integrity, ethics and social concerns”.
- The mission is being pursued with determination by the Leadership of the Trust at different levels including the Governing Council, Academic Council.
- The governance of the institution is reflective by effective leadership at the management level by President and in the institution level by Governing Council, Academic council, Principal, Vice Principals, HODs, Faculty and Students.
- The Principal provides the necessary leadership in running the Institution ably supported by others in the overall functioning of the Institute. The Institute promotes the culture of participative management where all major decisions are taken collectively.
- Knowledge management is being effectively implemented at the administrative level for both students and faculty covering areas like academics, finance, Hostel, Purchase & Stores through use of customized / procured software

- The institution has well defined organizational structure which includes quality policy, action plans and schedules for future developments, feedback systems and student satisfaction survey along with Grievance Redressal Cell for overall effective deployment of processes and strategic development
- The college has prepared the “Strategic Development Plan Document”, action plan and schedule for its future development up to 2020 based on the feedback collected from all cadres of the faculty.
- The Institute organizes and also encourages the faculty to undergo training programs at various other Institutes of National importance like IITs, NITs, IIMs, etc. in the area of their technical interest, in interpersonal and managerial skills.
- Teaching and non-teaching staff are benefited by many welfare mechanisms, EPF, gratuity, ESI, EI, Fee Concessions for wards, regular medical check-up, soft loans by credit co-operative society, free psychiatric counselling and medical facility
- The Institution is contributing to the pool of technical manpower of the country being a much sought after Institution, not only within the country but also from other foreign countries like Middle East and Nepal.
- The Institutional SWOT analysis has been carried out and the strengths and weaknesses of the Institute as a whole and the Departments in particular have been identified and action has been initiated to address them.
- Effective quality management is ensured by way of ISO 9001:2008 internal and external audits. Any non-conformity is addressed through remedial measures.
- IQAC initiates directions for conducting all academic and other activities and the departments enjoy academic autonomy. Teaching learning process is reviewed once in a semester to monitor the attainment of Course Outcomes and attainment of Program Outcome at the end of academic year.
- The IQAC ensures that, education and governance are of high quality. This is confirmed by granting of autonomy by UGC, receiving developmental grants such as TEQIP (Phase I&II), Research grants from various funding agencies
- The academic autonomy enjoyed by the Institute has been very cautiously utilized to bring in changes to the curriculum to make it progressive, industry oriented and socially meaningful thereby making the students better placed for employment.
- Financial Management practices are audited internally and also by an independent professional registered auditor.
- The institution maintains reserve and corpus fund and does mobilize the resource adequately.

Post Accreditation Initiatives:

Response to the recommendations of previous NAAC peer team of assessment and accreditation.

- Institute level strategic plan - 2020 has been prepared based on the feedback collected from all cadres of the faculty including Professors, HODs, Associate Professors and Assistant Professors. It covers Short, Medium and Long term goals of every department.
- IQAC has been constituted as per the NAAC guidelines and revamped with external members.
- A separate IQAC Director has been nominated to plan and execute all activities under IQAC.
- IQAC meets regularly to discuss and take actions related to quality aspects. AQARs have been prepared and uploaded.

Other Initiatives

- Scheme of **annual performance evaluation** of faculty members has been introduced in last two years. Financial incentives are being given to well performers and the rest are given suitable advice to perform up to the expectations. This has brought in a positive change and all faculty members have become more proactive in carrying out their work.
- Scheme of **research incentives** has been introduced in last two years to promote research culture amongst the faculty. Results are now being seen in terms of better quality research papers being published, more applications are being sent for funded research projects, involving students in research activities and patents are being filed
- Rotation of HODs and section Heads has been introduced during last year. This has brought in some remarkable positive changes in department administration and teaching learning aspects.
- Annual **academic audits** involving external auditors has been initiated
- Internal administrative autonomy has been given to Department of Management Studies, looking at their special requirements and market demands. However, the engineering departments and management department follow the academic autonomy guidelines given by the affiliating universities in *Toto*.
- To involve students in college administration, two student representatives on rotational basis are now being invited as observers in all Governing council meetings.
- Every department has formed short-range, mid-range and long-range plans and action plan towards its implementation.

CRITERION VII: INNOVATION AND BEST PRACTICES

- The institution conducts Green Audit.
- In order to create environment awareness, a Green Cell has been constituted in the Institute with students as active members. The campus and the surroundings are made eco-friendly by taking initiatives on energy conservation, use of renewable energy, water harvesting, waste management etc.
- Projects are undertaken in various Departments to demonstrate the above initiatives. Elixir is one such forum under Department of E & E Engineering to make prototypes in the laboratory.
- Karnataka New Age Incubation Network (NAIN) under Government of Karnataka provides facilities to student entrepreneurs to come up with proposals for implementation.
- Innovative efforts for academic excellence are focused on innovations and R&D in the areas of
 - o Renewable Energy Concept
 - o Micromachining, condition monitoring and vibration Analysis
 - o Karnataka New Age Incubation Network (NAIN) NMAMIT
 - o ELIXIR
 - o MicroLABlet
 - o Aero Modeling Lab and Robotics Lab
 - o Learning Management System, Management In action and Professional Growth and Individual Development
 - o Active learning Laboratory
- The best practices inculcated in the institution in last two years are 1) Blooms Taxonomy Levels incorporated for Students Learning Evaluation and 2) Introduction of Employability Skill Development a mandatory non- credited course.

- Over the years, the college has started using a few best practices to increase the academic excellence and efficiency of working of the college. The following best practices inculcated at NMAMIT are worth mentioning
 - o Environmental Consciousness initiatives
 - o Creating a sense of volunteering among the students
 - o Computer based Student Facilitation System
 - o News Letters

Post Accreditation Initiatives:

- Some innovative practices have been introduced in last 2 years. The Existing best practices have been streamlined and strengthened.
- In the years 2015 and 16, following best practices are introduced.
 - o Bloom's taxonomy levels are incorporated in question paper settings. This has resulted in improvements in students learning. The students have clearly understood the concept and have taken up academics seriously as they have to improve upon their higher order thinking skills to get good grades in the examinations.
 - o Employability Skills Development (ESD) is introduced for all UG students in 5th and 6th semester which has resulted in enhancing the skillset of students and quickness in attempting the questions in placement tests. The evidence of success rate is witnessed in terms of more number of students being placed with multiple offers by attending interviews in less number of companies.
- Additional best practices introduced in last 2 to 3 years are given below
 - o Introduction of Outcome Based education concepts like listing of COs, POs, PEOs, Mapping among them, introduction of Blooms taxonomy levels in curriculum design and evaluation, CO and PO attainment and analysis etc.
 - o Focused Industry Institute Interactions
 - o Standardization of PowerPoint Template for the official presentations
 - o Condensed version of NAAC – Assessment and Accreditation
 - o Event Management System

SWOC ANALYSIS

STRENGTH:

- Outstanding students with good academic record and better CET/COMED-K ranking from various parts of the country.
- Over the years, the Institution has become one of the most sought after institutions in the state of Karnataka by its well-structured and relevant teaching learning and evaluating process.
- Committed Faculty: Well qualified, experienced and committed faculty members have helped building the institution to its current status as a reputed institution.
- The academic credentials of the faculty, their involvement with industry, and their approach to continuous quality improvement have helped NMAMIT to receive NBA accreditation for all the applied programs in Engineering and MBA.
- NMAMIT considers strong and active MOUs with industry and International Institutions plays a major role in institutions strategic development plan and has developed exceptional relationship with the Indian and the multinational industry organizations. This partnership has contributed to the development of a curriculum that is most responsive to the needs of industry and has assured outstanding placement for NMAMIT's graduates.
- Industries offer internships and association with International Institutions has helped to establish academic partnership wherein the faculty and students go to foreign universities for higher learning and research.
- Proactive student centric and progressive administration.
- Complete computerization of examination system.
- Introduction of Smart card and Smart campus for the benefit of students and their guardians.
- Utilization of TEQIP (Phase I and II) for Institutional development.
- Availability of adequate Infrastructure and their optimal utilization. ICT is incorporated well in all processes, NPTEL, EDUSAT, E-Vidya and Learning resources developed by our faculty are accessed by students.
- Adequate Hostels, Quarters and Mess in the campus
- Excellent Sports facilities for training National teams, college teams. Sports and cultural activities are carried out throughout the year as supplementary to teaching learning activities
- Funded research projects, research publications in Scopus indexed Journals and Conferences.
- NMAMIT has strong quality measures to assure quality of programs, curricula, faculty credentials, research output, and student services. A continuous quality improvement process assures the involvement of all stakeholders, ranging from students, parents, faculty, industry, employers, and Government and University nominees in the academic process.
- NMAMIT is a NBA Nodal Centre for training in outcome based accreditation process and ensures that the institution maintains desired accreditation standards.
- Established processes as per ISO 9001:2008 and the requirement of NAAC to offer quality education.
- EDC, New Age Incubation Centre and MSME for Vocational training and other Entrepreneur Developmental activities.
- Interaction with rural public and participation in community service.

WEAKNESS:

- Though autonomous, guidelines of the affiliating university which are common to all autonomous colleges of Karnataka shall have to be followed.
- Lack of 12B status is a disadvantage in getting support from funding agencies of the government
- Absence of UGC Developmental Grants.
- Rural place far away from industries.
- As every major institution in India is facing, NMAMIT is also facing the issue of shortage of doctoral degree holders mainly in the cadre of Associate Professors. 84 faculty members are pursuing research leading to Ph.D. degree and our current efforts to have 100% faculty with Ph.D. in Associate Professors cadre will be achieved by 2020.

OPPORTUNITIES:

- To expand research output by publications in indexed International Journals and obtaining patents.
- To develop a strong research base, particularly Interdisciplinary, and to get National recognition as a research Institute.
- To maximize the impact of Industry and Institution partnership
- R&D centre and collaborative research are planned
- To Strengthen and Enhance alumni interactions and participation and contribute for institutional development

CHALLENGES:

- Global competitions from well-known Foreign Universities, which may establish their campuses in India.
- To bring the college to a level of an advanced technical Institution like IITs.
- To motivate all faculty to participate in Research and Consultancy in the Institute
- To get MHRD/UGC aid for developmental activities being unaided institute.
- To promote industry consultancy activities

SECTION B

PROFILE OF THE AUTONOMOUS COLLEGE

SECTION B

PROFILE OF THE AUTONOMOUS COLLEGE

1. Name and address of the College:

Name : N.M.A.M. Institute of Technology (NMAMIT), Nitte
Address : Nitte, Karkala Taluk - 574110
District : Udupi
State : Karnataka
Website : <http://nmamit.nitte.edu.in/>
Email : principal_nmamit@nitte.edu.in

2. For Communication:

Name	Designation	Contact Information	
Dr. Niranjan N. C	Principal	Telephone	O: 08258-281264
			R: 08258-231473
			M: 91-9611266900
		FAX	08258-281265
Dr. I. R. Mithanthaya	Vice Principal & Dean (Academic)	Telephone	O: 08258 -281953
			R: 08258 – 281531
			M:91-9480266962
		FAX	08258-281265
Dr. Shrinivas Rao B.R.	Vice Principal & Controller of Examination	Telephone	O:08258-281264/203
			R: 0820 -2526213
			M: 91-9448107800
		FAX	08258-281265
Dr. Nagesh Prabhu	Professor and HOD Dept. of E&E (Institution NAAC Coordinator)	Telephone	O:08258-281264/290
			M: 91-9448081488
		FAX	08258-281265
		Email	prabhunagesh@nitte.edu.in
			hodee@nitte.edu.in

3. Status of the Autonomous College by management.

- i. Government
 ii. Private
 iii. Constituent College of the University

☐
☒
☐

4. Name of University to which the College is Affiliated:

Visvesvaraya Technological University (VTU),
 Belagavi 590 010, Karnataka

5. a. Date of establishment, prior to the grant of 'Autonomy' : 27/08/1986
 b. Date of grant of 'Autonomy' to the College by UGC : 06/11/2008 effective from 2007-08

6. Type of institution:

a. By Gender

- i. For Men ☐
 ii. For Women ☐
 iii. Co-education ☒

b. By shift

- i. Regular ☒
 ii. Day ☒
 iii. Evening ☐

c. Source of funding

- i. Government ☐
 ii. Grant-in-aid ☐
 iii. Self-financing ☒
 iv. Any other (Please specify) ☐

7. Is it a recognized minority institution?

Yes ☐

No ☒

If yes specify the minority status (Religious/linguistic/any other) and provide documentary evidence.

NA

8. a. Details of UGC recognition:

Under Section	Date, Month & Year	Remarks (If any)
i. 2 (f)	05/05/2008	Certificate attached in Appendix E.1
ii. 12 (B)	-----	
iii. Grant of Extension of Autonomous status	28/02/2017	6 Years (2016-17 to 2021-22) Certificate attached in Appendix E.1

b. Details of recognition/approval by statutory/regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

(Enclose the Certificate of recognition/approval)

Under Section/Clause	Day, Month and Year	Validity	Programme/ Institution
F.No. South-West/ 1-2811986452/ 2016/EOA AICTE	25.04.2016	1 year	Under Graduate
			Civil Engineering
			Mechanical Engineering
			Electrical & Electronics Engineering
			Electronics & Communication Engineering
			Computer Science & Engineering
			Information Science & Engineering
			Biotechnology

Under Section/clause	Day, Month and Year	Validity	Programme/ Institution
F.No. South-West/ 1-2811986452/ 2016/EOA AICTE	25.04.2016	1 year	Post Graduate
			MCA(Masters in Computer Applications)
			MBA(Masters in Business Administration)
			M.Tech. in Construction Technology
			M.Tech. in Energy Systems Engineering
			M.Tech. in Machine Design
			M.Tech. in Power Electronics
			M.Tech. in Digital Electronics & Communication
			M.Tech. in VLSI Design and Embedded Systems
			M.Tech. in Computer Science & Engineering
			M.Tech. in Computer Networking
			M.Tech. in Industrial Biotechnology
			M.Tech. in Software Engineering
			M.Tech. in Structural Engineering

AICTE approval letters for the academic year 2016-17 is given in **Appendix E.2**

9. Is the College been recognized?

a. By UGC as a 'College with Potential for Excellence' (CPE)?

Yes

☐

No

☒

If yes, date of recognition: NA

b. For its contributions/performance by any other governmental agency?

Yes

☒

No

☐

If yes, Name of the agency and Date of recognition: (dd/mm/yyyy) :

Sl. No	Name of the Agency	Date of Recognition
1	Technical Education Quality Improvement Programme (TEQIP-I)	27-01-2005
2	Technical Education Quality Improvement Programme (TEQIP-II)	24-06-2011
3	KBITS(GoK)	28-12-2013
4	STEP (GoK)	26-06-2009
5	EDC	11-06-2004
6	AICTE	Research Grants
7	DST	
8	DBT	

10. Location of the campus and area:

Location*	Rural
Nitte Education Trust Campus area in acres (Rural)	118
Campus area in acres for NMAMIT (Rural)	50.33
Built up area in sq. mts.	98,119

(* Urban, Semi-urban, Rural, Tribal, Hilly Area, Any others specify)

11. Does the College have the following facilities on the campus (Tick the available facility)? In case the College has an agreement with other agencies in using such facilities provide information on the facilities covered under the agreement.

• Auditorium/seminar complex	☒	AC auditorium • Sambhram – 450 Capacity • MBA – 350 capacity AC Seminar Halls (100 capacity)-04 • Shambhavi, Phalguni, Sowparnika MCA hall Non-AC Seminar Hall (150 capacity) • Abhyudaya Non-AC Auditorium (4000 capacity) • Sadananda
• Sports facilities		
* Play ground	☒	• Large separate playgrounds for Hockey, Cricket & Football
* Swimming pool	☒	• Indoor stadium with 14,000 sq.ft floor area
* Gymnasium	☒	• Multi Gym & fitness centre • 400 meter track sports ground • Two Cricket pitch and three practice pitch • State of the art wooden flooring for basketball. Indian Basket Ball team underwent coaching for about 2 weeks each during this year in this facility • NBA Basketball academy to start in the campus very soon – first of its kind in the whole country
• Hostel		
* Boys' hostels	☒	• More than 2200 students in the college hostels
* Girls' hostels	☒	• 5 Boys Hostel blocks for UG • 2 Boys Hostel block for PG • 2 Girls Hostel blocks for UG and • 2 Girls Hostel blocks for PG students.
• Residential facilities		
* for teaching staff	☒	• 48 Faculty quarters (each flat of 1500 sq.ft);
* for non-teaching staff	☒	• 4 Nonteaching staff quarters (each of 1200 sq.ft); • 3 Professors quarters (each of 2000 sq.ft) • Guest house - 2 VIP suites, 21 AC Rooms
* Cafeteria	☒	• College Canteen –Veg. Cuisine (South and North) ; Food court near hostels

- Health Centre ☒
- * First aid facility ☒
- * Inpatient facility ☒
- * Outpatient facility ☒
- * ambulance facility ☒
- * emergency care facility ☒
- Health Centre staff
 - * Qualified doctor Full time ☒ Part-time ☐
 - * Qualified Nurse Full time ☒ Part-time ☐
- Other facilities
 - * Bank ☒
 - 1. Syndicate (Inside the campus)
 - 2. Vijaya Bank (close to campus)
 - * ATM ☒
 - * Post office ☒ Inside the campus
 - * Book shops ☒
- Transport facilities
 - * For students ☒
 - 29 Buses
 - * For staff ☒
- Power house ☒
 - 1600 KVA Transformer for the college
 - 1700 KVA power back-up for College and Hostel with 7 Generators
- Waste management facility ☒

12. Details of programmes offered by the institution: (Give data for current academic year)

Sl. No.	Name of the Programme/ Course	Duration (years)	Entry Qualification	Medium of instruction	Sanctioned/approved Student intake				No. of students admitted
					Intake	PIO 15%	SNQ 5%	Total Intake	
Under Graduate Programs									
1.	BE in Civil Engg.	4	PU/12th / Diploma	English	120	18	6	144	114
2.	BE in Mechanical Engg.	4			180	27	9	216	185
3.	BE in Electrical & Electronics Engg.	4			60	9	3	72	52

4.	BE in Electronics & Communication Engg.	4			180	27	9	216	184
5.	BE in Computer Science & Engg.	4			180	27	9	216	213
6.	BE in Information Science & Engg.	4			120	18	6	144	127
7.	BE in Biotechnology Engg.	4			60	9	3	72	54
Total					900	135	45	1080	929
Post Graduate Programs									
1.	Master of Computer Applications (MCA)	3	Degree with Maths at 10+2		120	-	-	120	70
2.	Master of Business Administration (MBA)	2	Any Degree		180	-	-	180	158
3.	M.Tech in Construction Technology	2	B.E (Civil Engg.,)		18	-	-	18	17
4.	M.Tech in Structural Engg.	2	B.E (Civil Engg.,)		24	-	-	24	17
5.	M.Tech in Energy Systems Engg.	2	B.E Mechanical Engg/E&E)		18	-	-	18	7
6.	M.Tech in Machine Design	2	B.E (Mechanical Engg.,)		18	-	-	18	16
7.	M.Tech in Power Electronics	2	B.E (E&E/ E&C/ Telecom)		18	-	-	18	3
8.	M.Tech in Digital Electronics & Commn.	2	B.E (E&C)		25	-	-	25	9
9.	M.Tech in VLSI Design & Embedded Systems	2	B.E (E&C)		18	-	-	18	6
10.	M.Tech in Computer Science & Engineering	2	B.E. (CSE/ISE)		25	-	-	25	19
11.	M.Tech. in Software Engg	2	B.E. (CSE/ISE)		18	-	-	18	0
12.	M.Tech in Computer Networking	2	B.E. (CSE/ISE)		18	-	-	18	1
13.	M.Tech in Industrial Biotechnology	2	B.E. (BTE)		18	-	-	18	0
Total					536			536	323

Doctoral Programs									
1.	Ph. D Programme	Min 3years (full time) /4years (part time)	M.Tech for Engg. Faculty, M.Sc for Science faculty	English	--	--	--	--	84

13. Does the institution offer self-financed Programmes?

Yes



No



If yes, how many?

All of the above listed

14. Whether new programmes have been introduced during the last five years?

Yes



No



If yes, Number

05 (PG Programme)

15. List the departments: (Do not list facilities like library, Physical Education as departments unless these are teaching departments and offer programmes to students)

Particulars		UG	PG	Research Centre
Science	Department of Science & Humanities	-	-	✓
Engineering	Department of CSE	✓	✓	✓
	Department of E&CE	✓	✓	✓
	Department of E&EE	✓	✓	✓
	Department of ISE	✓	✓	-
	Department of Mechanical Engg	✓	✓	✓
	Department of Civil Engg	✓	✓	✓
	Department of BT	✓	✓	✓
Others	Department of MCA	-	✓	-
	Department of MBA	-	✓	✓

16. Are there any UG and/or PG programmes offered by the College, which are not covered under Autonomous status of UGC? Give details.

No.

17. Number of Programmes offered under (Programme means a degree course like BA, MA, B.Sc, M Sc, B.Com etc.)

a. Annual system



b. Semester system



c. Trimester system



18. Number of Programmes with

a. Choice Based Credit System



b. Inter/multidisciplinary approach



c. Any other (specify) : Credit Based Semester System



19. Unit Cost of Education

(Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

- a. Including the salary component Rs.1,05,940/-
- b. Excluding the salary component Rs. 46,648/-

20. Does the College have a department of Teacher Education offering NCTE recognized degree programmes in Education?

Yes No ✓

- If yes a. How many years of standing does the department have?
..... years
- b. NCTE recognition details (if applicable)
Notification No.:
Date: (dd/mm/yyyy)
- c. Is the department opting for assessment and accreditation separately?

Yes No ✓

21. Does the College have a teaching department of Physical Education offering NCTE recognized degree programmes in Physical Education?

Yes No ✓

- If yes a. How many years of standing does the department have?
..... years
- b. NCTE recognition details (if applicable)
Notification No.:
Date: (dd/mm/yyyy)
- d. Is the department opting for assessment and accreditation separately?

Yes No ✓

22. Whether the College is offering professional programme?

Yes ✓ No

If yes, Please enclose approval / recognition details issued by the statutory body governing the programme.

23. Has the College been reviewed by any regulatory authority? If so, furnish a copy of the report and action taken there upon.

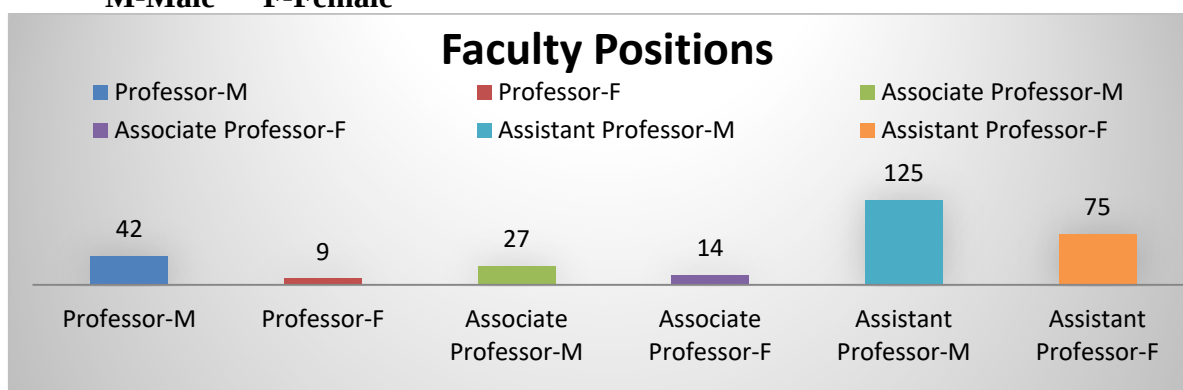
Sl. No	Recognizing Agency	Duration	Proof
1	VTU Belagavi Permanent affiliation to 1. B.E in Mechanical, ISE, BT, Civil, E&E and CSE 2. MBA 3. MCA	2013-14 to 2017-18	Attached (Appendix E.3)

Sl. No	Recognizing Agency	Duration	Proof
	4. M.Tech (DEC) 5. M.Tech (CSE)		
2	VTU Belagavi Permanent affiliation to 1. B.E (E&C) 2. M.Tech (ESE)	2014-15 to 2019-20	
	VTU Belagavi Permanent affiliation to 1. M.Tech (CCT)	2015-16 to 2020-21	
3	Provisional Accredited by NBA 1. B.E in ISE and CSE 2. M.Tech (DEC) 3. M.Tech (ESE) 4. MBA	2015- 17	Attached (Appendix E.4)
4	Accredited by NBA 1. B.E (Civil) 2. B.E (E&CE) 3. B.E (E&EE) 4. B.E (Mech) 5. M.Tech (DEC) 6. M.Tech (ESE) 7. MBA	2012-15	Attached (Appendix E.5)
5	Accredited by NBA 1. B.E (BT)	2012-17	

24. Number of teaching and non-teaching positions in the College

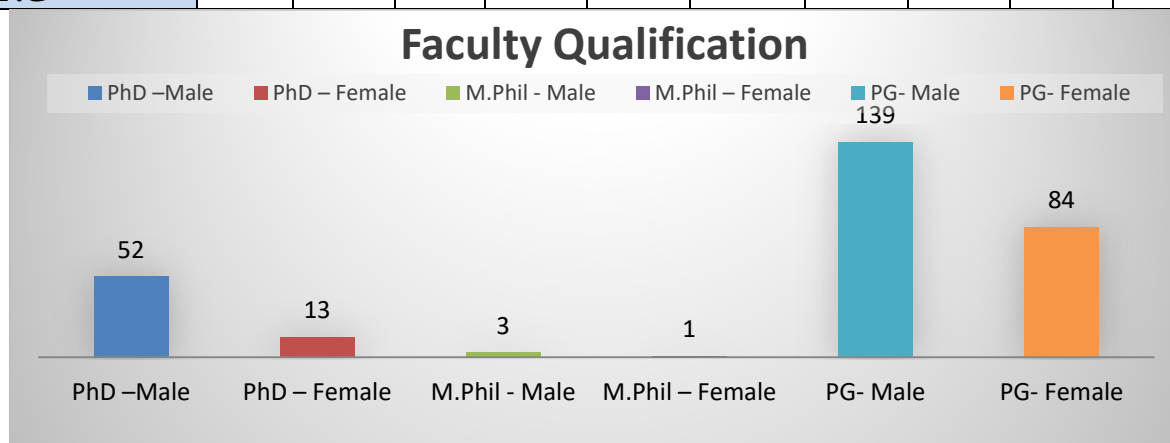
Positions	Teaching faculty						Non-teaching staff		Technical staff	
	Professor		Associate Professor		Assistant Professor					
	*M	*F	*M	*F	*M	*F				
Sanctioned by the UGC / University / State Government										
Recruited	-NA-									
Yet to recruit	-NA-									
Sanctioned by the Management/Society or other authorized bodies										
Recruited	42	09	27	14	125	75	226	117	67	44
Yet to recruit	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

*M-Male *F-Female



25. Qualifications of the teaching staff

Highest qualification	Professor		Associate Professor		Assistant Professor		Lecturer		Total	
	M	F	M	F	M	F	M	F	M	F
Permanent teachers										
D.Sc./D.Litt.										
Ph.D.	41	08	06	02	05	03	-	-	52	13
M.Phil.	-	01	-	-	03	-	-	-	03	01
PG	01	-	21	12	117	72	-	-	139	84
Total	42	09	27	14	125	75	-	-	194	98
Temporary Teachers										
Ph.D.	-	-	-	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-	-	-	-
P.G	-	-	-	-	-	-	-	-	-	-
Part Time Teachers										
Ph.D.	-	-	-	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-	-	-	-
P.G	-	-	-	-	-	-	-	-	-	-

**26. Number of Visiting Faculty/ Guest Faculty engaged by the College.**

Sl No.	Name of the Department	Number of Visiting Faculty
1	MBA	11
2	Civil Engineering	2
3	Mechanical Engineering	1

27. Students enrolled in the College during the current academic year, with the following details:

Students	UG		PG		Ph.D.	
	M	F	M	F	M	F
From the state where the College is located	515	306	150	161	-	-
From other states of India	70	22	9	3	-	-
NRI students	11	5	-	-	-	-
Foreign students	-	-	-	-	-	-
Total	596	333	159	164	-	-

M-Male F-Female

28. Dropout rate in UG and PG (average for the last two batches)

Batch admitted in	UG	PG		
	B.E	M.Tech	MCA	MBA
2008	3.51%	-	-	-
2009	1.90%	-	2.2%	-
2010	0.80%	-	2.2%	-
2011	1.18%	-	-	-
2012	3.75%	-	-	-
2013	NA	-	-	-
2014	NA	-	-	-

29. Number of working days during the last academic year.

222 Days

30. Number of teaching days during the last academic year

191 Days

31. Is the College registered as a study centre for offering distance education programmes for any University?

Yes

☐

No

☒

If yes, provide the a. Name of the University

b. Is it recognized by the Distance Education Council?

c. Yes

☐

No

☐

d. Indicate the number of programmes offered

32. Provide Teacher-student ratio for each of the programme/course offered :1:15

Department	Ratio
Civil	1:16
Mechanical	1:15
E&EE	1:15
ECE	1:16
CSE	1:15
ISE	1:15
BT	1:15
MCA	1:20
MBA	1:16

All 11 M.Tech programmes have a teacher student ratio of 1:12

33. Is the College applying for?

Accreditation

Cycle1

☐

Cycle2

☐

Cycle 3

☐

Cycle 4

☐

Cycle 5

☐

Re-Assessment

☒

34. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)

December 10, 2014 valid up to December 09, 2019



35. a. Date of establishment of Internal Quality Assurance Cell (IQAC)

01/07/2001 and reconstituted on 24/05/2016

b. Dates of submission of Annual Quality Assurance Reports (AQARs).

(i) AQAR for the academic year 2015-16 (Submitted on 05/07/2016)

(ii) AQAR for the academic year 2014-15 (Submitted on 28/02/2017)

36. Any other relevant data, the College would like to include. (Not exceeding one page)

- Technical Education Quality Improvement Programme (TEQIP) is a World Bank Project in association with MHRD, GoI to improve the quality of Technical education in the country and a few states. The program was implemented in Karnataka with the help of Government of Karnataka in the year 2005. Based on the performance of the institution, 14 colleges in the state were chosen of which 5 were private colleges and we are one among them. Our college, to start with, regarded as a Nodal Centre (Lead Institution) and were given major grants. On successful implementation of Phase I (2005-2010), based on performance, we were considered for Phase II (2010-2017).
- Visvesvaraya Technological University (VTU) in 2007 has granted Academic Autonomy to 12 Engineering Colleges which fulfil the criteria of Permanent Affiliation and at least 80% of the programmes are accredited by the NBA. Since our college has met those conditions, we were given Autonomy in the first phase itself.
- Students who have secured good ranks in CET conducted by KEA and also by COMED-K opt our college, though situated in a small village, because of the environment which is conducive to academic achievements and good placement records.
- UGC has granted extension of Autonomous status to NMAMIT for a period of 6 years w.e.f. 2016-17 to 2021-22.

SECTION C

CRITERIA-WISE INPUTS

SECTION C

CRITERIA-WISE INPUTS

CRITERION I: CURRICULAR ASPECTS

1.1 Curriculum Design and Development

1.1.1 How are the institutional vision / mission reflected in the academic programmes of the College?

Vision

Pursuing Excellence, Empowering people, Partnering in Community Development

Mission

To develop N.M.A.M. Institute of Technology, Nitte, as Centre of Excellence by imparting Quality Education to generate Competent, Skilled and Humane Manpower to face emerging Scientific, Technological, Managerial and Social Challenges with Credibility, Integrity, Ethics and Social Concern

Quality Policy

We, the members of NMAMIT, recognize our students, their parents as well as their prospective employers as our esteemed customers.

We commit ourselves to provide education to our students as per our stipulated syllabus using the best practices in order to achieve Customer delight. Our target is to reach the position of one of the best technical institutes in India and we aim at sustaining this position.

Core Values

Ethics, Teamwork, Honesty, Loyalty, Professional & Personal Integrity.

- The Curriculum of the academic programs for both UG and PG are so designed that, they are relevant to the requirements of present day employments in Public/Private Industries/institutions which are Indian and Global/Multinational organizations and our placement records substantiate it.
- The academic programs have certain interdisciplinary courses to facilitate graduates work in collaborative environments.
- Academic Programs also have courses like communication skills, constitution of India, Professional Ethics, Environmental Science & Engineering and IPR. This initiative makes graduates to inculcate with holistic and integrated education and make them ready to face scientific and technological challenges. Students participate in extension activities to mingle with the society and lead a respectable social life as responsible citizens.
- Students involve in a demographic survey of the entire Nitte Village under Nerekere Kshema to study the village life and their problems. The analysis of survey can be done using software developed in-house by the students of MCA.
- Institute has introduced short term training programs like CNC Operation Programming and Training, Special advanced computer applications, training in some trades like Electrician, Apparel Design & Fashion Technology and Interior Decoration.
- Institute arranges Blood donation camps, Entrepreneurship Awareness Camps and Health awareness camps.
- Final year B.E students involve themselves in projects that reflect community needs.
- Students also take up course (both elective and regular) that specifically address issues of ethics, human skills and values. In addition, certain electives offered by the industry are part of the curriculum.

- The interdisciplinary courses enable the students to work in multiple technologies and in groups of varied interests.
- The students actively participate in various Curricular, Co-curricular and Extra Curricular Activities under Professional society chapters such as ACM, CSI, IET, IEEE, ISTE, IIPM, ACM-W and WIE (W). These activities address the Social Challenges like Credibility, Integrity, Ethics and Social Concern.
- The course scheme has been finalized to align with research and contemporary issues. The idea is that an average student is able to experience the state of the art technologies to address the global needs and challenges
- The students are imparted skills to use information sources and also equip them to design and conduct experiments. The students are trained for research based (engineering) problem solving.

1.1.2 Describe the mechanism used in the design and development of the curriculum? Give details on the process. (Need Assessment, Feedback, etc.)

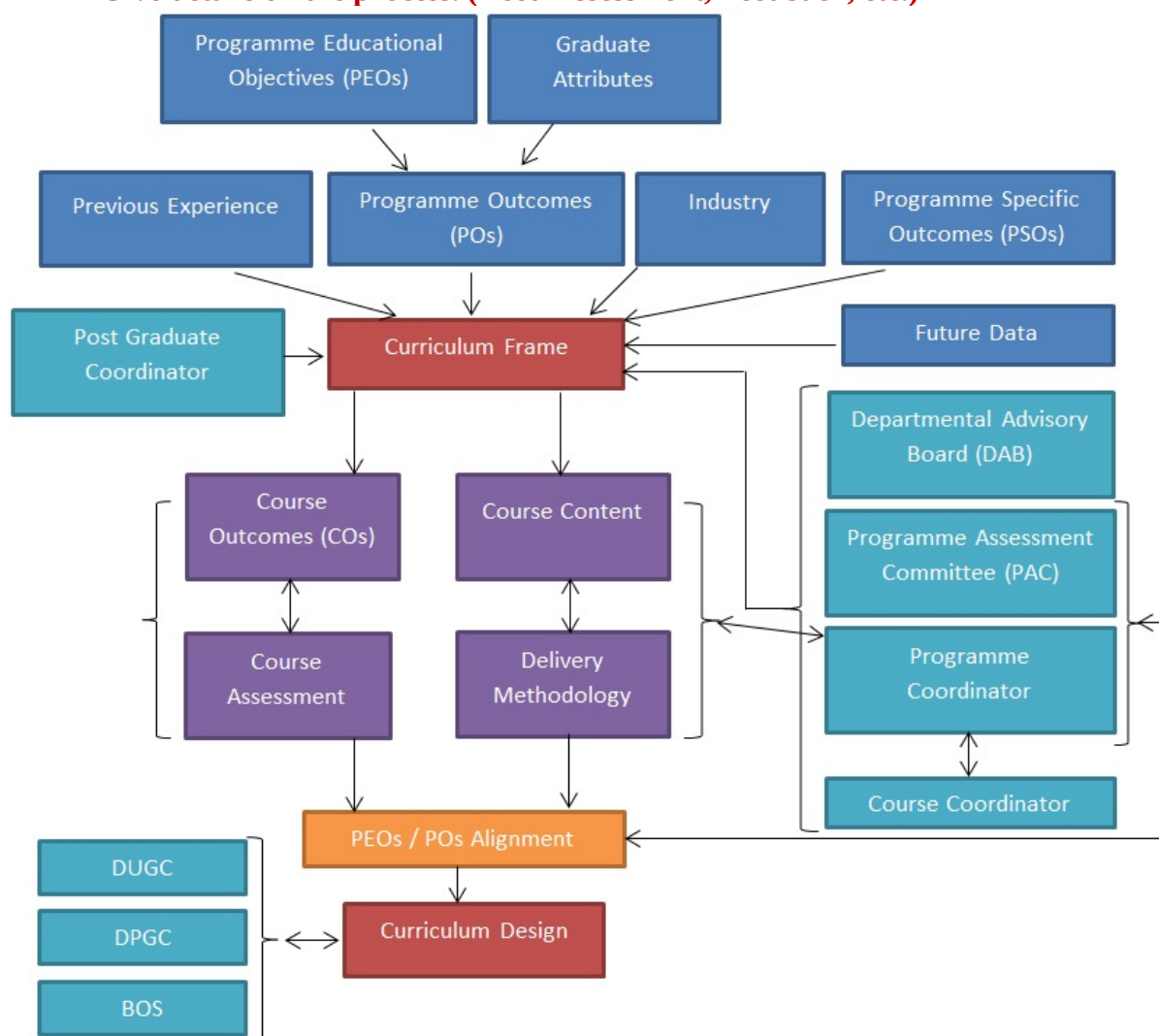


Fig 1.1: Outcome Based Education Process and Curriculum Development

- The institute offers 7 UG and 13 PG Programs which are conventional to cater the man power requirements. These courses are designed keeping in mind the Program Educational Objectives (PEO) and Program Outcomes (PO) as per graduate attributes of NBA.

- These courses cater mainly to pursue higher studies, industries and R & D institutions. Ample opportunities are provided to the students through EDC, NAIN, MSME and related courses to pursue entrepreneurial career.
- While designing courses, the course content of similar courses offered by IITs, NITs, IIM, ASME, IETE etc. are considered by the respective departments and is included wherever possible to enrich the course.
- The courses also have Science and Humanities, Value Added Courses, Electives (Departmental & Outside the Department), besides departmental foundation and core subjects.
- Periodic revision of the courses is based on student, alumni and other stakeholder's feedback, involving Departmental Undergraduate Committee (DUGC) and Departmental Postgraduate Committee (DPGC), Board of Studies (BOS), academic council (AC) and Governing council (GC).
- The design and development process generally begins with a need analysis report which comprises of (i) Stated customer needs (ii) Implied needs (iii) Overall goals of Instructions (iv) Relevant standards i.e. AICTE and UGC guidelines and Curricula of Entrance Tests like Indian Engineering Services (IES) and Graduate Aptitude Test for Engineers (GATE), etc. and (v) General characteristics of target population.
- Based on the feedback from students and the various other stake holders (faculty, parents, alumni, industry) obtained at the time of course exit and programme exit, the **Programme Assessment Committee (PAC) and Departmental Advisory Board (DAB)** decides the relevance of these feedbacks .
- BOS comprising of departmental staff and external members from Industry/R&D Labs who are subject experts will discuss about the feedback and recommends relevant changes.
- The recommendation of BOS in the form of a resolution (with the revised curriculum content) is placed before Academic Council of the institute which has the power to scrutinize and approve the proposal with or without modifications. The Academic Council also finalizes the Regulations, Schemes and Methods of Evaluation besides the course content.
- The Board of Governors (Governing Council) oversees this exercise and formal approval of this body is needed before the Revised Curricula (or Regulations) are implemented.
- The curriculum of all programs is designed to inculcate Graduate Attributes as defined by NBA in students.

Graduate Attributes prescribed by NBA:

- i. Engineering Knowledge
- ii. Problem Analysis
- iii. Design & Development of Solutions
- iv. Investigation of Complex Problem
- v. Modern Tools Usage
- vi. Engineer and Society
- vii. Environment & Sustainability
- viii. Ethics
- ix. Individual & Team work
- x. Communication
- xi. Lifelong Learning
- xii. Project management & Finance

- The institution has created a structure and it ensures that the curriculum developed and approved by the governing bodies and the university is implemented effectively supported by the well-defined frameworks as depicted below:

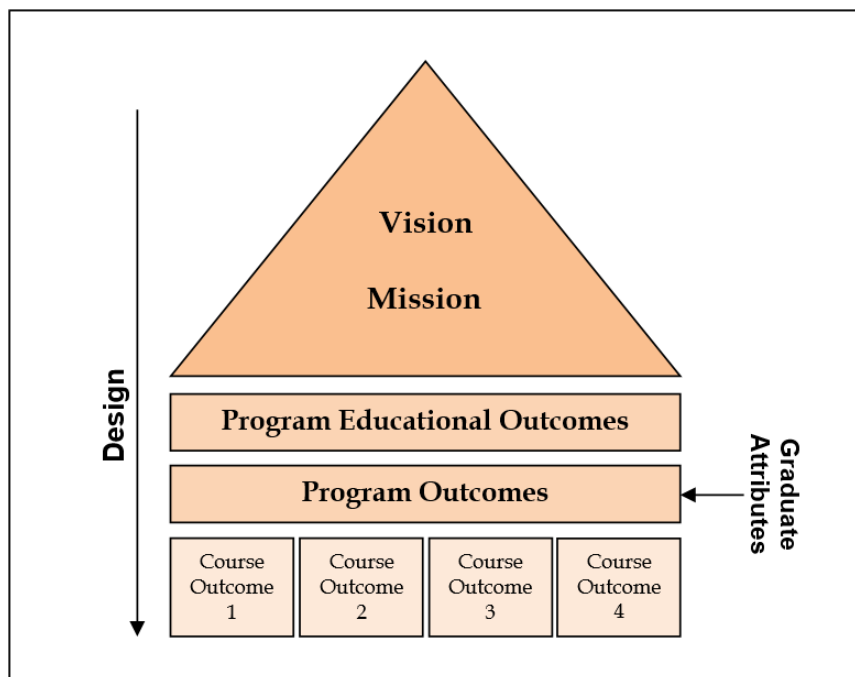


Fig 1.2: Curriculum Developed

1.1.3 How does the College involve industry, research bodies, and civil society in the curriculum design and development process? How did the College benefit through the involvement of the stakeholders?

- The important bodies constituted by institute such as BOS include members from industry, alumni and faculty members from premier institutions. The suggestions given by them are incorporated every year in the curriculum.
- Institute has MoU with the industries/R&D Lab/Premier Institutes and their suggestions are obtained. E.g.: Infosys, Span InfoTech, EMC², NIT Surathkal etc.
- With reference to Infosys Campus Connect, the CSE department is offering Essentials of IT, C# and .NET Technologies, Web Technologies, Business Intelligence and its Applications, Building Enterprise Applications, Mobile Application Development, Python programming and Big Data Analytics.
- With reference to EMC² Academic Alliance, the ISE department is offering Information Storage and Management, Cloud Infrastructure and Services and Data Science and Big Data Analytics.
- Two of our faculty members have been recognized as Silver Level partner by Infosys consistently for last 3 years.
- Members of the faculty have liaison with persons in the industry/R&D institution/Premier Institutes and send students for carrying out their projects with these experts and this makes the faculty also to go for updating themselves as well as the course content.

1.1.4 How are the following aspects ensured through curriculum design and development?

* **Employability**

* **Innovation**

* **Research**

❖ **Employability**

- In order to improve employability, a new course on Employability skill development (ESD) has been introduced in 6th semester B.E since 2015 as a part of curriculum. During the year 2016, for 2nd year, a course on Enhancing Self Competence (ESC) is introduced.
- Presence of industry representatives including alumni in curriculum development through Academic Council & BOS ensures courses are designed and administered to enhance student employability.
- We also offer separate courses like Critical Thinking, Creative thinking, Communication to address these needs. Institution also has industry experts as visiting/adjunct faculty ensuring relevant industry inputs.
- Industry suggested/supported courses/electives are offered.
- Placed students' carryout projects/ internships in industry and complete their course requirements by attending classes in a **fast track semester**. This ensures students to secure projects/ internships with stipend.
- Ashok Leyland–NMAMIT Joint State-of-the-Art Automotive Laboratory is being established in the academic year 2017-18.

❖ **Innovation**

- Student projects are evaluated by allotting certain percentage of marks specifically for innovativeness as represented in rubrics for evaluation.
- Introduction of more case studies, simulation exercises, workbook in curriculum.
- In the Department of MBA, Management in Action (MIA) project requires the students to visit industry and do mini consultancy assignments and jointly reviewed by industry experts and faculty. Super 100 presentations made by the students who perform comparative analysis of companies' performance.
- Certain departments have entered into agreement with Small and Medium Scale industries in and around Mangalore and Udupi to provide seminars / guest lectures / workshops / projects / internships to the students in Emerging Areas.

❖ **Research**

- Curriculum Design & Development ensures the graduates are competent to carryout research.
- Few research oriented projects are given to final year students of B.E and M. Tech during their final semester.
- To promote research culture among PG students, the curriculum of some of the departments ensures that few courses require writing research papers and field-work assignment.
- All dissertations are subjected to plagiarism checks.
- Introduction of seminars and projects on current topics in the curriculum makes the students to go through many research publications as well as develop interest in pursuing research, even at early stages of their studies.
- Students are encouraged to present research papers in National/International conferences.

1.1.5 How does College ensure that the curriculum developed addresses the needs of the society and have relevance to the regional / national developmental needs?

- The requirements of national developments in the sectors like Energy, Communication, Transportation, IT and Infrastructure are best addressed by the curriculum.
- The value added courses and mandatory courses such as Constitution of India & Professional Ethics, Environmental Studies and Communication Skills, etc. makes the graduates to care for societal needs and become responsible citizens, aligning themselves to community services.
- The following courses in the curriculum address the needs of the society.
 - o Engineering Skill development Lab for I / II year B. E students.
 - o Industrial Pollution Control (Open Elective for 8th semester B. E- Mechanical)
 - o Renewable Energy Sources (Elective for 6th semester B. E- Mechanical)
 - o Energy Conservation and Management (Elective for 8th semester B. E- Mechanical and 2nd semester M. Tech in Energy System Engineering)
 - o Alternative Energy System (Elective for 1st semester M. Tech in Energy System Engineering)
 - o Utilization of Solar Energy (Elective for 2st semester M. Tech in Energy System Engineering)
 - o Non- conventional energy resources are offered as an open elective at 8th semester.
- Encouragement is given to the students to develop the projects related to regional needs as a part of curriculum such as **“Agrimitra”**, **“Quadcopter”** for pesticide spray, **Multipurpose tiller** related to farming, **Food vending machine**, **Waste disposal ATM** and **Multi-seed decorticator**.
- Management in Action (MIA) program of Department of MBA directly helps small businesses by having budding entrepreneurs taking up mini consultancy projects.
- Outreach projects such as Samvedana, Nitte Utsav have helped the local community. For instance, our students and faculty are involved in helping schools nearby with IT literacy, development of soft skills, organizing eye camps, blood donation drives etc., help in rural marketing, showcasing talents of rural artisans etc.
- Through Software Development and Innovation Center (SDIC), the students are working on various projects such as, Automation software of NET Employee's Co-operative Society, Department Website, and Automation of Panchayath Activities. These projects address to the needs of regional / national development.
- Faculty members are trained in Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO) on **'Geospatial Technologies for Urban Planning'**, **Basics of Remote Sensing, GIS & GNSS** and **'Geospatial Technologies for Urban Planning'** to contribute as an Extension activity.

1.1.6 To what extent does the College use the guidelines of the regulatory bodies for developing or restructuring the curricula? Has the College been instrumental in leading any curricular reform which has created a national impact?

- The regulatory bodies in the design and development of curriculum are according UGC norms: The institution has
 - Departmental Under Graduate Committee (DUGC)

- Departmental Post Graduate Committee (DPGC)
- Board of Studies (BOS)
- Academic Council (AC)
- Governing Council (GC)
- The institution curriculum is also designed to meet the requirements of affiliating university in terms of number of credits, flexibility, choice based credit system, grading in terms of SGPA and CGPA. The Curriculum is at par with the renowned institution. Many Graduates of the institution have occupied responsible positions in India and abroad.
- The curriculum for M.Tech in Industrial Biotechnology was designed by the Department of Biotechnology, which is approved by VTU and the same is followed by non-autonomous affiliated institutions.

1.2 Academic Flexibility

1.2.1 Give details on the following provisions with reference to academic flexibility.

a. Core / Elective options

The Curriculum of B.E degree for 200 credits Comprises of

Table 1.1: Credit Share

Courses	Credit Range
Basic Science and core courses	25-35
Engineering Science and core courses (Engg Foundation Courses)	25-30
Humanities and Social Science	10-15
Programme Core Courses	100-110
Elective Courses	20-30
Departmental Program Major Project	8-12
Mandatory Learning Courses	Non Credited

Subjects in an UG courses are introduced as per AICTE guidelines and affiliating University guidelines with respect to contact hours (L-T-P): Contact hours: 28-34 hrs/week

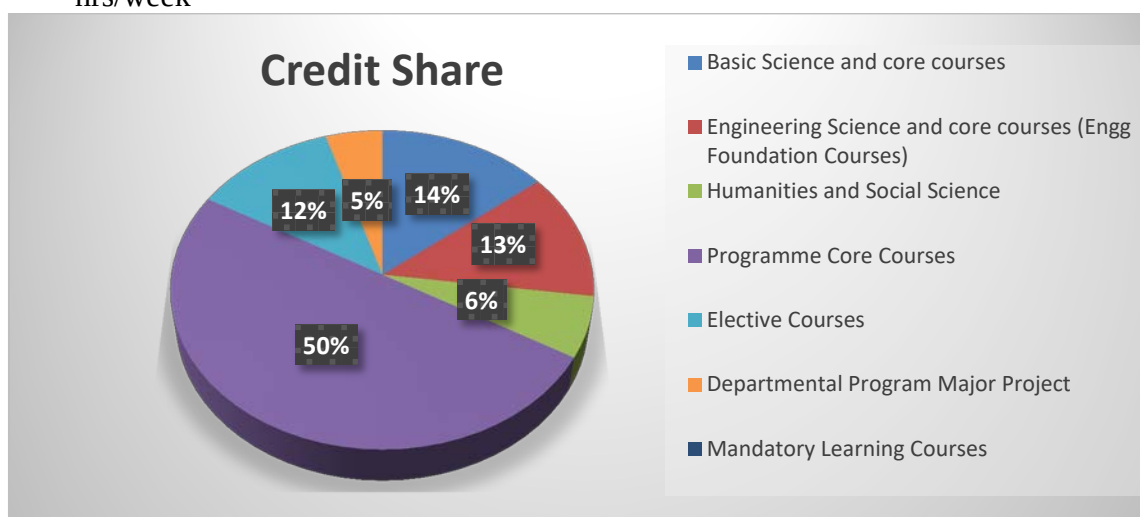


Fig 1.3: Credit Share among various courses

b. Enrichment courses

Add-on courses and Skill Development Programmes are offered in each department.

c. Courses offered in modular form

Audit courses in the form of lectures/laboratories/mini projects are offered by different departments.

d. Credit transfer and accumulation facility:

- o The institute follows the guidelines issued by the affiliating (Degree Awarding) University in transfer of credits.

e. Lateral and vertical mobility within and across programmes and courses:

The institute follows the guidelines of the affiliating University.

1.2.2 Have any courses been developed specially targeting international students? If so, how successful have they been? If 'no', explain the impediments.

- The courses of undergraduate programs are designed such that it meets the requirements of international standards.
- International students have done UG internships and post-doctoral fellowships.

1.2.3 Does the College offer dual degree and twinning programmes? If yes, give details
No**1.2.4 Does the College offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?**

Yes, all programmes (7 UG and 13 PG) are under self-financing

Table 1.2: Admission Policies

B.E	Admission	45% through KEA(CET) 30% through COMED-K 25% through Management Quota
	Fee Structure	KEA: As prescribed by the State Govt. COMED-K: As prescribed by the State Govt. Management: As prescribed by the State Govt. from time to time
	Teacher Qualification	As per AICTE norms
	Salary	As per the 6th Pay commission
M.Tech	Admission	80% through KEA (PGCET/GATE) 20% through Management Quota (PGCET/GATE)
	Fee Structure	KEA:As prescribed by the State Govt. Management: As prescribed by the State Govt. from time to time
	Teacher Qualification	As per AICTE norms
	Salary	As per the 6th Pay commission
MBA	Admission	Minimum 50% through KEA(PGCET) Maximum 50% through Management Quota(PGCET/MAT/KMAT)
	Fee Structure	PGCET: As prescribed by the State Govt. Management: As prescribed by the State Govt. from time to time
	Teacher Qualification	As per AICTE norms
MCA	Salary	As per the 6th Pay commission
	Admission	Minimum 50% through KEA(PGCET) Maximum 50% through Management Quota (PGCET/MAT/KMAT)
	Fee Structure	PGCET: As prescribed by the State Govt. Management: As prescribed by the State Govt. from time to time
	Teacher Qualification	As per AICTE norms
	Salary	As per the 6th Pay commission

1.2.5 Has the College adopted the Choice Based Credit System (CBCS)? If yes, how many programmes are covered under the system?

Yes. All UG programmes are covered under Choice Based Credit system.

1.2.6 What percentage of programmes offered by the College follows?

Annual system	-
Semester system	100 %
Trimester system	-

1.2.7 What is the policy of the College to promote inter-disciplinary programmes? Name the programmes and what is the outcome?

- M. Tech in Energy Systems Engineering (ESE) is jointly offered by Department of Mechanical Engineering and Department of E&E Engineering
- The Institution has a policy to promote interdisciplinary programmes and has promoted research in interdisciplinary areas by developing interdisciplinary research centres like
 - o Research and Innovation centre
 - o Centre for Micromachining
 - o Renewable energy
- The students of following programs usually carryout interdisciplinary projects and research.
 - o M. Tech in Energy Systems Engineering (ESE)
 - o M. Tech in VLSI Design and Embedded Systems
 - o M. Tech in Power Electronics is offered for candidates having BE /B.Tech/AMIE degree in Electrical and Electronics /Electronics and Communication engineering.
 - o M. Tech in Digital Electronics
 - o M. Tech in Software Engg
- **Outcome**
 - o In UG program, it is mandatory to choose one course offered by other departments as Open Elective in the final year.
 - o Some of the Dissertation and Projects are Interdisciplinary.
 - o Design, Development and Launch of Pico satellite STUDSAT-1 in collaboration with our sister Institute NMIT, Bangalore and ISRO.
 - o Design and Development of all-terrain and formula vehicle by the students of Mechanical Engg., E&CE and CSE.
 - o Establishment of Micro machining Lab facility (Mechanical and E&CE).
 - o Solid Waste Management Activity (Bio technology, Chemistry and Civil Engg.).
 - o Establishment of Robotics Lab (Mechanical Engineering department)

1.3 Curriculum Enrichment

1.3.1 How often is the curriculum of the College reviewed for making it socially relevant and/or job oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders?

Curriculum is reviewed once in a year. In need based manner the revision of the course is undertaken as per the requirements of stake holders.

1.3.2 How many new programmes at have been introduced UG and PG level during the last four years? Mention details.

* **Inter-disciplinary :** Nil

* **Programmes in emerging areas**

Table 1.3: Program in emerging area: P.G

Sl. No.	Department	Name of the Programme	Year
1	Civil Engineering Department	M.Tech in Structural Engg.	2016
2	Biotechnology Department	M.Tech. in Industrial Biotechnology	2015
3	Computer Science Engineering	M.Tech in Software Engg.	2015
4	MBA	MBA in Information Technology	2015
5	Electrical and Electronics Engineering	M. Tech in Power Electronics	2014
6	Computer Science Engineering	M.Tech in Computer Network and Engineering	2012
7	Mechanical Engineering	M.Tech in Machine Design	2012

1.3.3 What are the strategies adopted for revision of the existing programmes? What percentage of courses underwent a major syllabus revision?

- Based on the suggestions given by the members of BOS, new courses have been introduced in certain programmes.
- B. E – Inclusion of electrical wiring, carpentry and demonstration of automobile parts and machine tools in Engineering skill development lab for I year.
- Noncredit based course “Biology for Engineers” has been introduced (2015) for I year.
- Employability Skill Development has been introduced for 5th and 6th semester.(2015)
- Enhancing Self Competency has been introduced for 3rd /4th semester (2016).
- At post graduate level the soft skill component is introduced from this academic year (2016-17)
- Mandatory audit course (Hands on training) is introduced from this academic year for all PG Engineering Programs.
- Percentage of courses underwent a major curriculum revision.
 - o U.G: About 25 – 30% of UG programme, include newer subjects (mainly electives) and contents. Electives are added based on the need. (Feedback from Stakeholders)
 - o P.G : 5% courses

1.3.4 What are the value-added courses offered by the College and how does the College ensure that all students have access to them?

The following are the value added courses

Table 1.4: Value Added Courses

Sl. No	Type of the course	Name of the courses	Mode of accessibility
1	Ethics & Constitution	CIPE (Constitution of India & Professional Ethics)	Compulsory subject for first year
2	Value Added Course	Biology for Engineers	Compulsory for all first year students
3	Soft Skill Development	Enhancing self-competence (ESC)	Compulsory Subject in third year of B.E

4	Personality Development	Immersive Group Workshop (IGW)	Compulsory subject at the beginning of third year
5	Open Elective Course	IPR	Elective offered in final year
6	Value Added Course	Professional & Cognitive Communiqué	Open elective for final year

- Audit courses are offered during last two years: 13 in 2014-15 and 13 in 2015-16. Some of the prominent audit courses offered are
 - o Introduction to Parallel Programming & CUDA
 - o Java Design Patterns, Theory & Practice of Data Structures
 - o Mobile Application Development using Android & Phone Gap
 - o Concepts of Java Programming
 - o Internet of Things (IOT) using Intel Galileo Boards
 - o PYTHON concepts & Programming, Advanced Algorithms
 - o Android App Development, A Laboratory Course on Arduino
 - o Land Surveying using Total station, Landscape Designing
 - o Practical Approach to Design and Detailing of RCC Structural Members
 - o MEMS
 - o Repair of Home Appliance & Electrical Wiring, Electrical CAD
 - o Nano Biotechnology, Research Internship/ Miniproject
 - o MATLAB & Application of Bioprocess Engineering
 - o Production of value added products from waste paper
 - o Microbial Production of Bio oil, Production of Pullulan
 - o Production of eco-friendly gum from underutilized starch
 - o Students' take-up Internship Programs in well-known Industry and R&D Departments.
 - o Training programs on soft skills and numerical aptitude are arranged
- Access to value added and audit courses are announced through a circular notified in the notice board. The access to these courses is ensured to all students by the process of registration. Large numbers of interested students register for audit courses.

1.3.5 Has the College introduced any higher order skill development programmes in consonance with the national requirements as outlined by the National Skills Development Corporation and other agencies?

- As outlined by NSDC, Mechanical Engineering students undergo training programs such as Arc Welding, Simulation and Operation of CNC Machine tools, Operation on Machine Tools and Working skills on Computer Aided Design and Analysis as part of their regular curriculum.
- Skill development program on product development process through NASSCOM
- Management in Action (MIA) and entrepreneurial development courses in collaboration with SME associations are introduced.
- The institute is associated with Karnataka Small Industries Association (KSIA) on human resource development and skill development programs for students of MBA and they get an opportunity to visit a unit in the industrial estate to study the operations of the unit.

1.4 Feedback System

1.4.1 Does the College have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?

Yes.

- Feedback is collected from every student at the end of each semester for every course.
- The feedbacks are analyzed by the HOD of respective department and Dean Academics and constructive suggestions are given.
- The relevant/valid feedbacks are considered for revision of curriculum.

1.4.2 Does the College elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods adopted to do the same - (conducting webinar, workshop, online forum discussion etc.). Give details of the impact on such feedback.

Yes.

- BOS and Academic Council (AC) have external members from institutions of National importance and repute, and they participate in curriculum development and their feedbacks are implemented.
- The institute has MoU with Penn State University, Pennsylvania and Ritsumeikan University. The interactions with them also helps to enhance the curriculum
Impact: By way of such interactions, some industries/ companies came forward to establish Intel Embedded Lab, Wipro Mission 10X, ARM Lab and Hexmoto sponsored lab facilities.

1.4.3 Specify the mechanism through which alumni, employers, industry experts and community give feedback on curriculum enrichment and the extent to which it is made use of.

- The academic and administrative bodies such as BOS, AC comprise of distinguished senior persons with rich experience in academic field, research field and administrative field.
- Feedback obtained from alumni working as scientists in R&D organizations and industry is considered for curriculum revision.
 - One to one discussion between industrial experts and subject experts, contributes for curriculum revision. For example, on the basis of inputs from industrial expert, the Automotive Electronics has been included in the course on 'Automobile Engineering' and the curriculum of Metrology & Measurement laboratory has been revised.

1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the institution in ensuring effective development of the curricula?

- The curriculum developed by internal faculty after deliberations for any course will be reviewed effectively by the senior faculty from renowned academic institutions, scientists from R&D, Experts from Industry who are members of BOS and AC. The curriculum in reputed institutions is also considered while arriving at final decision.
- The faculty members are encouraged to attend National & International workshops and FDP's and EDP's in premier institutions to further improve quality of the courses. The institution also encourages the faculty to undertake industrial training.

- Faculty are encouraged to take inputs from Mission 10X, pedagogical trainings, webinars, NPTEL e-Vidya, coursera and MOOCS to enhance the quality of teaching learning process and contribute to curriculum development.
- Faculty members are encouraged to attend intensive five day workshop on “Instructional Design and Delivery”, a joint programme organized to the faculty members in December 2016 in collaboration with Society for Education and Entrepreneurship Development (SEED).
- Faculty members upload the course plans, lecture notes, syllabus, quizzes and assignments in Moodle.
- IQAC oversees the Quality sustenance by reviewing the Quality aspects of various departments and Quality enhancement measures are communicated to departments by conducting meetings.

CRITERION II: TEACHING -LEARNING AND EVALUATION

2.1 Student Enrolment and profile

2.1.1 How does the university ensure publicity and transparency in the admission process?

The admissions for B.E and M.Tech are governed as per the policy of Karnataka State Government. The salient features of which are as given below:

- 75% of the UG seats are filled through common entrance tests and counselling conducted by Karnataka Examination Authority (KEA)/ Consortium of Medical, Engineering and Dental Colleges of Karnataka (COMED-K)
- 80% of M.Tech seats are filled through common entrance test and counselling conducted by KEA
- 50% of the seats of MBA & MCA are filled through common entrance test and counselling conducted by KEA
- The remaining seats in respective Programs are filled by the management by giving wide publicity through advertisements in print media, electronic media and through the college website. The seats are filled based on merit.

2.1.2 Explain in detail the process of admission put in place for UG, PG and Ph.D. programmes by the College. Explain the criteria for admission (Ex. (i) merit, (ii) merit with entrance test, (iii) merit, entrance test and interview, (iv) common test conducted by state agencies and national agencies (v) others followed by the College?

Table 2.1: Admission Process

Under Graduate	BE	45% of the seats through Karnataka Govt. Common Entrance Test conducted by KEA	Seats will be allotted by KEA by counseling based on merit cum reservation for SC/ST/OBC
		30% of the seat through COMED-K Exam	Seats will be allotted by COMED-K by counseling based on merit in the COMED-K
		25% of the seats to be filled under Management Quota	As per merit among the applicants.
Post Graduate	M.Tech	80% of the seats through Karnataka Govt. PG Common Entrance Test/GATE	Seats will be allotted by KEA by counseling based on merit cum reservation for SC/ST/OBC Candidates with GATE score have to apply to KEA and will be given first preference during the counseling.
		20% of the seats to be filled under Management Quota	As per merit among the applicants. (Should have a valid GATE/ PGCET Ranking)
	MBA	Minimum 50% of the seats through KEA (PGCET) / CAT/ KMAT	Seats will be allotted by KEA by counseling based on merit cum reservation for SC/ST/OBC
		Maximum 50% of the seats filled under Management Quota	As per merit among the applicants (with a valid PGCET/ CAT/ KMAT Ranking)
	MCA	Minimum 50% of the seats through KEA(PGCET)	KEA counseling as per merit and reservation
		Maximum 50% of the seats filled under Management Quota	As per merit among the applicants (with a valid PGCET ranking)

Research	Ph.D.	100% seats through University Entrance Test (VRAT) and interview conducted by VTU Belagavi.	Selection is done by VTU as per the merit in the entrance test and technical interview.

2.1.3 Does the College have a mechanism to review its admission process and student profiles annually? If yes, what is the outcome of such an analysis and how has it contributed to the improvement of the process?

The admission Process is regulated by the State Government.

- The state government regulates the major portion of the admission process (75%). The balance (25%) (Inclusive of NRI) is filled by the management.
- We analyse the profile of admitted students to understand their demographic details, 12th standard percentage and CET/COMEDK ranking. Most of the students who join our Institution under CET are mainly from Udupi, Dakshina Kannada and nearby districts with very good 12th standard percentage and reasonably good CET ranking.
- Under COMEDK, students from all over India seek admission in various disciplines with fairly good ranking.
- In Management Quota admission, to encourage meritocracy, students with more than 85% marks in Physics, Chemistry and Mathematics are offered a scholarship of 25% of the tuition fee as a regular practice every year.
- Immediately after the commencement of classes in the 1st semester a test in English is conducted for all the students. Students scoring less than cut off will be given additional coaching in English.
- Generally students scoring less in this test are from rural background or had their 12th standard education in regional language. A unique programme for personality development of all the First year students is organized by the name “Mission Prerana for change”.
- The above process ensures students with better profiles & percentage of marks and with rural background to take admission in all disciplines every year.

2.1.4 What are the strategies adopted to increase / improve access to students belonging to the following categories.

- **SC / ST**
- **OBC**
- **Women**
- **Different categories of Persons with disabilities.**
- **Economically Weaker sections**
- **Outstanding achievers in sports and extracurricular activities**
- The policy of admissions for B.E, M.Tech, MBA and MCA are taken care of by the Karnataka State Government.
- The admissions to various categories like SC/ST, OBC, outstanding achievers in sports and extra-curricular activities, persons with varied disabilities and economically weaker section are taken care of by necessary reservations offered by the Karnataka Government. The facilities as per State Government norms are extended to these students. Students from these categories are provided concession in various fees.
- After getting admitted, students under these categories are provided with the following amenities:

- **SC /ST /OBC students:**
 - SC/ST students are totally exempted from paying tuition fees as per government norms.
 - OBC students get scholarships as per the norms of the Government.
- **Women:**
 - Hostel accommodation is provided to all needy students with adequate facilities.
 - Security systems are in place to prevent un-authorized access to hostels.
 - A Lady Counsellor is available to address their grievances.
 - 24/7 Ambulance facility is available.
 - Prevention of Sexual Harassment (PrOSH) Committee is in place.
- **Different categories of Persons with disabilities:**
 - They are given consideration in awarding scholarships. But admission of these students is based on stipulated minimum requirements.
 - Lifts and ramps are provided for easy access in all academic blocks.
 - A parking space is earmarked to students for parking their vehicles.
- **Economically weaker sections:**
 - They are given merit scholarships.
 - Facilitation to get bank loans. A Syndicate Bank branch, functions inside the campus, which provides loan.
 - An exclusive office staff has been appointed to disseminate information about the various scholarships available (both government and private), facilitating application process and disbursement of the same on time.
 - “Earn while you learn scheme” is available for students, particularly to help them to cover their living expenses.
- **Outstanding achievers in sports and other extracurricular achievements:**
 - A few students with excellent sports track are admitted under management quota.
 - Sports scholarships are available for these students.
 - For those who represent the college in National /State/ University level sports events, attendance, grace marks and additional MSE are given.

2.1.5 Furnish the number of students admitted in the College in the last four academic years

Table 2.2: Student Admission: UG Programmes

Branch	2013-14		2014-15		2015-16		2016-17	
	Intake	Admitted	Intake	Admitted	Intake	Admitted	Intake	Admitted
Civil	120	124	120	112	120	120	120	114
Mechanical	180	208	180	214	180	207	180	185
Electrical	60	66	60	45	60	54	60	52
Electronics	180	188	180	195	180	191	180	184
Comp.Sci	180	199	180	201	180	200	180	213
Inform.Sci	60	69	60	62	60	64	120	127
Biotech.	60	47	60	48	60	49	60	54
Total	840	901	840	877	840	885	900	929

15% PIO Quota and 5% Super Numerary Quota over & above the AICTE Sanctioned intake is approved.

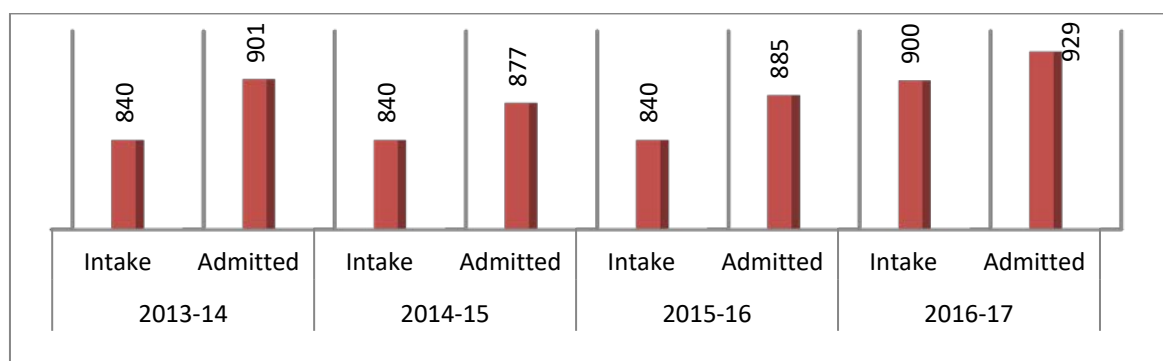


Fig 2.1: Student Admission for past 4 years: UG Programmes

Table 2.3: Student Admission: PG Programmes

Branch	2013-14		2014-15		2015-16		2016-17	
	Intake	Admitted	Intake	Admitted	Intake	Admitted	Intake	Admitted
M.C.A.	120	115	120	81	120	90	120	70
M.B.A.	180	161	180	171	180	179	180	158
M.Tech: Computer Science & Engineering	25	25	25	25	25	21	25	19
M.Tech: Construction Technology	18	18	18	18	18	17	18	17
M.Tech: VLSI Design & Embedded Systems	18	18	18	18	18	18	18	6
M.Tech: Energy Systems Engineering	18	15	18	9	18	9	18	6
M.Tech: Digital Electronics & Communications	25	25	25	25	25	21	25	9
M.Tech: Machine Design	18	17	18	18	18	15	18	16
M.Tech: Computer Networking	18	17	18	18	18	14	18	01
M.Tech: Software Engineering	-	-	-	-	18	5	18	00
M.Tech: Power Electronics	-	-	18	16	18	14	18	3
M.Tech: Industrial Biotechnology	-	-	-	-	18	5	18	00
M.Tech: Structural Engineering	-	-	-	-	-	-	24	17

2.1.6 Has the College conducted any analysis of demand ratio for the various programmes offered by the College? If so, indicate significant trends explaining the reasons for increase / decrease.

Table 2.4: Demand Ratio

Branch	2013-14			2014-15			2015-16			2016-17		
	NA	NSA	DR	NA	NSA	DR	NA	NSA	DR	NA	NSA	DR
Civil	126	124	0.98	126	112	0.89	126	120	0.95	126	114	0.90
Mechanical	216	208	0.96	216	214	0.99	216	207	0.96	189	185	0.98
Electrical	72	66	0.92	63	45	0.71	63	54	0.86	63	52	0.83
Electronics	189	188	0.99	216	195	0.90	216	191	0.88	189	184	0.97
Comp.Sci	216	199	0.92	216	201	0.93	216	200	0.93	216	213	0.99
Inform.Sci	72	69	0.96	63	62	0.98	72	64	0.89	127	127	1.00
Biotech.	63	47	0.75	63	48	0.76	63	49	0.78	63	54	0.86

NA- Number of Applications, NSA-Number of Students Admitted, DR- Demand Ratio

In general, demand ratio is more than 0.9. However, minor variations are due to reservation category students as some of them do not take admission after the seat allotted by KEA or few students withdraw their admission at a later date as they get admission for Medical Education.

2.1.7 Was there an instance of the College discontinuing a programme during last four years? If yes, indicate the reasons.

No

2.2 Catering to Student Diversity

2.2.1 Does the College organize orientation / induction programme for fresher's? If yes, give details of the duration of programme, issues covered, experts involved and mechanism for using the feedback in subsequent years.

Yes,

- College organizes 2 day freshers' orientation programme.
- On the **first day** of college reopening, Fresher's Orientation program called Familiarization program is arranged where Principal/Vice Principals/Controller of Exams/Deans/Heads of Departments/Warden address the students (in presence of their guardians, if present) on the following;
 1. Vision, Mission, Quality Policy and Core Values of the College.
 2. About Autonomous system and its advantages and importance of Add-on courses, Core Engineering Courses, Electives-program and open, Certificate Courses and other academic programs.
 3. Examination Rules and regulations.
 4. Emphasis on Research and its inclusion at the UG level.
 5. Facilities available within the campus such as Library, Labs, Language Lab, Canteen, Medical facility, Gym, Reprographic and Internet facilities, Transportation.
 6. Availability of the services of the Student Counsellor
 7. N.C.C, N.S.S, Technical associations, Departmental associations, clubs.
 8. Students' grievances cell, committees such as Anti-ragging, malpractice consideration, PrOSH an Anti-sexual harassment committee.
 9. Placement cell.
 10. Hostel.
 11. Transportation Facilities
- On the **second day**, a professional counsellor along with a few faculty members and senior student volunteers drawn from various departments conduct a focused orientation /induction programme.
- The programme includes sessions and activities related to communication, leadership and interpersonal skills required for the overall development of an engineering student.

Feedback: The students express their views on such programmes in their regular feedback process and their views and opinions are used for subsequent years

2.2.2 Does the College have a mechanism through which the "differential requirements of student population" are analysed after admission and before the commencement of classes? If so, how are the key issues identified and addressed?

Yes

After the admission process is completed, a list of students whose marks in PCM are less than 60% is prepared. These students are attached to various faculty advisors for monitoring progress.

- The overall supervision of these students is directly handled by the First year Coordinator.
- A test is conducted in English for all the students who join the first year. Those of the students who score less than a prescribed cut off are given special coaching to improve their written and spoken English skills by way of a Bridge Course.
- At the beginning of each academic year, students take admission to the Institute from different states across the country, outside the country and with different back grounds. In order to make them comfortable in the campus, the orientation program helps them in familiarizing with class rooms, laboratories, administrative offices, sports facilities, health centre, bank, post office and other infrastructural facilities along with information about co-curricular activities, academic calendar, necessary rules and regulations.
- During the orientation program, senior students conduct sessions on various activities held in the campus, where students can participate and contribute.
- In addition, the Institute has anti ragging cell and PrOSH sexual harassment prevention committee, which addresses pro-actively any issue raised by any student. A professional counsellor along with faculty mentors is available in the campus to help the newly joining students.

2.2.3 Does the College provide bridge /Remedial /add - on courses? If yes, how are they structured into the time table? Give details of the courses offered, department-wise/faculty-wise?

Yes,

- Bridge courses/Remedial classes are conducted every week for the first year students, the time table of which is prepared and notified by the First Year Coordinator.
- Bridge Courses/remedial classes are offered at College level for academically weaker students at first and second semester to make up for their deficiencies and to bring them on par with others. In the regular time table, there will be one extra Tutorial class in Mathematics for all 1st and 2nd Semester Students.
- The weaker students are identified (those who got less than 60% in PUC and less than 10 Marks in 1st MSE) and are given Special coaching classes through the Student Monitoring Cell.
- If the students score more than 50% marks in First Mid Semester Examination in all subjects, they are given exemption from attending remedial classes, otherwise these classes will continue and it is made mandatory for them.
- Bridge courses in mathematics and environmental studies are arranged during Saturday afternoon sessions for lateral entry students
- For effective monitoring of the welfare of the students, about 30 students are attached to a faculty called 'Faculty Advisor/Proctor'.
- The performance of the weaker students is strictly monitored through the Student Monitoring Cell.
- Remedial classes are also conducted for poor performers of higher semesters.
- To facilitate fast learners to acquire additional knowledge and skills, different departments offer audit courses encompassing theory, laboratory and sometime project work. These are generally offered during the summer semester. However,

sometimes based on the requirements, it is offered in regular semesters also.

- Special coaching for Civil Service Exams is conducted at the college level by an expert and Nation Entrance Tests like GATE / GRE from various departments
- Audit courses are offered during last two years: 13 during 2014-15 and 13 during 2015-16.

2.2.4 Has the College conducted a study on the incremental academic growth of different categories of students; - student from disadvantaged sections of society, economically disadvantaged, physically handicapped and slow learners etc.? If yes, give details on how the study has helped the College to improve the performance of these students.

Yes.

It has been observed that a good percentage of students from disadvantaged section of society lack communication skills. To help academic growth of students from disadvantaged sections of society, economically disadvantaged, physically handicapped and slow learners etc., following strategies have been adopted.

- i) The Institute provides necessary mentoring and counselling to weaker students. Special classes are conducted for slow learners and weak students beyond the classes/lab hours.
- ii) Summer semester provides opportunity to weaker students to clear their backlog courses and allows them to improve their performance.
- iii) Attending Language Lab and Enhancing Self Competence helps the students to overcome their difficulties.
- iv) All these measures help in substantially improving the performance of these students.

2.2.5 How does the institution identify and respond to the learning needs of advanced learners?

Advanced learners are identified through class room activities, project work, various assessment tasks and feedback from the faculty. Some of the ways in which their learning needs are addressed are as follows:

- i) Advanced learners are encouraged to take up Audit courses which are offered during summer/regular semesters to improve and gain additional knowledge in their fields of interest.
- ii) They are encouraged to take up internships in industry/ R&D institutions.
- iii) They are encouraged to work on funded R&D/ Consultancy projects in various departments under the mentorship of a faculty member. This is done during the summer semester as an internship. They are given a certificate at the end of the internship.
- iv) Students are encouraged to present papers in National/International conferences and are also financially supported.
- v) Leadership qualities of these students are enhanced by making them to organize and participate in seminars, conferences, workshops and techno-cultural fests.
- vi) They are also encouraged to pursue higher studies and are trained for GATE / Civil Service Examinations.

2.2.6 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?

- The admission to the college for differently abled students is according to Government and University policies

- The college has provided ramp and elevators.
- Need based personal attention/coaching is provided.
- Extra time is given during CIE/ SEE, as per University guidelines.

2.3 Teaching –Learning Process

2.3.1 How does the College plan and organize the teaching, learning and evaluation schedules? (Academic calendar, teaching plan and evaluation blue print, etc.)

All academic activities are planned before the commencement of every semester.

➤ Academic calendar

The academic calendar is prepared by the COE in consultation with Dean (Academic) and approved by the Academic Council in the beginning of the academic year. In the preparation of the calendar of events, the Institute follows the VTU guidelines on academic working days. The calendar outlines the semester schedule (like course registration, commencement of classes, dropping and withdrawal of courses etc.) & examination schedule (which includes mid semester examinations, semester end examinations (theory and practical), announcement of results etc.)

Once the academic calendar is approved, all the activities will be conducted as per the calendar within the stipulated time. The Institution has been conducting all the examinations as per the academic calendar and declaring the results within the stipulated time, without any hassle.

Calendar of academic activities and schedule is given in **Appendix E.6** for the academic year 2016-17.

➤ Teaching plan

- The course book/college calendar is made available to all the students which contains detailed syllabus of various courses which includes course code, course title, number of credits, number of contact hours/week and total number of credits for that semester is made available to all students in the beginning of the academic year.
- Each faculty prepares a detailed course plan for the course assigned to him/her. This includes hour wise syllabus content, review questions, model question papers of MSE and SEE, and course outcomes. To comply with the course plan, they are also required to maintain a Teachers diary which includes the details of the topics covered from syllabus in each hour, teaching pedagogy used and other responsibilities handled by the faculty during the semester. The progress of the syllabus covered is continuously monitored by HOD/ Dean (Academics).
- Course file is maintained which contains course plan, scheme of evaluation (MSE and SEE), sample assignments, MSE books, result analysis, CO attainments and Academic Performance Index (API).
- The learning process is made more interactive, participative and interesting through the use of teaching aids.

➤ Evaluation

- The institution follows a policy of total transparency in the evaluation process.
- Answer books of MSE/ surprise tests will be shown to all the concerned students. SEE answer books are made available to the students on demand.
- The institution through the 'SMART CAMPUS' system allows the students to see their attendance status and CIE marks (including surprise test, quizzes, assignments etc.).
- The mode of evaluation and the marks assigned are as per the scheme given in the course book/college calendar.

- The Academic calendar, Examination time table and SEE Results are made available to the students in the institution website and college intranet (Moodle).

➤ **CIE**

- i) The students are continuously evaluated based on seminars, assignments, quiz and surprise tests for which marks are allotted. The schedule/information about the same is given to the students during the beginning of the semester.
- ii) The Mid semester examinations (MSE) are conducted in a semester as per the academic calendar. The percentage of syllabus to be covered for this is followed uniformly for all the departments. Time table for MSE-I and II is given in **Appendix E.7**

- iii) CIE Test is conducted every week on alternate days for M.Tech and MCA.

- Laboratory classes and evaluations are carried out throughout the semester
Evaluation blueprints: The institution adopts guidelines provided by VTU for autonomous colleges to evaluate the students.

2.3.2 Does the College provide course outlines and course schedules prior to the commencement of the academic session? If yes, how is the effectiveness of the process ensured?

Yes,

- Every faculty member prepares the course plan and the course schedules and provides it to the students prior to the commencement of the Academic session. This helps students to register for courses of their choice and balancing their course load towards meeting the criteria of degree requirements. The course instructor provides detailed course plan and course materials. The same is uploaded in the **college intranet (Moodle)**. The academic calendar provides sufficient time to students for adjusting their courses registered. They may drop courses till the last date specified in the calendar.
- The effectiveness of this process is ensured by taking regular feedback from students. This is done at different levels.
- Feedback is taken through **regular class committee meetings** to evaluate the satisfaction regarding the coverage of various topics, quality of teaching etc.
- Feedback is discussed with the faculty and if needed **extra classes are conducted** to cope up with the course.
- Feedback regarding the syllabus in the form of course exit survey is taken at the end of the semester. These suggestions are discussed in the BOS meeting.
- The HOD in consultation with the faculty and student representatives of the respective departments, schedule co-curricular and extra-curricular activities.

➤ **SEE**

- The semester end examinations are conducted at the end of each semester as per the academic calendar. The schedule of examination (master time table) is notified to the students on the very first day of each semester. SEE Time Table is given in **Appendix E.8**

2.3.3 What are the courses, which predominantly follow the lecture method? Apart from classroom interactions, what are the other methods of learning experiences provided to students?

In general 75% of the courses predominantly follow the lecture method. Remaining 25% is through laboratories and project work. The lecture session includes chalk and talk (Board work and explanation), LCD presentations and use of audio visual aids.

The other methods of learning provided to students include:

- **Tutorials** – Tutorial periods are included only for those courses which involve numerical problems, practice, critical thinking and programming. These periods are specially marked in the timetable. During this period students are given exercises, where students work in group and which is individually monitored by the course instructors/tutors.
- **Mini projects** – Some of the courses make use of mini projects as part of CIE to facilitate better learning by the students.
- Other methods include group discussions, seminars, assignments and Hands on training. Students take up internship during vacation voluntarily in R & D labs/ industries.
- Further to help students to understand difficult topics in various courses, faculty encourages them to watch video lectures through MIT open course ware, NPTEL etc. In addition, in house videos of lectures for a few difficult courses are also made available to the students during the semester.
- In a few courses, simulation software is made use of to make difficult concepts to be understood easily through demonstration.
- External experts from industry and academia are invited to deliver lectures and interact with students.
- Placed students in some of the companies are given opportunity to do their final year project work as part of their internship in Eighth semester for a period of about 4 months.

2.3.4 How 'learning' is made more student-centric? Give a list of participatory learning activities adopted by the faculty that contribute to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

- The institution follows the 'Outcome Based Education' in all the programmes (UG/PG) offered. This ensures the learning to be student centric.
- Students are offered freedom in taking up courses, which they can learn at their own pace and time. This is taken care of by providing an option of dropping / withdrawal of a course as per the academic calendar at appropriate time in a semester. The courses offered have their course outcomes, which are in line with the program outcomes, which are further aligned with the 'Graduate Attributes' defined by NBA.
- NMAMIT is an institution taking all the steps and efforts to move from teacher-centric learning to student-centric learning and has created the required supporting systems. For improved student learning and dynamic class atmosphere, the following methods are used:

➤ **Interactive Learning**

- Quiz Programs, important Videos are displayed through ICT enabled class rooms.

- At the end of every class the recap sessions by the students are done to sum up the topic learnt.
- Interactive lectures by industry personnel are organized for the students to know about the latest development.
- The faculty members ask logical questions for the students to answer.
- **Collaborative Learning**
 - To facilitate collaborative learning, group discussions among students are encouraged to share ideas and views among themselves.
 - Collaborative learning also happens by doing Mini Projects and Major Projects, which are done by students in groups.
- **Independent Learning**
 - Students are encouraged to take-up the online courses (e.g.) NPTEL, according to their convenience.
 - Access to Library during and after college hours to enable students go through material and enhance their knowledge.
 - Easy access to the Computer Aided Self Learning Modules at library.
 - Preparation for presentation of papers and demonstration of projects in competitions.
 - Students are encouraged to actively participate in the development of open courseware.

2.3.5 What is the College policy on inviting experts / people of eminence to provide lectures / seminars for students?

The institution has the objective of promoting and providing a vibrant academic and scholarly environment.

- Different departments invite experts and researchers as guest lecturers and faculty. They regularly conduct lectures; organize seminars, workshops, and faculty development programs. Lectures are also organized under student associations and technical society chapters (IEEE, ISTE, ACM, IE (I) etc.)
- The college has a liberal policy to promote these activities by paying necessary honorarium, travel expenses and hospitality. The college has a well-furnished guest house to accommodate the experts.
- This process of inviting experts to deliver lectures to students helps the faculty, students and institution, where they share their knowledge and expertise. This also helps in networking, signing of MoUs, placements and other associations which are mutually beneficial.
- Details of the lectures arranged are available at respective departments.

2.3.6 What are the latest technologies and facilities used by the faculty for effective teaching? Ex: Virtual laboratories, e-learning, open educational resources, mobile education, etc.

The latest technologies and facilities used by the faculty for effective teaching include:

- PPTs
- Audio / Video Aids
- NPTEL/EDUSAT course materials
- E-Learning facility - DVD/CD ROMs
- E-Journals

- Simulation based tools using programming languages like MATLAB, LABVIEW, PSIM, PSCAD, Cadence and ANSYS etc.
- Use of design and drafting software like AUTOCAD, CATIA etc.
- Language lab
- Open source tools, e-resources.
- ICT enabled classrooms.
- Virtual Lab nodal centre.

2.3.7 Is there a provision for the services of counsellors / mentors/ advisors for each class or group of students for academic, personal and psycho-socio guidance? If yes, give details of the process and the number of students who have benefitted.

Yes,

The college has a full time mental health professional who attends to personal and psycho-social requirements of counseling. The college is also supported by Psychiatric Centre which is very close to the campus.

The college has a multi layered counseling mechanism

- The college has a Student Monitoring Cell, headed by a Senior Professor designated as First Year Coordinator.
- The Students Monitoring Cell maintains the personal and academic information of all the students.
- When the students enter the first year, the First Year Coordinator identifies those who are academically weaker and they are assigned individually to different faculty advisors (Proctors). This faculty monitors the performance of the allotted student and help them in academic related issues.
- Every class has one or two class advisors. They regularly interact with the students regarding all academic related matters. Serious issues are identified and communicated to the respective HODs, who in turn take necessary action.
- Depending upon the requirements, parents are also informed and invited for further actions.
- Student's performance in CIE is communicated to the parents/guardian at least twice in a semester, through the Head of the Department.
- The training and placement department regularly provides information and training to the students regarding campus recruitments.
- Faculty are available for supervising students' project work, training and internship.
- **Psycho-socio guidance**
 - o A rural psychiatry centre of the N.E.T. assists us with major psychiatric problems in collaboration with professional counselling in college or independently.
 - o The college has an in - house mental health professional who sees self-referred or other referred students for any issue that torments students.
 - o 60% of the Staff members have been oriented through a 4 full day workshop to identify and handle students with minor problems too to ensure that a large number of needy students benefit from personal counselling services. They refer students to professional counsellor when they find it complicated.
 - o In a month around 12 new students are seen by the professional counsellor for specific problems they face and are followed up to maximise their social and academic functioning.

- o Knowledge, skills and approaches to deal with issues that can be distracting, damaging are demonstrated to students through weekly- half day's activities like '**Mission Prerana for change**' which has modules on health, confidence building, anger management, effective thinking strategies, diversity appreciation including substance abuse, behavioural addictions, freedom, learning styles and stress management.
- o **Yuj for life** conducts week long sessions in breathing, relaxation, flexibility to help students deal with stress, academic issues like concentration and this is run by a team in hostels and college before and after class hours for 20 students at a time, one workshop a month.
- o While it is difficult to accurately estimate how many benefit from this process, it is believed that we have understood the personal, inter personal, psycho-social issues and their interference with academic functioning. From personal professional counselling that began in NMAMIT 26 years ago, we have found various ways to reach out to all students through processes mentioned above. Team **Abhyuday** uses a multi-pronged approach to strengthen student capabilities all round.

2.3.8 Are there any innovative teaching approaches/methods/practices adopted/ put to use by the faculty during the last four years? If yes, did they improve the learning? What methods were used to evaluate the impact of such practices? What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching?

Yes.

The following are the innovative teaching approaches / methods /practices by the faculty members

➤ **Computer assisted learning**

- Use of PPTs and LCD projectors in class rooms during lectures.
- Use of E-resources by the faculty (includes NPTEL, EDUSAT, MIT OCW, coursera, MOOCs etc.)
- Availability of broad band internet facility through Wi-Fi across the campus.
- Digital library – CD ROMs, online databases (like EBSCO, ProQuest, Science Direct) e-journals, audio/video resources.

➤ **Active learning**

- In real time there are very few ideal learners. Most students have preferred learning activities and styles, and they are not all alike. In active learning, faculty connects various concepts to activities.
- Use of case study, brain storming, communication games and activities and group discussions.
- Language lab in English department to improve speaking and writing skills.

➤ **Project based learning**

- Students undertake mini / major projects and learn the application technology taught in the course work.
- Mandatory project work in the final year of study for both UG and PG programs
- Encourages students to do research and publish papers in reputed Journals/Conferences as part of their final year project work.

➤ **Experiential learning**

- Field visits, on-site learning and internships.
- Hobby clubs

- Teaching by resource persons from industries and academia.
- Offering audit courses.
- Self-study component.
- Faculty trained to teach curriculum designed by industry for specialized courses.
- Skill developments / seminars / quizzes / Intercollegiate Technical Competitions /Workshops /conferences on emerging technologies.

➤ **Model based learning**

- Students are taught working of bulky models by taking them to laboratories and the miniature models are shown in class.
- Students develop prototype models

The impact of adapting innovative teaching practices.

- Better understanding of concepts / fundamentals and topics.
- Improvement in confidence level of the students.
- Improvement in pass percentage and marks.
- Improvement in number of placements.
- Efforts made by the Institution in giving due recognition to the faculty.
- The institution recognises and rewards for excellence in teaching through various methods which include:
 - Giving certain weightage during annual performance appraisal.
 - Cash incentives for R & D and publications.

2.3.9 How does the College create a culture of instilling and nurturing creativity and scientific temper among the learners?

The institution encourages a culture of creativity and scientific temper through various activities. Students are encouraged to actively participate in following activities.

- The institution conducts an annual intercollegiate technical competition in, where students actively participate and also organize various activities.
- Students are encouraged to participate in prestigious technical competitions across the country. They are sponsored by the college.
- Students are encouraged to participate in technical seminars/conferences to present papers, posters, projects, ideas etc., in order to nurture scientific temper and research aptitude. They are sponsored by the college.
- Students are motivated to participate in the on-going funded research projects in different departments.
- The student associations and hobby clubs in different departments continuously organize many programs like debate, exhibitions, seminars and workshops throughout the year by inviting experts/ resource persons from outside the college.
- Students are encouraged to participate in technical exhibitions conducted by Trade Fairs by professional bodies.
- Students also visit/undergo short term training in R &D labs.
- The Institution has an Innovation and Incubation Centre with funding from Karnataka government for promoting innovation, creativity and entrepreneurship amongst students' community.
- Students are encouraged to apply for KSCST project funding.
- The institution has a MSME Centre sponsored by Government of India to facilitate start-ups by students of the institution.
- Award to recognize best projects through entrepreneurs and the alumni.

2.3.10 Does the College consider student projects a mandatory part of the learning programme? If so, for how many programmes is it made mandatory?

* **Number of projects executed within the College**

* **Names of external institutions associated with the College for student project work**

Yes.

Project work is mandatory for students of all the UG and PG programs in the final year.

- About 90% of the UG projects and 80% of the PG projects are executed in the respective departments and the remaining in industry, which could be direct or through internships.

➤ **External institutions associated with the College for student projects**

- Some of the PG projects are carried out in reputed organizations and R & D labs like ISRO, NAL, BEL, BHEL, Hexmoto Controls etc.,
- About 10% of the total students, who are campus placed in companies like Infosys, SPAN INFOTECH, VMware, Informatica, Robosoft, Global Delight, Accord Software etc., do their project in respective industries.
- Every year some of the UG projects are funded by KSCST, Government of Karnataka.
- Our institution is a part of a consortium of colleges in a prestigious project called STUDSAT, where nano and pico satellites are designed, fabricated and tested, and put into orbit by ISRO. Already two satellites have been put into orbit. This endeavour is partly sponsored by the college.

➤ **Role of the faculty in facilitating such projects**

- The project topic is generally specified by the guide and students opt for projects and guides based on their interests. The students are continuously supervised / advised by the guides in all stages of their project work, including report writing.
- In certain departments students are encouraged to do mini projects (not a part of the curriculum) in emerging areas of technology. These projects are fully/partly sponsored either by the college/Alumni association. These projects after completion are exhibited in technical exhibitions to display the skills and talents of the students.
- Every year all the UG projects are exhibited in the project exhibition called 'Project EXPRO', where external experts from academia/industries are invited to evaluate the same. Some projects are selected as the best projects and cash prize and certificates are given to them.
- Students are also encouraged to exhibit their projects in intercollegiate project exhibitions.
- Students of Electrical Engineering build prototypes of concepts as hobby project and hold an exhibition ELIXIR which is funded by Alumni. Students of different departments are part of aero club and robo club which are technical clubs, where students work on innovative projects, which are interdisciplinary in nature. Students of these clubs based on their projects, participate in intercollegiate competition conducted by premier institutions like IIT Chennai and Mumbai. Students of Mechanical Engineering regularly participate in the design, fabrication and tests of 'All-Terrain Vehicle' and take part in competitions organized by various automotive societies like SAE, etc.

2.3.11 What efforts are made to facilitate the faculty in learning / handling computer-aided teaching/ learning materials? What are the facilities available in the College for such efforts?

- Faculty prepare soft copies of lecture notes, ppt hand outs and circulate it among students. Moodle (college) intranet is used to share these resources. It is also used to conduct online exams, announce campus recruitment details and announce all department and institutional level details.
- The campus is Wi-Fi enabled which facilitates easy access to internet and e-resources which can be accessed by students and faculty members.
- Each class room is fitted with LCD projectors to enhance the scope of e-learning
- Faculty members are encouraged to register for online courses.

➤ **Facilities available**

- Scanning, printing as well as photocopying facilities are provided.
- Faculty regularly make use of computer aided teaching methods including educational videos, you tube videos etc.
- Digital library facilities are available with CD ROMs and DVDs of lectures / notes and E-resources (including E-journals).
- Campus with MIS called 'Smart Campus' is used both by the faculty and students. Faculty enters the daily attendance of students and CIE marks. Students can know their attendance status, marks and other details using this facility.

2.3.12 Does the College have a mechanism for evaluation of teachers by the students / alumni? If yes, how is the evaluation used in achieving qualitative improvement in the teaching-learning process?

Yes. To ensure quality in the teaching – learning and assessment process, regular feedback is collected from various stake holders. Feedback is collected from the students, and alumni.

- Students give feedback regarding teaching learning process at the middle of the semester and at the end of the semester. The feedback at the end of the semester is collected by Dean (Academic), who later carries out SWOC analysis and informs the results to the faculty.
- HOD/class Advisor collects feedback from students regarding teaching. Based on the analysis, the HOD counsels individual faculty member for improvements.
- Course exit survey for each course is carried out, online using computer lab facility /offline in each department. The generated report is given to the individual faculty to know the status of achievement of course outcomes.
- Program exit survey is carried out for the graduating students, to know the achievement of program outcomes. Both program and course exit survey is carried out using Moodle. Based on the survey the corrective decisions are taken.
- Alumni feedback is collected regarding curriculum and attainment of PEOs. HOD in consultation with the senior faculty of the department takes decision regarding the revision of curriculum / introduction of new courses in support of attainment of PEOs.

2.3.13 Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If yes elaborate on the challenges encountered and the institutional approaches to overcome these.

Yes. Sometimes in case of leave availed by a faculty due to any unforeseen exigencies, he or she will offset this loss by taking extra classes either during

weekdays or holidays, in order to complete the curriculum. This is monitored by the course coordinator (in case of multiple sections), in order to ensure uniform coverage of syllabus content.

2.3.14 How are library resources used to augment the teaching-learning process?

- During the first year orientation programme, a visit to the central library is arranged for the students, where the Librarian gives details about the library resources and facilities available.
- Students are provided with “Book Bank” facility and each can borrow 05 books for an entire semester.
- Separate text books section is available
- Issues section-books can be borrowed by staff
- Reference sections
- Journals, e-books, CD/DVD, Delnet, VTU Consortium and tech magazines are available for developing research interests.
- Latest software for the effective management of the library facility for improving teaching learning process has been installed and the facilities are made available to students and faculty.
- Separate book section is available for reserved category students and they can borrow books in addition to the above facilities.
- SC/ST Book Bank provides 10 books per student per semester
- Most of the departments possess their own departmental library, where text books, project reports, technical reports; magazines etc. are made available to the students during college hours.

2.3.15 How does the institution continuously monitor, evaluate and report on the quality of teaching, teaching methods used, classroom environments and the effect on student performance.

- Lectures are conducted as per the course plans given to the students as well as uploaded to the Moodle and coverage of syllabus is periodically monitored by HoD and Dean (Academics). Teacher is expected to enter the coverage of syllabus in teacher’s diary on a day to day basis which is scrutinized by signed by the HoD.
- The HoDs and Dean (Academic) monitors the conduction of classes as per the time table.
- Feedback is taken regularly from students at different levels in a semester. The feedback analysis is done using standard tools and documents. The result of feedback analysis is communicated to the faculty by the HoD/Dean regarding their strengths and weakness.
- In case of critical issues regarding teaching– learning and assessment, the HoD/Dean counsels the concerned faculty for improvement.
- Feedback is also taken from alumni using various formats.
- The college is ISO 9001: 2008 certified, which facilitates in regularly monitoring, evaluating and reporting on the audits of teaching, teaching methods used and class room environments.
- As per the directions of IQAC
 - Result analysis is done to evaluate teaching learning process and for continuous improvements.
 - Academic audits have been conducted on regular basis to verify compliance of teaching learning process and academic activities.

2.4 Teacher Quality

2.4.1 What is the faculty strength of the College? How many positions are filled against the sanctioned strength? How many of them are from outside the state?

Faculty strength (positions filled)	: 292
Sanctioned Strength	: 304
No. of Faculty from Outside the State	: 28 (about 10 %)

2.4.2 How are the members of the faculty selected?

As and when the vacancy arises due to increase in intake, introduction of new programme or attrition of faculty, the selection process is initiated before the starting of the semester. Faculty Selection process comprises of:

- Advertisement in Newspapers / College Website
- Sending circular to leading educational institutes for display
- Short listing the applications received based on qualification and experience.
- Candidates are interviewed by Committee consisting of Nominee of Governing Council, two subject experts from outside, the Head of the Department and the Principal.
- The interview process consists of
 - o Demo-lecture
 - o Subject experts and Committee members interaction with candidates
- Selection of the candidates by the committee members.
- The list of selected candidates is sent to Management for final approval.

2.4.3 Furnish details of the faculty

Table 2.5: Faculty Details

Highest qualification	Professor		Associate Professor		Assistant Professor		Lecturer		Total	
	M	F	M	F	M	F	M	F	M	F
Permanent teachers										
D.Sc./D.Litt.										
Ph.D.	41	08	06	02	05	03	-	-	52	13
M.Phil.	-	01	-	-	03	-	-	-	03	01
PG	01	-	21	12	117	72	-	-	139	84
Total	42	09	27	14	125	75	-	-	194	98
Temporary Teachers										
Ph.D.	-	-	-	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-	-	-	-
P.G	-	-	-	-	-	-	-	-	-	-
Part Time Teachers										
Ph.D.	-	-	-	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-	-	-	-
P.G	-	-	-	-	-	-	-	-	-	-

M-Male F-Female

2.4.4 What percentages of the teachers have completed UGC-CSIR-NET, UGC-NET, and SLET exams? In that what percentage of teachers are with PG as highest qualification?

UGC-NET -: 01

There are 225 faculty members (about 77%) with PG as highest qualification.

2.4.5 Does the College encourage diversity in its faculty recruitment? Provide the following departments-wise details.

Yes.

Table 2.6: Faculty Diversity

Department	% of faculty who are product of the same College	% of faculty from other Colleges within the State	% of faculty from other States	% of faculty from abroad
Biotech	25	75	-	-
Chemistry	-	100	-	-
Civil	30	50	20	-
C S E	54	41	5	-
E&CE	33.33	55.55	11.11	-
E&EE	26	74	-	-
Humanities	-	100	-	-
ISE	37.5	50	12.5	-
MCA	70	18	12	-
Mathematics	-	85.71	14.28	-
Mechanical	35	60	5	-
Physics	-	100	-	-
T & P	-	67	33	-
MBA	15	60	25	-

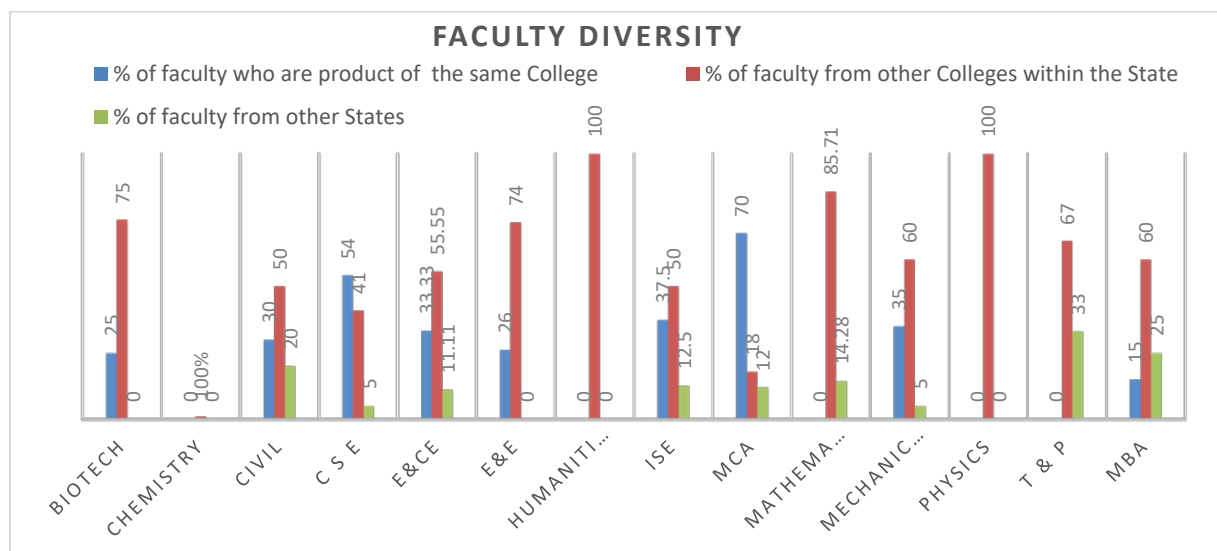


Fig 2.2: Faculty Diversity

2.4.6 Does the College have the required number of qualified and competent teachers to handle all the courses for all departments? If not, how do you cope with the requirements? How many faculty members were appointed during the last four years?

Yes

- The college has recruited the required number of qualified and competent teachers as per the norms laid down by the AICTE and VTU.
- In the last 4 years, **125** faculty members were appointed because of increase in intake. However, the attrition rate is small.

2.4.7 How many visiting Professors are on the rolls of the College?**Table 2.7: Visiting Professors**

Sl No.	Name of the Department	Number of Visiting Faculty
1	MBA	11
2	Civil Engineering	2
3	Mechanical Engineering	1

2.4.8 What policies/systems are in place to recharge teachers? (eg: providing research grants, study leave, nomination to national/international conferences/Seminars, in-service training, organizing national/international conferences etc.)

The institution has a well-defined policy in place to recharge teachers in the following manner.

- Attend seminars, conferences, workshops etc., both national and international for which partial/full financial assistance covering registrations fees, travel expenses and per diem allowance are provided by the management and special leave is granted.
- Organize national /international conferences and seminars by providing full financial assistance.
- Conduct faculty development programs and workshops in emerging areas of science and technology.
- Attend FDPs in various reputed institutions/Research organizations.
- Grant to cover the shortage of resources in funded research projects is given by the management to promote research culture.
- Undergo training in industries / organizations
- Pursue their higher studies / research by deputing them with salary under different programs with study / extraordinary (sabbatical) leave.
- Incentives are given for fetching funded projects, consultancy, publication in reputed journals/ conferences and reviewing papers for reputed journals.

2.4.9 Give the number of faculty who received awards / recognitions for excellence in teaching at the state, national and international level during the last four years.

1. Dr. Niranjana N Chiplunkar has been awarded with Bharatiya Vidya Bhavan National Award for the Best Engineering College Principal – 2014 by Indian Society for Technical Education.
2. Dr. Krishna Shenai has been awarded and selected as IEEE Distinguished Lecturer by Power Electronics Society (PELS) -2016.
3. Dr. Krishna Shenai has been selected as an Honorary Advisor to the Centre of Excellence in Nano electronics at Electrical Engineering of IIT Bombay effective from 06-03-2017.

2.4.10 Provide the number of faculty who have undergone staff development programmes during the last four years. (Add any other programme if necessary)**Table 2.8: Academic Staff Development Programmes**

Academic Staff Development Programmes	Number of faculty
Refresher courses	150
HRD Programmes	55
Orientation Programmes	15
Staff training conducted by the College	120

Staff training conducted by University/other Colleges	128
Summer / winter schools, workshops, etc.	50
Any other (please Specify)	
Instructional design delivery workshop	50
International Conference	25

2.4.11 What percentage of the faculty have

- * **been invited as resource persons in Workshops / Seminars / : 10%**
Conferences organized by external professional agencies
- * **participated in external Workshops / Seminars / Conferences : 80%**
recognized by national/ international professional bodies
- * **presented papers in Workshops / Seminars / Conferences : 70%**
conducted or recognized by professional agencies
- * **teaching experience in other universities/national institutions and : 10%**
others:
- * **industrial engagement : 10%**
- * **international experience in teaching : 2%**

2.4.12 How often does the College organize academic development programmes for its faculty, leading to enrichment of teaching-learning process?

The college organizes the academic development programs in every semester in the areas of curricular development, teaching learning methods, examination reforms and content /knowledge management. The details are given below.

Table 2.9: Academic Development Programmes

Sl. No	Details	Duration
1.	Workshop on “Therapeutic Counseling for Engineering Teachers”	16.07.2013 to 19.07.2013
2.	FDP for Fresh Teachers	16.09.2013
3.	Workshop on “Effective Leadership for Excellence” for BoG Members	28.01.2013
4.	Pedagogical Training Faculty “Effective Leadership for Excellence”	03.05.2013
5.	Pedagogical Training for Senior Faculty “Effective Leadership for Excellence”	20.06.2013
6.	Training Programme on “Strategic Leadership for Excellence”	14.09.2013
7.	Research scholars conclave “NMReCon-13”	2 nd week of November, 2013
8.	Workshop on “ABET Accreditation & Outcome Based Education”	11.03.2014 to 12.03.2014
9.	Pedagogical Training	26.07.2014 to 02.08.2014
10.	Pedagogical Training	5.09.2014 to 9.09.2014
11.	Pedagogical Training	02.10.2014 to 06.10.2014
12.	Pedagogical Training	16.10.2014 to 22.10.2014

13.	NBA Workshop on “Outcome Based Education and Accreditation”	14.06.2014 to 16.06.2014
14.	FDP on Technical documentation using latex	14.07.2014
15.	Introduction to Therapeutic Counselling for Engineering Teachers	02.06.2014 to 05.06.2014
16.	“Research Methodologies”	23.01.2015
17.	NMReCon -2015	07.05.2015
18.	3 Day Workshop on “Research Methodology and LATEX”	2.09.2015 to 4.09.2015
19.	A seminar on “Value Education”	12.09.2015
20.	Workshop on understanding Adolescent issues and introduction to Therapeutic Counseling for teachers in Higher Education (TEQIP)	17.05.2016 to 20.05. 2016
21.	Faculty Development Programme (5 days) on “Instructional Design & Delivery” by SEED Chennai (TEQIP)	26-12-2016 to 30-12-2016

2.4.13 What are the teaching innovations made during the last five years? How are innovations rewarded?

Innovations:

- ICT in Education
- Multimedia Teaching and Learning
- EDUSAT programmes
- NPTEL Videos.
- Webinars
- Micro-Teaching.
- Projects based learning
- Active learning
- Experimental learning
- Independent learning.
- Making lectures more interactive with deliberations and discussions

Rewards:

- Additional weightage in performance appraisal and monthly incentives are given.
- Innovations in teaching are considered during promotion of faculty members.

2.4.14 Does the College have a mechanism to encourage

* Mobility of faculty between institutions for teaching?

* Faculty exchange programmes with national and international bodies?

If yes, how have these schemes helped in enriching quality of the faculty?

Yes

- The institution has signed MoUs with a few reputed Universities like Penn State University (PSU) USA, Ritsumeikan University, Japan, NUS, Singapore European Union etc., where students and faculty are encouraged to visit these institutions for better exposures in the emerging areas of technology.
- Faculty and students from these institutions visit our institution on short visits for undergoing training programs/project work/research work etc.
- Resource persons from industries are invited in a few departments for either delivery of special lectures or for handling a few courses of the curriculum.

- Faculty and students are encouraged to take up their doctoral studies/research work in these universities with whom MoUs have been signed.
- Students placed in a few companies are given an option to take up certain specialized elective courses, which are taught by experts from these companies.
- Dr. Krishna Shenai has been selected as distinguished lecturer by IEEE.
- Dr. Subramanya Bhat, Dr. Niranjan N. Chiplunkar, Dr. Ujwal, Dr. Vidya, Mr. Suryanarayana, Mr. Venugopal, Dr. Srinivas Rao and Dr. Anil visited various foreign universities under faculty enrichment initiatives.
- Dr. Balasubramani, Dr. Radhakrishna and Mr. Karthik Pai have trained faculty members of various Engineering colleges on Outcome Based Education (OBE).

Impact: Exposure of faculty to other institutions has provided an opportunity to widen their horizon of thinking and acquire new skills in teaching and research.

2.5 Evaluation Process and Reforms

2.5.1 How does the college ensure that all the stakeholders are aware of the evaluation processes that are operative?

- Detailed information regarding the evaluation process (as per the guidelines for autonomous college) is printed in the college calendar, which are made available to all the students during the beginning of the academic year.
- Every academic year at the beginning of the semester, the Controller of Examinations (COE) addresses first year students together with parents during orientation programme, the newly recruited faculty to orient them regarding the examination processes / schemes of evaluation for theory, labs and project work.
- The Controller of Examinations in consultation with the Principal, Dean (Academics) and all HODs prepare the academic calendar for tests and examinations for the students at the beginning of every semester, which is put in the college website for the information of the students.
- The COE prepares an academic schedule for HOD/ faculty at the beginning of every semester providing them an overview about the various exam related events in the semester with deadlines which helps them to adhere to the same.
- The academic calendar having all the information necessary for the students for the entire semester is displayed on the notice board of all departments and is available in the college web site.
- If there are any changes in the events of the academic calendar and the schedule due to unforeseen circumstances, it will be notified to the students, HoD and faculty from time to time through circulars to be displayed on the notice board, announcement in college website and through an e-mail.
- The entire faculty will inform the students about the evaluation process, assessment methods and schedules at the beginning of the semester, which includes Mid Semester Examination (MSE), Continuous Evaluation (CIE) and Semester End Examinations (SEE).
- The students and parents are informed about their performance in the MSE through Smart Campus and mail.

2.5.2 What are the major evaluation reforms initiated by the college and to what extent have they been implemented in the college? Cite a few examples which have positively impacted the evaluation management system.

- The Institution has introduced Choice Based Credit System for all UG programs.
- For certain courses, on-line examinations are conducted.

- Coding / masking system is introduced to ensure anonymity
- Introduction of Bloom's Taxonomy in grading of questions is expected to improve the quality of questions and enhanced the learning outcomes, and higher order thinking skills in students.
- Students who represent National / University level sports events are awarded grace marks.
- Attainment of Course Outcome through MSE and SEE is practiced by all faculty members

Impact: The analysis of attainment of Course Outcomes clearly indicates the areas where the faculty members should channelize their efforts in adapting innovative teaching/ methodologies in view of improving the attainment of course outcomes.

2.5.3 What measures have been taken by the institution for continuous evaluation of students and ensuring their progress and improved performance?

- The Continuous Internal Evaluation is based on Mid Semester Examinations, tests, assignments, seminars, mini projects.
- Each faculty gives regular feedback to the students on his/her performance in MSE and CIE and counsels and sometimes takes the help of faculty Advisor / HOD in counselling them for improving their performance.
- After every MSE, the student's mark of all the courses taken by him / her is mailed to the parents and by SMS.
- Poor performers are identified and remedial classes are conducted

2.5.4 What percentage of marks is earmarked for continuous internal assessment? Indicate the mechanisms strategized to ensure rigor of the internal assessment process?

- Both CIE and SEE have equal weightage (50 : 50)
- A student's final performance in a course shall be judged by taking into account his/her result in both CIE and SEE put together.
- A student will not be eligible to appear for SEE in a particular course if he/she fails to get minimum 40% marks in CIE.
- The mid semester examinations are coordinated and conducted at each department as per the guidelines and timetable announced by the COE's office similar to that of SEE.
- The question papers for MSE are thoroughly scrutinized by the concerned faculty and HOD before it is finalised.

Table 2.10: Examination Evaluation

Theory		
CIE		
MSE – I		20 marks
MSE – II		20 marks
Task (Tests, assignments , seminars , mini projects)		10 marks
	Total	50 marks
SEE		
Conducted for 100 marks for 3 hours but reduced to 50 marks		50 marks
	Grand total	100 marks

Laboratory	
CIE	
Conduction of experiments, record writing and mid semester examinations	40 marks
Viva voce	10 marks
Total	50 marks
SEE	
Procedure writing/ Circuit diagrams / Program writing /Experiments conducted	40 marks
Viva voce	10 marks
Total	50 marks
Grand total	100 marks

2.5.5 Does the college adhere to the declared examination schedules? If not, what measures have been taken to address the delay?

YES

- The college adheres strictly to the declared examination schedules which are prepared and published at the beginning of the semester.
- In case of emergencies like declaration of holidays by the state government, natural calamity, strikes etc., necessary changes are made in the examination schedule and brought to the notice of concerned students and faculty immediately.

2.5.6 What is the average time taken by the college for declaration of examination results? Indicate the mode / media adopted by the college for the publication of examination results e.g., website, SMS, email etc.

- Results are declared within fifteen days from the date of last examination.
- Results are announced on the individual department notice boards and on the college website.
- Students and parents are informed by SMS.

2.5.7 Does the college have an integral examination platform for the following process?

- We have a well-defined, structured, pre examination, examination and post examination processes.
- **Pre examination processes:**
This process includes time table generation, OMR, student's list generation, online registration for invigilation, flying squad teams, attendance sheet, and online payment gateways.
- **Examination Process**
Has mainly examination material management and logistics – Examination centre for distribution of answer scripts, data books, and data sheets. Verification of admission tickets in the examination hall by the invigilators and attendance capture.
- **Post Examination Process**
Includes collection of answer scripts, masking and coding of answer scripts, answer script issue centre, issuing answer scripts to evaluators, documentation of answer scripts issued and returned, verification of marks awarded by the evaluators, entry of verified marks in the marks sheets, decoding of marks and announcement of results.

2.5.8 Has the College introduced any reforms in its Ph.D. evaluation process?

- The Ph.D. registration and evaluation process is carried out as per the guidelines of the affiliating University.

2.5.9 What efforts are made by the College to streamline the operations at the Office of the Controller of Examinations? Mentions any significant efforts which have improved process and functioning of the examination division / section?

- A senior Professor is designated as Controller of Examinations to manage the day-to-day affairs of the examination section.
- The entire examination process has been streamlined with well-defined milestones with deadlines, which has led to smooth conduct of all examinations with active support from the students and faculty.
- Regular email alerts are sent to faculty / HOD regarding the different deadlines for different events, along with the detailed academic schedule that is given at the beginning of the semester.
- Internal and external examiners are sent reminders by email and phone regarding deadlines for submission of question papers, commencement and completion of valuation work and any other examination related responsibilities.
- There is a provision for revaluation of the answer scripts of different courses.
- Most of the examination related activities have been automated using software. This includes – use of SMART CAMPUS for entry of attendance and CIE marks, generation of progress reports based on MSE – I and II, along with the attendance status, entry of SEE marks, processing of results, report generation, generation of statistics using software.

2.5.10 What is the mechanism of redressal of grievances with reference to evaluation?

- There is a provision for applying for revaluation of answer scripts for regular SEE and supplementary examinations. Revaluation process is carried out by Departmental Undergraduate Committee (DUGC) and Departmental Postgraduate Committee (DPGC) for UG and PG programs respectively.
- The DUGC and DPGC consist of HOD as Chairman and few faculty subject experts as members. The chairman can co-opt other faculty if there is a need.
- Students need to apply for the revaluation.
- During the DUGC / DPGC revaluation process, the students are given a chance to see their answer scripts, compare their answers with the scheme of evaluation used for evaluation process and give their concerns in a prescribed standard form.
- The DUGC /DPGC go through the concerns expressed by the students and address these concerns based on the merit.

2.6 Student Performance and Learning Outcomes**2.6.1 Does the College have clearly stated learning outcomes for its programmes? If yes, give details on how the students and staff are made aware of these?**

Yes

- The Program Outcomes designed for undergraduate engineering programs are in line with Graduate Attributes defined by NBA as given below.

➤ Graduate Attributes:

- Engineering Knowledge
- Problem Analysis

- iii. Design & Development of Solutions
- iv. Investigation of Complex Problem
- v. Modern Tools Usage
- vi. Engineer and Society
- vii. Environment & Sustainability
- viii. Ethics
- ix. Individual & Team work
- x. Communication
- xi. Lifelong Learning
- In addition to this, each program has to add its own program specific outcomes. In addition faculty will develop three to five course outcomes for each course they teach. These course outcomes are mapped to the program outcomes. These program outcomes in turn reflect the achievement of Graduate Attributes.

➤ **Faculty Members**

- The college has a NBA nodal center which organizes awareness programs on outcome based education (OBE).
- Programme Outcomes (POs) and Course Outcomes (COs) are discussed and finalized in respective departments.
- The Programme Outcomes are displayed in prominent places.

➤ **Students**

- Course book/college calendar is given to students, consists details of POs, COs of all courses. Course outcomes are informed to students by the respective faculty members in the beginning of every semester.

2.6.2 How does the institution monitor and ensure the achievement of learning outcomes?

- Faculty ensures achievement of course outcomes using proper assessment tools like CIE, SEE marks and feedback from students.
- Achievement of program outcomes is assessed through Program Exit survey done at the end of the program and through CGPA.
- Program Assessment Committee (PAC), BOS, BOE, Academic Council, IQAC etc. are the various bodies which help in monitoring the achievement of learning outcomes.

2.6.3 How does the institution collect and analyse data on student learning outcomes and use it for overcoming barriers of learning?

- Feedback is collected from all the stake holders- students, alumni and employers. This is done through Course Exit Survey and Program Exit Survey.
- The data so collected is analyzed course wise / teacher wise/ program wise and sample results are placed before the Academic Council and Governing Council for necessary suggestions and directions.
- Based on the feedback analysis, measures are taken to modify curriculum, inclusion of new courses and electives, skill development programmes, audit courses to enhance the learning outcomes.

2.6.4 Give Programme-wise details of the pass percentage and completion rate of students.

Table 2.11: Pass Percentage and Completion Rate of Students

Program – B.E.	Year of Admission	Total No. of Students Appeared	No. of Students Completed Successfully	Pass Percentage %
Computer Science & Engineering	2009-10	129	110	85.27
	2010-11	156	148	94.87
	2011-12	167	162	97.00
	2012-13	241	225	93.36
Electronics & Communication Engineering	2009-10	150	134	89.33
	2010-11	158	144	91.14
	2011-12	168	157	93.45
	2012-13	231	198	85.71
Information Science & Engineering	2009-10	67	63	94.03
	2010-11	71	65	91.55
	2011-12	81	75	92.59
	2012-13	80	71	88.75
Mechanical Engineering	2009-10	154	135	87.66
	2010-11	166	146	87.95
	2011-12	236	218	92.37
	2012-13	243	218	89.71
Electrical & Electronics Engineering	2009-10	68	60	88.24
	2010-11	78	70	89.74
	2011-12	84	74	88.10
	2012-13	73	66	90.41
Civil Engineering	2009-10	73	59	80.82
	2010-11	76	58	76.32
	2011-12	89	75	84.27
	2012-13	159	142	89.31
Biotechnology	2009-10	36	30	83.33
	2010-11	25	20	80.00
	2011-12	39	36	92.31
	2012-13	26	22	84.62

Program – M.Tech.	Year of Admission	Total No. of Students Appeared	No. of Students Completed Successfully	Pass Percentage %
Vlsi Design & Embedded Systems	2011-12	18	18	100
	2012-13	18	18	100
	2013-14	18	17	94.44
	2014-15	18	17	94.44
Computer Science & Engineering	2011-12	25	25	100
	2012-13	25	24	96.00
	2013-14	25	23	92.00
	2014-15	25	22	88.00

Digital Electronics & Communication	2011-12	25	25	100
	2012-13	25	24	96.00
	2013-14	25	25	100
	2014-15	25	24	96.00
Energy Systems Engineering	2011-12	18	17	94.44
	2012-13	18	17	94.44
	2013-14	15	15	100
	2014-15	9	9	100
Construction Technology	2011-12	18	17	94.44
	2012-13	18	17	94.44
	2013-14	18	18	100
	2014-15	18	18	100
Machine Design	2012-13	17	16	94.12
	2013-14	17	16	94.12
	2014-15	18	15	83.33
Computer Network Engineering	2012-13	18	18	100
	2013-14	17	17	100
	2014-15	18	17	94.44
Power Electronics	2014-15	16	14	87.50

Program	Year of Admission	Total No. of Students Appeared	No. of Students Completed Successfully	Pass Percentage
MBA	2011-12	175	159	90.86
	2012-13	179	173	96.65
	2013-14	161	145	90.06
	2014-15	171	153	89.47
MCA	2010-11	90	88	97.78
	2011-12	90	88	97.78
	2012-13	120	119	99.17
	2013-14	115	111	96.52

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION**3.1 Promotion of Research****3.1.1 Does the College have a research committee to monitor and address the issues of research? If yes, what is its composition? Mention a few recommendations which have been implemented and their impact.**

Yes.

- The institution has constituted **Research Advisory Committee** and **Research Executive Committee** to monitor the research activities and address the issues related to research
- Composition of **Research Advisory Committee**: Principal, Director (R&D), Dean (R&D) and 3 Professors (Nominated by Principal)

Table 3.1: Research Advisory Committee

Sl. No.	Name	Designation	Department
1.	Dr. Niranjana N Chiplunkar (Chairman)	Principal	CSE
2.	Dr. Vaman Rao C	HOD	Biotechnology
3.	Dr. Nagesh Prabhu	HOD	E&E Engg.
4.	Dr. I. Ramesh Mithanthaya	Vice Principal/ Dean (Academics)	Civil Engg
5.	Dr. Krishna Shenai	Director (R&D)	E&C
6.	Dr. Sudesh Bekal (Convener)	Dean (R&D)	Mechanical Engg.

Table 3.2: Research Executive Committee:

Sl.No	Name	Designation	Department
1.	Dr. Sudesh Bekal	Dean(R&D)	Mechanical Engg.
2.	Dr. Srinivasa Pai	Professor	Mechanical Engg.
3.	Dr. Udaya Kumar G	Professor	Civil Engg.
4.	Dr. Balasubramani	Professor	Information & Science Engg.
5.	Dr. Udaykumar Reddy	HOD	Computer Science and Engg.
6.	Dr. Sathyendra Kumar Shet	Professor	Electrical & Electronics Engineering
7.	Dr. Surendra Shetty	Professor	MCA
8.	Dr. K V SSSS Sairam	Professor	Electronics & Communication Engg.

Based on the recommendations of the committee following activities have been implemented:

- **Annual research conclave:** Research conclave is being held for the research scholars (Ph.D. students) of the institution where they present their work and progress.
Impact: The quality of research and publications has improved.
- **Research incentives:** Monetary incentives are provided to faculty members for all types of research activities such as paper publications, research grants and patents.
Impact: The number of journal/conference papers has increased in the last 2 years compared to earlier years.
- **Publishing Annual Research Journal:** The College is publishing an annual research journal. The best papers from the international conferences organized by the college are peer reviewed and selected for publication.
Impact: It has improved research eagerness among the faculty members and

exposed to the latest developments in their domains.

- The **MBA Department publishes Nitte Management Review** – A bi-annual trans-disciplinary research journal since 2007. Both print and on-line versions are brought out. The Journal primarily focuses on a variety of issues in the area of management. The Journal is indexed in EBSCO, J Gate, i- scholar.

Impact: The journal has provided a platform for faculty members to publish their papers. It has provided recognition to the college.
- Best Researcher Award:** Best Researcher award has been constituted in the Institution. Research parameters such as research grants received, journal publications, patents, Ph.Ds. guided and review of research papers are considered for the award.

Impact: Created competitive research environment amongst members of the faculty.
- Financial support for attending workshops/FDPs/ conferences:** A minimum of 50% expenses towards registration fee and travelling are reimbursed to all faculty members.

Impact: The number of faculty members attending the conference and presenting paper has increased in the last two years.
- Summer research internships:** Summer Research Internship for UG students has been initiated to involve students in research related activities for which the college provides financial assistance.

Impact: Large numbers of students are enrolling for the internship programme and work under the supervision of Doctoral scholars.
- Product Development Cell:** Product development cell has been functional to develop student projects into patentable products. The funding is being provided by the college.

Impact: Work on **Plasmid Isolation Kit** has been developed in the biotechnology department. A project on development of **MicroLablet** is successfully completed by the department of E&E.
- E-Procurement support for Researchers:** E-Procurement support such as registering to portal, publishing tender, etc. is being done centrally to facilitate purchases centrally.

Impact: The researchers spend more time on their research.
- Collaboration with other Institutions:** The College has established collaboration with Singapore National University, Penn State University, USA, Ritsumeikan University, Japan, and University of Agriculture, India etc. to enhance quality of research.

Impact: Few of our researchers/students visited Singapore National University, Ritsumeikan University and Penn State University for research interactions.
- Granting monetary incentive for pursuing Ph.D.:** The College is providing financial assistance of Rs. 2,000 per month to faculty members who have successfully completed the Ph.D. course work till their Ph.D. degrees are awarded.

Impact: The number of teachers registering for Ph.D. has increased in the last two years.
- Providing Publicity for the faculty research among students:** Information about research grants, patents, facilities are uploaded onto the website. Recent research publications are put on display.

Impact: Visibility of the research work is enhanced and motivated others to pursue research.

3.1.2 What is the policy of the College to promote research culture in the College?

- Faculty members can avail leave with pay on specific requirements to pursue Ph.D.
- College offers full time Ph.D. programme with stipend to promote research activities from 2016.
- Incentives are given in the form of promotions and monetary benefits for research publications, reviewing research articles, and procuring research grants.
- TA, DA and registration fee is provided to present paper in National/ International conference.
- B.E students' project exhibition and presentation "EXPRO" is organized in the month of April. Cash rewards for the three Best projects every branch of engineering B.E programme.
- Undergraduate and PG students are encouraged to present papers in national/international conferences and their travel and registration expenses are borne by the college.
- Students have been given the opportunity to take up mini projects by registering to audit course for 60 days during summer vacation.
- To encourage faculty to undertake Ph.D. studies, an allowance of Rs. 2,000/- for those who complete their Ph.D. course work and sabbatical leave for completing the critical part of their Ph.D. work are provided.
- To encourage research activity and Ph.D. studies incentive in the form of promotions are given. Example: Faculty members are promoted to the rank of Associate Professors on submission of their Ph.D. thesis. On award of Ph.D., faculty members are considered for promotion to the post of Professors against vacancies.
- Short fall in the budget proposed and grant received from funding agencies, is made up by supportive funding from the management.
- In deserving cases, academic work load is reduced for the faculty with external research grants.
- Establish connection with National and International University to strengthen the research activity under faculty exchange programme.
- In the department of MBA, faculty members make presentations on research topics who are working for their Ph.D. research. They are advised and suggestions are given by senior faculty members, to make improvements in the objectives, hypotheses, methodology, review of literature and report writing.
- Encourage student partnership by offering summer internship, summer projects, product development, and incubation activity and providing funding for the above activities (Example: student SAE BAJA project, Robotic projects, App Development, Plasmid culture development)
- Establishing MoU with foreign University and deputing PG students for carrying out their projects (Example: Five PG students did their 8 month project at Ritsumeikan University, Japan)
- Make research Journals available online - Journals are accessible through EBSCO (in MBA), through VTU consortium for other engineering and MCA departments.
- Developing student research skills through research internship
- Sharing the expertise of experienced faculty members with research skills to those who need assistance in developing their competence for research.
- Faculty show commitment to collaborate with renowned institutions and participate in curriculum planning with an emphasis to promote research.

- Establish International Collaboration
- Participate in interdisciplinary research.
- Ph.D. students registered in the college are encouraged to present their research work during “Research Conclave”.
- M.Tech students’ research project exhibition and presentation is held during International Conference on Emerging Trends in Engineering every year.

3.1.3 List details of prioritised research areas and the areas of expertise available with the College

Table 3.3: Details of Expertise in Prioritised Research Areas

Sl.No	Name of Experts	Department	Research Area
1.	Dr.Vaman Rao	Biotechnology Engineering	Biofuel (Bioethanol, Biodiesel) production
2.	Dr. Vidya S M	Biotechnology Engineering	Probiotics and Prebiotics in Food and Medicine
3.	Dr. Ujwal P	Biotechnology Engineering	Plant tissue culture, Phytoremediation, Proteomics
4.	Dr. Chetan D. M	Biotechnology Engineering	Environmental biotechnology, Microbial biotechnology
5.	Dr. Shyama Prasad Sajankila	Biotechnology Engineering	Nano-technology, Cell & Molecular Biology
6.	Dr. Anil Kumar H.S	Biotechnology Engineering	Biochemistry, Enzymes and Glycobiology
7.	Dr. Barath B.R	Biotechnology Engineering	Bioinformatics, System Biology
8.	Dr. Shrinivasa Rao, Dr. Narasimha Bailkeri B R Dr. Shashikantha Karinka, Dr. Sudesh Bekal, Dr. Mallikappa	Mechanical Engineering	Alternative Fuels for IC Engines and Emissions, Renewable energy, solar, biomass, Green Manufacturing
9.	Dr. Subrahmanya Bhat K	Mechanical Engineering	Total Quality Management
10.	Dr. Srinivas Pai	Mechanical Engineering	Tool Condition , Artificial Neural Networks, Machining
11.	Dr. Muralidhar Rao	Mechanical Engineering	Micromachining, Micro milling, Embedded control
12.	Dr. Narasimha Marakala	Mechanical Engineering	Fluid induced vibration
13.	Dr. Srinath Shetty, Dr. Ramesh Mithanthaya, Dr. Bhavani Shankar Rao	Civil Engineering	Soil Mechanics, Structures
14.	Dr. Udaya Kumar G	Civil Engineering	Water conservation in lateritic formations
15.	Dr.Radhakrishnan. K	Civil Engineering	Geohydrology, Micro watershed, Geophysics and Geometrics (Remote sensing and GIS) Applications

16.	Dr.Akshatha Shetty	Civil Engineering	Structures, Concrete Technology, Structural Dynamics
17.	Dr. S K Mahadeve Gowda	Civil Engineering	Hydraulics and Water Resource
18.	Dr. Nagesh Prabhu	E&E Engineering	Custom Power Devices and Power Quality, Power System Dynamics and Control Power Electronics Renewable Energy, Smart Grid
19.	Dr.Sathyendra Kumar	E&E Engineering	Power Electronics & drives, Renewable energy, Energy management and audit
20.	Dr. Pius Pinto	E&E Engineering	Power Electronics & drives, Renewable energy, Control Systems
21.	Dr.Niranjan Chiplunkar N	Computer Science Engineering	High Performance Computing, Parallel Computing and Compilation Techniques, Multi, Many core and Hybrid computing, CAD for VLSI, Networking-
22.	Dr.Udaya Kumar Reddy	Computer Science Engineering	Graph Algorithms, Theoretical Computer Science
23.	Dr. D. K. Sreekantha	Computer Science Engineering	Soft Computing, Risk Management Expert System Design
24.	Dr. Uday Kumar Shenoy	Computer Science Engineering	Computer Networks, Operating Systems
25.	Dr. Mohammed Javed	Computer Science Engineering	Image Processing, Pattern Recognition, Data Compression
26.	Dr. Neelima B	Information Science and Engineering	High Performance Computing, Architecture and Compiler Optimizations, Distributed Computing, Big Data Processing and Analytics, Cryptography and Network Security
27.	Dr.Balasubramani	Information Science and Engineering	Image Processing
28.	Dr. K. Rajesh Shetty	Department of E&C	Communication Systems, Wireless Communication, MIMO Systems, Error Control Coding, Space Time Coding
29.	Dr.M. K. Parasuram	Department of E&C	Power Electronics, Analog Electronics, Digital Electronics
30.	Dr.Rekha Bhandarkar	Department of E&C	Digital Signal Processing, VLSI
31.	Dr.K.V.SSSS. Sairam	Department of E&C	Optical Communications

32.	Dr. Veena Devi	Department of E&C	Remote Sensing and Image Processing
33.	Dr.Krishna Shenai	Department of E&C	Signal Processing, Commun. Systems and Power & Energy Systems
34.	Dr. K. S. Shivaprakasha	Department of E&C	Wireless Sensor Networks, Information Theory, Error Control Coding, Cryptography
35.	Dr.Janardhan Nayak	Department of Chemistry	Synthetic organic chemistry
36.	Dr.Ramesh Bhat	Department of Chemistry	Multilayer coating and corrosion
37.	Dr.Aarti Bhat	Department of Chemistry	Nanotechnology
38.	Dr.Shashirekha Rai	Department of Mathematics	Lattice Theory
39.	Dr. Shankaran P	Department of Mathematics	Graph Theory
40.	Dr. Sharad Hegde	Department of Mathematics	Number Theory
41.	Dr.Sharada Prabhu Dr. Manjunath K B	Department of Physics	Crystal Growth, Composite Materials
42.	Dr.G.K. Shiva Kumar	Department of Physics	Semiconductor Thin films
43.	Dr.Mohan Hegde, Dr.Surendra Shetty	Department of MCA	Software Engineering, Data Mining
44.	Dr.Karuna Pandit	Department of MCA	Cryptography and Random number generation
45.	Ms. Sarika Hegde	Department of MCA	Automatics Speech Recognition –
46.	Dr.Sankaran	Department of MBA	Strategy and Macro Organizational Studies
47.	Dr.N K Thingalaya	Department of MBA	Banking and Finance
48.	Dr.N.S Shetty Dr.GV Joshi Dr.Sudhir Raj K	Department of MBA	Agriculture Economics, Economics, Economics and Entrepreneurship
49.	Dr.Ashalatha K	Department of MBA	Financial Inclusion and Women Empowerment
50.	Dr.Sudhir M	Department of MBA	Corporate Social Responsibility
51.	Dr.Vanishree Joseph	Department of MBA	Social and Public Policy Analysis
52.	Dr.Divakar Bhat	Department of Library	Library Electronic Consortium

3.1.4 What are the proactive mechanisms adopted by the College to facilitate smooth implementation of research schemes/projects?

➤ **Timely release of grants**

- **Advancing funds for sanctioned projects:** Once the sanction letter is received from funding agency. Moreover, additional grant is also provided if the sanctioned grant is not sufficient for carrying out the research project.
- Once the research grant is credited to the project account the same is released, against the request of Principal Investigator according to the standard procedure followed by the Institution.

➤ **Autonomy to the principal investigator/coordinator for utilizing overhead charges**

- Principal Investigator has been given full autonomy as far as utilization of overhead charges are concerned, bills need to be provided and the accounts should be audited for the financial year.

➤ **Providing start-up funds and other facilities for research**

- Providing furniture, un-interrupted power supply, laboratory facilities to the faculty members who wish to start research work.
- Funding for developing research lab infrastructure through seed money by the college.

➤ **Timely auditing**

- Accounts section of the college has a mechanism to audit the accounts. Auditing of the project account is done on yearly basis for the financial year ending at 31st of March of every year by the Institute.

➤ **Submission of utilization certificate to the funding authorities**

- Principal Investigator of the project prepares the utilization certificate on yearly basis and submits it to the Accounts Department.
- Based on the utilization certificate the accounts department prepares the audited financial report for the each financial year of the project on receipt of audited financial report from the accounts department, the principal investigator of the project submits the utilization certificate to the funding authorities through the head of the Institute.

➤ **Weekly Research Meetings**

- The department of MBA has internal research committee to promote research culture. The department conducts research meetings every Friday and uses this platform to discuss the working papers, research article review, book review, research proposals etc. Constructive feedback is given to the scholar during this meeting.

➤ **Support Structure**

- Purchase department is constituted in the College to help purchase of equipment for research purposes. The office of Dean (R&D) facilitates e-procurement of purchases. Research proposals (for Grants) are scrutinized by Dean (R&D) before onward submission and thereby ensure all requirements of the research proposals for grants are met.

➤ **Mentoring**

- Senior faculty members motivate the junior staff members to carry out research by sharing their knowledge and guidance.

3.1.5 How is interdisciplinary research promoted?

➤ Among different departments of the college

- The culture of Interdisciplinary research among faculty and students of different disciplines has been initiated. Interdisciplinary funded projects in the area of Physics, Chemistry, Biotechnology and Mechanical departments of common interest have been executed. Faculty and Students from different disciplines work together in carrying out these projects which involves research internship and product development by applying for grants for projects by collaborating with other departments within the college.
- The research journal published by the Institution provides scope for publishing interdisciplinary research outcomes.
- Interdisciplinary research activities amongst various departments have resulted in 11 completed funded projects with a total funding of Rs 47,79,889. The details are given in Section 3.4.6.

➤ Collaborations with National / International institutes/Industries

- To promote interdisciplinary research, a Professor, **Dr. Krishna Shenai**, who has 35 years of service in various universities of USA, has been inducted as Distinguished Professor and Director (R&D).
 - o 11 Interdisciplinary projects have been applied for funding during the academic year 2016-17 and the details are given below.

Table 3.4: Interdisciplinary Projects Applied For Funding

Sl. No	Scheme	Granting agency	PI/CoPI	Title of the Project	Budget
1.	Cognitive Science Research Initiative	DST	Dr. Krishna Shenai /Dr. Radhakrishnan K. / Dr. Maheshwar. S. Shirahatti (RARS, Vijayapura)	Sustainable Green Irrigation System for Agriculture Automation with Embedded Cognitive Intelligence	5 crores for 3 years
2.	INDO –US Joint Proposal in The Area of Low Cost Medical Devices	DBT	Dr. Krishna Shenai / Dr. Neelima/ Dr. Ananthan Raghothaman (KSHMA)/Dr. Dattatraya Narayan Gaonkar (NITK)	Low – Cost Minimally Invasive Spinal Surgical (MISS) Robot	1.58 crores for 2 years
3.	Call for Proposal on River Cleaning	DBT	Dr. Binaya Bhusan Nayak (CIFE Mumbai)/ Dr. I. Karunasagar (NUCSER)/ Dr. Krishna Shenai / NMAMIT.	Microbial Consortia for bioremediation of nitrogenous waste from fish processing industry effluent	INR 50 Lakhs for NMAM IT for 3 years
4.	Solar Energy Research Initiative	DST	Dr. Krishna Shenai / Dr. Shashikant Karinka	Scalable Highly Efficient DC Solar Power System for Green Buildings and Communities	INR 3 crores for 3 years

5.	Indo-Poland Joint Research Program	DST	Dr. Krishna Shenai/ Dr. Eliana Kaminska, Poland/ Dr. Nagesh Prabhu	Robust Gallium (GaN) Diode	Vertical Nitride Power	INR 2.7 crores for 3 years
6.	Applied Research/Technology Validation	MNRE	Dr. Krishna Shenai/ Dr. Ramarathnam, BASIL Energetics Private Limited, Chennai/ Dr. Dattatraya Narayan Gaonkar(NITK)/ Dr. Shashikanth Karinka	Highly Scalable Wind Hybrid System	Efficient Small Energy Power	INR 3.6 crores for 3 years
7.	National Program on Unmanned Marine Vehicles (NP – UMV)	IE	Dr. Krishna Shenai/NMAMIT Dr. I.Karunasagar / (NUCSER)	Advanced Wireless Sensors and Communication networks to detect microbes and their metabolites in marine waters and sediments		500 lakhs
8.	BRICS STI Framework Programme Coordinated Call for BRICS Multilateral Projects – Pilot Call 2016	DST	K. Shenai (PI: NMAM IT, India) Bo Zhang (co-PI: UESTC, China) and Denziar Martins (co-PI: Federal University of Santa Catarina, Brazil)	“Wide bandgap semiconductor power electronics for energy efficiency and sustainable green electricity”		INR 40 Lakhs for India; RMB 2 million for China; R\$ 380,000; and R\$ 380,00 for Brazil for 3 years
9.	CESEM	VGST	Dr. Krishna Shenai	Cognitive Wireless Sensor Networks for Smart Agriculture		60 lakhs
10.	National Program on Unmanned Marine Vehicles (NP – UMV)	IE	Dr. Krishna Shenai	Advanced Power Management of UMVs		300 lakhs
11.	Indo-US FOA# DE-FOA-0001606	DST	Dr. Krishna Shenai	“Institute of Smart Grid and Energy Storage for Indo-US (InGENIoUS)”		INR 3.45 crores for 5 years

- o **Dr. Krishna Shenai** has been selected as an **Honorary Advisor to the Centre of Excellence in Nano Electronics** at Electrical Engineering of IIT Bombay effective from 06-03-2017.
- o As per the request of Department of Science & Technology (DST)/Department of Heavy Industry (DHI), **Dr. Krishna Shenai** spearheaded the formation of two Consortia to develop electric vehicle (EV) technologies for 2-wheelers, 3-wheelers and 4-wheelers. At present, he is working as a key member of both consortia teams.
- o He is associated with Niti Aayog in developing a project plan for the manufacture of high-voltage silicon IGBT and SiC power MOSFETs in India.
- o He was the Distinguished Lecturer, *IEEE Electron Devices Society*, during 1998-2016.
- o He has been selected as Distinguished Lecturer (DL) by the IEEE Power Electronics Society (PELS) for years 2017 and 2018.
- o **Dr. Krishna Shenai** has 6 research publications in renowned International Journal/Conferences during the year 2016. The details of publications are given in **Appendix E.9**.

3.1.6 Enumerate the efforts of the College in attracting researchers of eminence to visit the campus and interact with teachers and students?

The college was part of TEQIP phase I and II. Under this scheme, the college has conducted many programmes, seminars, conferences and programmes for faculty and students by involving researchers of National and International repute, either as session experts or as keynote speakers.

➤ The Institution holds the following programmes regularly for which eminent researchers are invited:

1. NMReCon – Research scholars' conclave in the month of May every year.
 2. International Conference in Emerging Trends in Engineering (ICETE) is organized in the month of May every year.
 3. International Conference is held once in two years in the department of MBA on various themes in the month of December.
 4. National Conference organized once in two years by the department of MBA in the month of December
 5. National Conference is organized by E&E in the month of April every year.
 6. In addition, several other workshops, seminars, and FDPs are conducted by various departments.
- The details of 26 researchers of eminence visited during 2011-2016 are given in **Appendix E.10**

3.1.7 What percentages of faculty have utilized sabbatical leave for research activities? How has the provision contributed to the research quality and culture of the College?

- Faculty members are deputed to Penn state University, USA and Ritsumeikan University, Japan for research work and interaction for a period of one month – Till date **7 faculty members have availed** this facility.
- **4 faculty members pursuing part time Ph.D.** are **given sabbatical leave** stretching to a year, in order to help them speed up their work.

- **3 faculty members** are given **sabbatical leave** to complete their **Ph.D. course work**.
- For the past five years **20 faculty members** were **deputed for pursuing full time M.Tech**
- For the past five years **8 faculty members** were **deputed for pursuing full time Ph.D.**
- **Contributions to the research Quality and culture:**
 - o Establishment of research centers
 - o Increase in number of faculty pursuing research leading to Ph.D.
 - o Research papers have received Best paper awards.
 - o Publication in reputed journals has increased.
 - o Ph.D. thesis have received Best Thesis award.
 - o Faculty members submit proposals for funded research.
 - o Increase in number of faculty members with Ph.D. qualification

3.1.8 Provide details of national and international conferences organized by the College highlighting the names of eminent scientists/scholars who participated in these events.

Table 3.5: Details of National and International Conferences Organized by the College

Sl. No	Title of Conferences	Date	Resource person	Number of Participants	Department	Support
1	International Conference on Computer Architecture Networking and Applications	Jan7 th to Jan 12 th 2011	Prof Omid Ansary, Associate Dean of Penn State University, USA	300	CSE	TEQIP
2	International Conference on Emerging Trends in Engineering ICETE 2011	May 4 th & 5 th May 2011.	1.Dr L S Srinath, Former Director, IIT, Madras 2.Dr. P. Nagabhushan, Principal, BTI, Bangalore	240	ISE	TEQIP II
3	One day conference on Open Source Virtualisation	12 th August 2011	Mr. Diyanshu Verma (Linux Engineering Team, Dell R & D) Mr. Surya Prabhakar (Linux Engineering Team, Dell R & D)	100	MCA	Dell R & D and TEQIP
4	Current Scenario in Biofuel Technologies Conference	Dec, 19 th 2011	Dr. Sairam Rudrabatla Asst. Professor Pennsylvania State University, Harrisburg, Dr. Prakash Kumar, Professor, Dept. of Biosciences, National University of Singapore Mr. Y. B. Ramakrishna Chairman, Karnataka State Biofuel Development Board	120	BTE	Partly by NET and the rest by TEQIP

5	National Conference on Development Challenges in the 12th Five Year Plan	29-30th Dec, 2011	Sri Saumitra Chaudhuri, Member Planning Commission, Justice N. Santosh Hegde, Dr. Prakash Bhakshi, Chairman, NABARD Sri. K Kanaga Sabhapathy, Director, EPW Research Foundation, Mumbai Dr. Brinda Jagirdhar, Chief General Manager, SBI, Mumbai Sri. T V Bhat, Former General Manager, Syndicate Bank, Manipal. Dr. S T Bagalkoti, Professor, Dept. of Economics, Karnataka University, Dharwad	51	MBA	NMAM IT
6	National Conference on Advances in Electrical Engineering NCAEE-11	December 9-10, 2011	Mr. Chandrashekaraiya Senior executive engineer, SCADA, Bangalore	30	EEE	TEQIP
7	International Conference on Emerging Trends in Engineering- ICETE-2012	15/05/2012 to 16/05/2012	1. Dr. S.O. Ojoawo, Ladok Akintola University of Technology, Nigeria. 2. Dr. Apitep Saekow, Stamford International University, Bangkok. 3. Prof. Nilesh J Vasa, IIT Madras, Chennai. 4. Dr. R. Nagaraja, Managing Director, Power R&D consultants Pvt. Ltd, Bangalore. 5. Mr. Shashidhara Dongre M, Practice Head, L&T Infotech, Bangalore. 6. Mr. Girish Aithal, Director, Melior Learning Solutions, Bangalore. 7. Mr. Vipin Kumar, Infosys Technologies, Mangalore.	600	CSE	TEQIP
8	International conference on Recent Advances & Challenges in Biotechnology	Dec, 27th – 29th 2012	Dr. Prakash Kumar, Professor, Dept. Of Biosciences, National University of Singapore Dr. Arun Isloor, Associate Professor, Dept. of Chemistry, NITK Surathkal Dr. Madhusudhan, Professor and Dean, Research Centre for Nano science and Technology Dr. Gopal Marathe, Associate	130	BTE	TEQIP

			Professor, Dept. of Biochemistry, Manasagangotri Dr. Sairam Rudrabhatla, Associate Professor, Dept. of Environmental Science, Pennsylvania State University, Harrisburg			
9	International Conference on Development Challenges: Global Aspirations and Local Realities	29th and 30th Dec, 2012	Dr. Kiyofumi Kawaguchi, Chancellor, Ritsumeikan University, Japan. Dr. Lucas Meijis, Professor, Erasmus University, Netherlands. Dr. Femida Handy, University of Pennsylvania, USA. Dr. Waswa Balunywa, MUBS, Uganda Dr. Srinivas Madhur, Director of Research, Kambodia Development Resource University.	83	MBA	NMAM IT
10	National Conference NCAEE- 13	April 12, 13, 2013	Mr. D.T. Barki Chairman and MD, Noble Energy Solar Technologies Ltd	45	EEE	TEQIP
11	International Conference on Emerging trends in Engineering. ICETE-13	5-6, May 2013	Dr. Rama Bhat Mechanical & Industrial Engineering Department, Concordia University, Montreal, Quebec, Canada	275	Me ch	TEQIP
12	National Conference on Market, State, Society in Emerging India	29th and 30th Dec, 2013	Dr. Vinod Vyasulu, CBPS. Dr. T S Ravishanker, Retd. Professor, NIBM, Pune. Dr. R Venugopal, Director, MIM, Manipal Dr. C S Thammaiah, Director, IMA, ICICI Manipal Academy of Banking and Insurance, Bangalore Shri V. K Thalithaya, President, Primacy Industries, Mangalore Mr. Jagdish Kini, Founder Partner E5C Bangalore.	45	MBA	NMAM IT
13	National Conference on Multimedia & Information Security (NCMIS-14)	25-26 Feb, 2014	Dr. Sanjeev Kunte, JNNCE, Shimoga	80	CSE	TEQIP

14	International Conference on Power Electronics & Drives - ICPEDS-2014	10-11th April 2014	Dr. Shripad T Revankar, Professor & Director of Multiphase & Fuel Cell Research Labs, PURDUE University, West Lafayette, IN47907 USA	78	EEE	TEQIP
15	International conference on “Emerging Trends in Engineering” ICETE-2014	15th to 17th May 2014	Samsong Ozavo – Post Doc scholar	81	CV	TEQIP II
16	International Conference on Higher Education with Special Emphasis on Management Education	29th and 30th Dec, 2014	Dr. Satinder Dhiman, MBA Director and Chair School of Business, Woodbury University USA Dr. Michael Page, Provost and Vice President for Academic Affairs, Bentley University USA Dr. Dianne Lynne Bevelander, Professor of management Education, Rotterdam School of Management, Netherlands. Dr. Paul Dekker, Professor of Civil Society, Tilburg University, Netherlands Institute for Social Research. Mr. Thothathri Raman, Chairman, SEAA Trust New Delhi. Dr. Alex Hankey, Professor of Yoga and Physical Science at Swami Vivekananda Yoga Ausandana Samsthana(S-VYASA) Bangalore Dr. Sangeetha Menon , School of Humanities, NIAS, Bangalore Dr. Lucas Mejis, Professor, Rotterdam School of Management, Erasmus University, Netherlands	36	MBA	NMAM IT
17	National Conference on Advances in Electrical Engineering (NCAEE-2015)	2nd April 2015	Dr.K.P.Vittal, NITK, Suratkal	42	EEE	TEQIP
18	Gluster FS Conference	11 th April 2015	Resource persons from Red Hat	100	MCA	Red Hat

19	International Conference on Emerging Trends in Engineering (ICETE-15).	May 8th and 9th May 2015	Mr. Vithal Madyalkar, Country Manager, IBM Innovation Centre, Bangalore Dr. Sourav Dutta Executive Telecom Consultant & Cloud Leader, IBM, Bangalore Dr. Swapan Bhattacharya, Director, NITK, Surathkal, Mangalore 4. Dr. S D Sudarsan Group Leader, ABB Corporate Research Centre, Bangalore	86	ISE	TEQIP II
20	National Conf. on Emerging Computing Paradigm	11-12th March. 2016	Dr. Krishna Shenai, NMAMIT	30	CSE	NMAM IT
21	National Conference on Ethics and Governance in Management	29-30th Dec, 2015	Mr. Tusarnath Mohapatra, Director, Savithri Era Learning Forum, Ghaziabad Mr. Shankar Jagannathan, Founder and CEO, CimpliFive Corporate Secretarial Services, Bangalore Dr. Narayana A, Azim Premji University Bengaluru Dr. Radhakrishna Pillai, IIM Kozhikode Mr. Om Prakash Dani, Vice Chairman, Shri Arabindo Foundation, Pudhuchery	30	MBA	NMAM IT
22	Nitte Open Source International Conference	18th & 19th March 2016	Mr. Dan Lambright, Principal Software Engineer, Mr. Kaleb S Keithley, Senior Principal Software Engineer, from Red Hat Westford, Mr. Niels de Vos, Senior Software Engineer from Red Hat Netherlands. Mr. Joseph Elwin Fernandes, Senior Software Engineer, Mr. Vishwanath Bhat, Senior Quality Assurance Engineer, Lalatendu Mohanthy, Senior Software Engineer, Soumya Deb, Platform Evangelist, Atin Mukharjee, Senior Software Engineer, Rafi Kavungal Chundattu Parambil, Associate Software Engineer from Red Hat India Pvt.Ltd,	175	MCA	TEQIP

23	Nitte Conference on Advances in Electrical Engineering (NCAEE-2016)	April 11, 12, 2016	Er. Ramakrishna, Director Technical, MESCOM, Mangaluru	73	EEE	TEQIP
24	International Conference on Emerging Trends in Engineering (ICETE-2016)	12-13th May 2016	Dr. Shivkumar Kalyanraman, Former Professor, ECSE, Rensselaer Polytechnic Institute, Troy, New York,	151	E&C	TEQIP
25	Fifth International Conference on Social Entrepreneurship as a Means to achieve Win-Win Situations : Global Experiences, Achievements and Perspectives	29-30 Dec 2016	Mr. Muralidhar Koteswar, Managing Director, Avankia Group, Bangalore Dr. Satyajit Majumdar, Professor, Tata Institute of Social Sciences Mumbai Dr. Narasimhan Srinivasan, University of Connecticut School of Business Dr. Satinder Dhiman, Associate Dean of Business - MBA Program Chair, Professor of Management and Accounting - Woodbury University School of Business Dr. P. V Bhandari, Director, Dr. A.V Baliga Memorial Hospital, Udupi Dr. Gururaj H. Kidiyoor, Professor & Director-In Charge, T. A. Pai Management Institute	65	MBA	NMAM IT

3.1.9 Details on the College initiative in transferring/advocating the relative findings of research of the College and elsewhere to the students and the community (lab to land).

To showcase the research findings of faculty members to students the following arrangement has been made:

1. Faculty members' research publications are exhibited in a bill board.
2. Undergraduate students are involved with PG & research students in the department of Mechanical Engg. & Biotechnology Engg.
3. The PG students are attending presentations of research scholars during research scholars' conclave, NMReCon.
4. Conducting workshop to disseminate the research finding to students and faculty members.
5. Annually, exhibition of final year projects is held during a special programme called EXPRO where in the students from lower semesters are encouraged to interact with seniors.
6. The faculty members in the college transfer their research findings to students in the course of their regular teaching and also in preparing teaching materials.

➤ **Other involvements of the institutions with Society in the transfer of technology are as follows:**

1. Empowering local youth and women through a short term training program organized by Entrepreneurship Development Cell. For ex., CNC training, Machine Shop Training, Fitter, Garment Stitching.
2. Through biofuel Information and demonstration centre, arrangement has been made for production and use of biodiesel, distribution of saplings of biofuel plants and oilcake. This project is sponsored by Karnataka State Biofuel Development Board, Ministry of Panchayatraj, and Government of Karnataka. This centre has produced and marketed about 1500 litres of biodiesel and more than 3.5 tons of oil seed cake. The biodiesel is currently being used by NMAMIT for some vehicles, buses of GM Vidyaniketan Brahmavar, Udupi and generators of some of the restaurants.
3. A project carried out by Dr. Vidya S.M on Production and distribution of tissue culture plantlets of banana var. "Grand Naine" for the economic empowerment of the rural marginal SC/ST farmers and weaker sections of Udupi District, Karnataka, with the assistance obtain from DBT, New Delhi, has resulted in increase in productivity of Grand Naine Banana variant in the villages of Udupi district.
4. The weaker sections of the society in these villages have been economically benefited. About 25 thousand banana tissue culture plantlets were produced and distributed to farmers (125) of Udupi District. Total profit per farmer was found to be Rs.78, 279.
5. The knowledge acquired by the farmers on cultivation practices of tissue culture plants has helped them continue the practice. About 52 girls of the locality have been trained in tissue culture. This has enabled the girls to get employment in commercial tissue culture laboratories or establish their own tissue culture laboratories.

3.1.10 Give details on the faculty actively involved in research (Guiding student research, leading research projects, engaged in individual or collaborative research activity etc.)

➤ **Details of Faculty guiding Ph.D.**

44 faculty members are guiding Ph.D. The details are given below.

Table 3.6: Details of faculty guiding Ph.D.

S.No.	Name of the Faculty	Department	Number of Ph.D. Students guided	Number of Ph.D. Student being guided
1.	Dr. Niranjana N Chiplunkar	CSE	03	08
2.	Dr. Udaya Kumar Reddy	CSE	-	01
3.	Dr. Udaya Kumar K Shenoy	CSE	-	02
4.	Dr. Nagesh Prabhu	E&E	02	04
5.	Dr. Satyendra Kumar	E&E	-	02
6.	Dr. Pius Pinto	E&E	-	06
7.	Dr. Shrinivasa Rao	Mech	03	03
8.	Dr. Srinivas Pai P	Mech	02	06
9.	Dr. Muralidhar Rao	Mech	-	04
10.	Dr. Subrahmanya Bhat	Mech	-	03
11.	Dr. Sudesh Bekal	Mech	01	01

12.	Dr.Mallikappa	Mech	-	01
13.	Dr. Narasimha Marakala	Mech	-	01
14.	Dr. Narasimha Bailkeri	Mech	-	02
15.	Dr. Shashikanth Karinka	Mech	-	01
16.	Dr. K. Sankaran	MBA	-	02
17.	Dr. G. V. Joshi	MBA	10	01
18.	Dr. Sudhir Raj K	MBA	01	-
19.	Dr. A. P. Achar	MBA	03	05
20.	Dr. Ashalatha K	MBA	-	01
21.	Dr. C Vaman Rao	BT	04	06
22.	Dr. Vidya S.M	BT	01	03
23.	Dr.Ujwal P	BT	01	02
24.	Dr. Shyam Prasad Sajnakila	BT	-	02
25.	Dr. Surendra Shetty	MCA	-	03
26.	Dr. Sharada G Prabhu	Physics	-	01
27.	Dr.Janardhana Nayak	Chemistry	-	05
28.	Dr. Ramesh Bhat	Chemistry	-	01
29.	Dr. Aarti Bhat	Chemistry	-	01
30.	Dr. Shashirekha B Rai	Maths	-	02
31.	Dr.P. Shankaran	Maths	-	02
32.	Dr. Sharad Hegde	Maths	-	01
33.	Dr. Sharada G. Prabhu	Physics	-	01
34.	Dr. Manjunatha K.B	Physics	-	01
35.	Dr. Udaya Kumar G	Civil	-	02
36.	Dr. I. R. Mithanthaya	Civil	-	05
37.	Dr. Srinath Shetty K.	Civil	-	01
38.	Dr. Radhakrishnan K.	Civil	-	03
39.	Dr. K.V. S.S.S.S. Sairam	E&C	-	01
40.	Dr. Rekha Bhandarkar	E&C	-	01
41.	Dr. Veena Devi Shastrimath V	E&C	-	01
42.	Dr. K. S. Shivaprakasha	E&C	-	02
43.	Dr. Balasubramani	ISE	-	05
44.	Dr.Neelima B	ISE	-	01

➤ **Details of Collaborative / Sponsored Project**

Table 3.7: Details of Collaborative / Sponsored Project

Sl. No.	Name of the PI	Dept	Completed Project Grant (Lakhs of Rs)	Project Ongoing Grant (Lakhs of Rs)
1.	Dr. Niranjan N Chiplunkar	CSE	2.0+10 ATOM Boards (Intel)	-
2.	Dr. Vidya S.M	BT	16.16 (DAE, New Delhi)	22.13 (DAE , New Delhi)
			23.01 (Ministry Science & Technology, New Delhi)	
3.	Dr. C Vaman Rao	BT	3.81 (DBT, New Delhi)	7.90 (KSBDB, Govt of Karnataka) yearly grant
			30.00 (VGST, Karnataka)	18.40 (DBT)
			10.50(KSBDB, Govt of Karnataka)	

			0.4(VGST, Karnataka)	
			2.36 Fellowship Grant for Two years(CSIR)	
			0.4(VGST, Karnataka)	
4.	Dr. Srinivas Pai P	Mech	17. 40 (AICTE, New Delhi)	
			6.5	
			0.15 (IE(I), Kolkata)	
5.	Dr.Muralidhar Rao	Mech	12.40 (VTU, Karnataka)	
			16.14 (SERB, DST, New Delhi)	
			0.3 (VGST, Karnataka)	
6.	Dr. Shashikantha Karinka	Mech	1.02 (NID, Ahmedabad)	-
7.	Anil Kumar	Civil	Incubation (KIBTS)	3 Lakh
8.	Dr. Aarti Bhat	Chem	-	4.0 (VGST,Karnataka)
9.	Dr. G. V. Joshi	MBA	1.50 (IIBF, Mumbai)	-
10.	Dr.N.S.Shetty	MBA	2.95 (Udupi Zilla Panchayat)	-
11.	Dr. Nagesh Prabhu	E&E	0.35 (Karnataka New Age Incubation Centre, Department of IT/BT, Government of Karnataka)	-
			0.4 (Vision Group for Science and Technology, Karnataka)	-
			2.55 towards equipment (HEXMOTO Controls Pvt. Ltd, Mysore)	-

➤ **List of Collaborative Projects (MCA Department)**

Table 3.8: List of Collaborative Projects (MCA Department)

Industry Name	Date of MoU	Area	Faculty In charge
Thinking Telecom Hats, Ahmedabad	8 th October 2014	Android App Development	Sarika Hegde
Tech Verve Solutions, Bangalore	07 th Feb 2017	Android and mobile applications development	K. M. Hegde
Pinacle Media Solutions, Udupi	28 th Jan 2017	Software development on Web Applications	Mamatha Balipa
Pinaka Informatics Private Limited, Bangalore	5 th April 2014	Web Applications	Surendra Shetty
Weltrix Pvt. Limited, Australia	1 st Nov 2014	Android applications	Karuna Pandit
Bloom Fresh Edibles Pvt. Ltd, Bangalore	19 th May 2014	Online Application Development	Spoorthi Shetty
Indygo Software Systems Private Limited, Bangalore	In process	Software Development	Pallavi Shetty

➤ **Prof. Krishna Shenai , Director R&D, NMAMIT:**

11 Interdisciplinary projects have been applied for funding during the academic year 2016-17 (Refer section 3.1.5 for details)

3.2 Resource Mobilization for Research**3.2.1 What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization for last four years.**

About Rs.60 lakh is earmarked for research which is about 1.5 % of the total budget. In the financial year 2016-17, Rs.1Crore is earmarked for Research which is about 2% of the total budget.

➤ **Budgeted Expenditures:**

Table 3.9: Details of Major Heads of Expenditure, Financial Allocation & Actual Utilization (in lakhs of Rs.) for the Last four years

Major Head	2012-13 in lakhs of Rs		2013-14 in lakhs of Rs		2014-15 in lakhs of Rs		2015-16 in lakhs of Rs	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
Research subsidy	3.0	0	3.0	15.25	3.0	8.0	7.0	3.0
Outside Seminar	1.5	1.5	1.0	0	3.0	5.0	1.5	4.0
Institutional Seminar	48	10	10.0	0	10.0	22.0	15.0	0.25
STUDSAT project	-	-	5.0	1.3	1.50	0.75	5.0	-
Aero club Projects	-	-	0.5	0.65	0.75	0.75	0.75	1.3
Product Development Centre Activity	-	-	0.5	0.39	-	-	-	-
SAE Projects	-	-	-	-	-	4.5	1.0	0.7
Journals	35.0	35.0	12.0	12.56	14.0	15.5	20.0	31.62
Internet charges (25% of the total)	6.75	6.75	8.75	9.82	11.25	9.87	11.25	13.25
Total	94.25	53.25	40.75	39.97	43.5	66.37	61.5	54.12
Gross Budget	2433		2858		3444		4092.6	
% of Gross Budget	3.87		1.42		1.26		1.5	

➤ **Non Budgeted Expenditures:**

In addition to the budget allocated for research as mentioned above, following is the expenditure for the research activities of the institution:

Table 3.10: Expenses Incurred on other Research Activities

Item	Year	Expenses in lakhs of Rs.	Remarks
Publication of research bulletin	2012	0.50	2015 onwards the activity has been discontinued
	2013	0.619	
	2014	0.50	
Holding of Research Scholars Conclave – NMReCon	2012	0.60	
	2013	0.802	
	2015	0.3305	

Publication of NMAMIT Research Journal & Nitte Management Review	2012	1.1676	
	2013	0.8840	
	2014	0.69	
	2015	1.45	
	2016	1.22	
Internship for PG students in Ritsumeikan University, Japan for 6 months	2013	11	Two students were participated in this programme
Faculty Research Exchange Programme at Penn State University, USA	2013	12	Two Staff Members from Biotech & Two Staff Members from Mechanical Engg. were in USA for one month
Research Incentive	2013	0.44774	
	2014	1.07677	
	2015	0.74832	
	2016	0.48418	
Seed Money for Researchers	2012	3.50	
	2013	6.00	
	2013	0.15	
	2014	0.10	
	2015	4.00	
	2016	12.30	
Expenditure on Post-Doctoral Scholar From Nigeria	2014	2.8	Post-Doctoral Studies was for 12 Months. 4 papers have been published

3.2.2 What are the financial provisions made in the College budget for supporting student research projects?

➤ Budgeted Details:

Following **Budgetary provisions** are made in the college budget for supporting student research projects.

Table 3.11: Budgetary Support for Student Research Projects

Item	2013-14		2014-15		2015-16	
	Rs in Lakhs		Rs in Lakhs		Rs in Lakhs	
	Budget	Actual	Budget	Actual	Budget	Actual
STUDSAT project	5.0	1.3	1.50	0.75	5.0	-
Aero club Projects	0.5	0.65	0.75	0.75	0.75	1.3
Product Development Centre Activity	0.5	0.39	-	-	-	-
SAE Projects	-	-	-	4.5	1.0	0.7
Total	6.00	2.34	2.25	6.00	6.75	2.0

➤ Non Budgeted Details:

In addition to the budgetary provisions, research activities of students have been financed by the college as indicated below.

- One UG Student (BT) was sent to Singapore National University, Singapore, for doing her final year projects in the year 2013 – Rs. 75,264.
- Three UG Students of BT were sent to Singapore National University, Singapore, for doing their final year projects in the year 2014 –Rs. 75,000.

- c) Two PG Students were sent to Ritsumeikan University, Japan, for doing their final year project in the year 2013- 5.5 Lakhs.
- d) PG students were sent to Ritsumeikan University, Japan, for doing their final year project in the year 2013- Rs. 50,000.
- e) Four UG students from Mechanical Engg were funded by the college together with NMAMIT Alumni association for their final year project during the year 2014-15. Total of Rs. 20,000.
- f) PG students are provided with funds to attend and present their research paper in conferences.
- g) Two UG students and a Research Scholar were deputed to Ritsumeikan University, Japan, during the year December 2015.

3.2.3 Is there a provision in the institution to provide seed money to faculty for research? If so, what percentage of the faculty has received seed money in the last four years?

Yes.

- For the academic year 2016-17, 16 Faculty members (5.4%) have received Rs.1,00,000/- each as seed money in support of initiating research in their domain.
- The institution has made provision for granting additional financial support as seed money to meet the shortfall in the money granted by the funding agencies. The details of seed money given to the Dept. of Mechanical Engg. are given below.

Table 3.12: Seed Money

Sl No	Project details	Funding Agency /date	Funds Received from funding agency Rs.	Additional financial support provided as seed money in Rs.
1	Embedded control system design for position & tracking control of a prototype actuator	DST 20/09/2012	13,54,000	6,00,000
2	Defect Characterization in antifriction bearing using vibration signal analysis for condition monitoring	VTU, Belagavi 3/10/2008	6,50,000	3,50,000
3	Investigations on machining depth control in micro-electro-discharge machining (micro-EDM) process using 3D process simulation	VTU Belagavi 10/12/2010	12,40,000	4,00,000
4	Modeling and optimization of surface Roughness in Ti- based alloys using vibration monitoring	AICTE project 31/03/2013	17,40,000	15,000
5	Surface Roughness Evaluation of Turned Surface using computer vision system	IE(I) Kolkata Project 31/03/2014	15,000	10,000
Total				13,75,000

3.2.4 Are there any special efforts made by the College to encourage faculty to file for patents? If so, provide details of patents filed and enumerate the sanctioned patents.

YES.

- The College has identified a patent attorney (OMS patent services, Bengaluru) to help the faculty members go through the patenting process. The College has a certified patent agent (Dr. Shashikanth Karinka, HoD of Dept. of Mechanical Engg.) to help the faculty members in the preparation of patent application. The college provides financial support for those who are applying for patent.
- In research Incentive scheme of the Institute, certain points are awarded to those who have secured patents.
- In the year 2016, NMAMIT has established a MoA with National Research and Development Corporation (New Delhi) for patenting and commercialization.

Table 3.13: Details of the Indian patents filed

Sl No	Application Number	Application Date	Dept.	Title	Faculty
1.	376/CHE/2009	20/02/2009	CSE	Biometric Attendance	Rajeev Rajkumar
2.	2586/CHE/2010*	06/09/2010	MBA	Leave Trading System	Radhakrishna Sharma
3.	3/CHE/2011	31/01/2011	E&C	Enhancing Data Integrity Multi Level Flash Memories	Udupi Sripathi Acharya / Dr. Rajesh Shetty
4.	0821/CHE/2011*	18/12/2012	CSE	Binary Tree	Sanju V. Dr.Niranjana N. Chiplunkar
5.	5285/CHE/2012	18/12/2012	BT	Wine Production Process	Mr. Vinayak B.Shet
6.	1598/CHE/2014*	26/03/2014	CSE	Scalable Modular Inter Connect	Sanju V. Dr.Niranjana N. Chiplunkar
7.	4383/CHE/2014	8/9/2014	BT	Synthesis of nanoparticles	Dr. C. V. Rao, Mr. Vinayak B.Shet, Sneha Nayak
8.	4435/CHE/2014	10/2014	BT	Biomass Quantification	Dr. Ujwal P.
9.	6186/CHE/2014*	08/12/2014	BT	Super Sensitive & Stable Gold Nano – particles	Dr. Vidya S.M
10.	1915/CHE/2016	13/04/2015	CS	Approach to Watermark Video on Mobile Device	Venugopala P.S
11.	12920/CHE/2016	13/06/2016	BT	Aqueous and Ethanolic Root Extract of Coix Lacryma-Jobi as an Antidote to Snake Venom	Dr. Vaman Rao

12.	201641020143	2016	BT	Ethanol Root Extract of coix lacryma – jobi as an a antidote to make venom – molecular docking studies	Dr. Vaman Rao
13.	201641038073	2016	E&C	Noninvasive blood pressure monitoring system using ayurvedic wrist pulse analysis	Mr. Sukesh Rao
14.	201641038074	2016	E&C	Cuff less noninvasive blood pressure measurement technique using multi sensor array	Mr. Sukesh Rao
15.	201741000898	09/01/2017	Mech.	Multiple Biodiesel seed Decorticator	Dr. Shashikanth Karinka

* Application fees paid by the College.

3.2.5 Provide the following details of on-going research projects:

Table 3.14: Ongoing Research Projects National and International

Year	Name of the project	Name of the funding agency/ Industry	Total grant received (Rs)
2014-2017	Attenuation of Pseudomonas aeruginosa virulence by dietary phytochemicals from vegetables as quorum sensing inhibitors	DBT, New Delhi	18,40,000/-
2014-2017	Investigation on the role of probiotic exopolysaccharides in the prevention of radiation induced injury.	DAE, New Delhi	22,13,750/-
2016-2017	Conversion of waste paper into useful bioproducts	Govt. of Karnataka, New Age Incubation Project under IT-BT	3,00,000
2015-2016	A study on total rural sanitation in India	Charles University, Prague	Rs.3,00,000/- (Approx.)

3.2.6 How many departments of the College have been recognized for their research activities by national / international agencies (UGC-SAP, CAS, DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthrough due to such recognition.

Six departments (Mech, CSE, BT, Physics, MBA & Chemistry) have received grants from DST, DAE, VGST, CSIR, AICTE, Ministry of Finance, New Delhi, Indian Council of Social Science Research, New Delhi, IIBF, Mumbai, DBT, New Delhi etc. The quantum of assistance received is as shown below:

Table 3.15: Quantum of Assistance Received by National / International Agencies

Sl. No	Department	Assistance Received (in Lakhs of Rs.)	Sanctioning Agencies
1	Bio Technology	148	VGST, Karnataka KSBDB, Karnataka DBT, New Delhi DAE, New Delhi Karnataka New Age Incubation Project under IT-BT(GoK), KSCST, Karnataka.
2	Mechanical Engg.	70.2	VGST, Karnataka VTU Belagavi, Karnataka DST, New Delhi NID, Ahmadabad AICTE, New Delhi Karnataka New Age Incubation Project under IT-BT(GoK)
3	Computer Science	25.58	AICTE, New Delhi MST, New Delhi Intel, Bengaluru Karnataka New Age Incubation Project under IT-BT(GoK)
4	Chemistry	4.00	VGST, Karnataka
5	Physics	3.00	VTU, Belagavi, Karnataka
6	MBA	24.34	Ministry of Finance, New Delhi, Indian Council of Social Science Research, New Delhi Corporation Bank, Mangalore Indian Institute of Banking & Finance, Mumbai Sir Rattan Tata Trust, New Delhi
7	NAIN, NMAMIT	30.00	Karnataka New Age Incubation Project under IT-BT(Go)

➤ **Significant Outcomes/ Breakthroughs:**
Biotechnology Dept.:

- A project carried out by Dr. Vidya S.M on Production and distribution of tissue culture plantlets of banana var. "Grand Naine" for the economic empowerment of the rural marginal SC/ST farmers and weaker sections of Udupi District, Karnataka, with the assistance obtain from DBT, New Delhi, has resulted in increase in productivity of Grand Naine Banana variant in the villages of Udupi district. The weaker sections of the society in these villages have been economically benefited. About 25 thousand banana tissue culture plantlets were produced and distributed to farmers (125) of Udupi District. Total profit per farmer was found to be Rs.78, 279. The knowledge acquired by the farmers on cultivation practices of tissue culture plants will help them continue the practice.
- About 52 girls of the locality have become trained in tissue culture. This has enabled the girls to get employment in commercial tissue culture laboratories or establish their own tissue culture laboratories.

- Through biofuel Information and demonstration centre, arrangement has been made for production and use of biodiesel, distribution of biofuel saplings and oilcake. This project is sponsored by Karnataka State Bio fuel Development Board, Ministry of Panchayatraj, Govt. of Karnataka. This centre has produced and marketed about 1500 litres of biodiesel and more than 3.5 tons of oil seed cake. The biodiesel is currently being used by NMAMIT for some vehicles, buses of GM Vidyaniketan Brahmavar, Udupi and generators of some of the restaurants.

Mechanical Engg Dept:

- Dr. Muralidhara developed Micromachining Research Laboratory utilising the funds from SERB-DST, Government of India, VGST- Department of IT, BT and Science and Technology, Government of Karnataka, and Visvesvaraya Technological University, Belagavi.
- The research work carried out in micromachining Research Laboratory, entitled “Development of Tool Based Micro milling/Micro drilling Machine with Piezoactuated Work piece Feeding System” has been awarded FIRST PRIZE at Academia-Industry Pavilion at International Machine Tool Exhibition-2015 (IMTEX-2015) organized by Indian Machine Tool Manufacturers’ Association (IMTMA) at Bangalore International Convention Centre from 22nd to 28th January, 2015.
- The research work carried out in micromachining Research Laboratory, entitled “Development of Micro-Electro-Discharge machine (Micro-EDM) with Piezoactuated Tool Feed System” has been judged as the FIFTH best research work among the 24 Institutions who participated in Academia-Industry Pavilion at International Machine Tool Exhibition -2014 (IMTEX-2014).
- The research work entitled “Design Fabrication and Testing of piezoactuator based work piece feeding system for CNC Micro milling machine” presented by NMAM Institute of Technology, Nitte has won **4th best research work award** among the 160 research projects presented by 37 different institutions from different parts of India at Industry-Academia Pavilion in International Machine Tool Exhibition-2017 (IMTEX-2017) organized by Indian Machine Tool Manufacturer’s Association (IMTMA) during 26th January to 1st February, 2017 at Bengaluru International Exhibition Center BIEC).

3.2.7 List details of completed research projects undertaken by the College faculty in the last four years and mention the details of grants received for such projects (funded by Industry/National/International agencies).

Table 3.16: Completed Research Projects Undertaken by the College Faculty

Sl. No.	Title of the Project	Funding Agency	Amount (In Lakhs of Rs.)	Year of Completion	Principal Investigator/ Dept
1.	Biofuel information and Demonstration centre.	Karnataka State Biofuel Development board govt. Karnataka	10.50	2011	Dr. C. Vaman Rao/ Biotechnology

2.	Bank Finance for Agro Business : A Case Study in DK	IIBF, Mumbai	1.5	2012	Dr. G. V. Joshi / MBA
3.	Preparation of District Human and Development Report of Udupi District	Udupi Zilla Panchayat	2.95	2012	Dr.N.S.Shetty/ MBA
4.	Study and design of algorithms for VLSI CAD tool development towards applications involving mutually exclusive modules	AICTE	4.6	2012	Dr. N Chiplunkar/ CSE
5.	Software architecture and programming model to enhance the performance of application on multi-core platform	DST	15	2012	Dr. N Chiplunkar/ CSE
6.	Defect Characterization in antifriction bearing vibration signal and for condition monitoring	VTU Belagavi	6.5	2012	Dr. Srinivas Pai P/Mechanical Engg.
7.	Investigation on machining depth control in micro-electro-discharge machining Process using 3D Process simulation.	VTU Belagavi	12.4	2012	Dr. Muralidhar K./ Mechanical Engg.
8.	Biofuel Information and Demonstration, Training and publicity (sustenance grant)	Karnataka State Biofuel Development Board Govt. Karnataka	7.50/ year	2012	Dr. C. Vaman Rao/ Biotechnology
9.	1)Micro discharge Machining 2)STUDSAT	NMAMIT	3.5 5.0	2012	Mechanical Engg. E&C
10.	Production of bioethanol and pigments from glycerol-A by-product of biodiesel by Rhodotorulaglutinis/ Design Fabrication and Testing of Micro- pump Manufactured using Tool Based Micromachining Process for Drug Delivery System/ Biosynthesis of Silver and Gold Nanoparticles using Santalum album/ Development of Immobilized Bioreactor for Cellulose Production/	VGST, Bengaluru (TRIP)	1.4	2012 -16	Dr. C. Vaman Rao/ Biotechnology, Dr. Muralidhar/ Mechanical Engg Dr. Nagesh Prabhu/ E&E

	A Remote monitoring and Control system of a three phase generator using Zigbee wireless Network				
11.	Production and distribution of tissue culture plantlets of Banana var. “Grand Naine” for the economic empowerment of rural marginal SC/ST farmers and weaker sections of Udupi Dist.	DBT	24	2012-15	Dr. Vidya S.M. /Biotechnology
12.	To promote low power embedded system	Intel +10 ATOM boards	2	2013	Dr. N Chiplunkar / CSE
13.	1) Aero Club Projects 2) Embedded Control System Design for position and tracking control of prototype Activator 3) STUDSAT 4) Modeling and Optimization of Surface Roughness in Ti-based alloys using vibration	NMAMIT	0.65 6.00 1.30 0.15	2013	Mechanical Engg. E&C
14.	In vivo studies on comparative and synergistic radio protective effect of stem bark extracts of Ficus racemosa. Madhuca indica and Pterocarpus marsupium based.	DAE, New Delhi	16.29	2013	Dr. Vidya S M/ Biotechnology
15.	Surface Roughness Evaluation of Turned Surfaces using Computer Vision System.	The Institution of Engineers (India), Kolkata.	0.15	2014	Dr. Srinivas Pai/ Mechanical Engg
16.	Aero Club Projects	NMAMIT	0.75	2014	Mechanical Engg.
17.	Intel Embedded initiative and IOT	Intel Semiconducting Pvt. Ltd, India	3.50	2014	Computer Science Engineering
18.	STUDSAT	NMAMIT	0.75	2014	E&C
19.	NiO nanophosphors: Microwave synthesis, microstructure and photoluminescence	VGST, Govt. of Karnataka	4.00	2015	Dr. Aarti S. / Chemistry
20.	Embedded control system design for position & tracking control of a prototype actuator	SERB, DST, New Delhi	16.14	2015	Dr. Muralidhar K/ Mechanical Engg.

21.	Design and Fabrication of a Multiple Biodiesel Seed Decorticator	NID , Ahmadabad	1.02	2015	Dr. Shashikanth Karinka / Mechanical Engg.
22.	KSCST-grant Research Project in various Disciplines	KSCST	0.855	2012 - 2016	Dr.Nagesh Prabhu/ E&E Dr. C. Vaman Rao, Dr. Vidya S.M, Dr. Bharath B, Dr.Shyama Prasad Sajankila, Mr.Venkatesh Kamath H Ms. Harshitha M Jathanna/ Biotechnology Mr.Rakesh Joshi Mrs. Manasa
23.	Design and Fabrication of a Multiple Biodiesel Seed Decorticator	NID Ahmadabad	1.02	2015	Dr. Shashikanth Karinka / Mechanical Engg.
24.	Gender Consultancy for a report on political economy of State Business relations	DFID (Department Fund for International Development, UK)	0.50	2015	MBA
25.	Aero Club Projects	NMAMIT	1.30	2015	Mechanical Engg.
26.	STUDSAT	NMAMIT	0.75	2015	E&C
27.	Biosynthesis Of nanoparticles and their use as catalyst in biodiesel production	KSBDB Bengaluru 39th Series of SPP – Biofuel Projects. 39S_B_BE_008	0.07	2015 -16	Dr. C. Vaman Rao and Mrs. Louella Concepta Goveas Mrs. Sneha Nayak and Mr. Venkatesh Kamath Biotechnology
28.	Development of bioadsorbent for removal of toxicants from Industrial effluent	Govt. of Karnataka, New Age Incubation Project under IT-BT	3	2015 -16	Dr. Anil Kumar H.S. Dr. C Vaman Rao / Biotechnology
29.	Development of Biofertilizers using Rhizobium and Micorhiza	Govt. of Karnataka, New Age Incubation Project under IT-BT	3	2015 -16	Dr. Chetan D.M. Dr. C Vaman Rao/Biotechnology

3.3 Research Facilities

3.3.1 What efforts are made by the College to keep pace with the infrastructure requirements to facilitate Research? How and what strategies are evolved to meet the needs of researchers?

The Institute provides the laboratory space and equipment's available in the Institution whenever a faculty member receives a research grant. The Institute also provides uninterrupted power supply, computational facilities, broad band internet connection and library facility to the research laboratories. The institute has setup Research and Innovation Centre (RIC) to house all the research activities of the institute. The institute provides complete freedom to the researcher by providing round the clock access to the research facilities.

Additionally, the following software has been procured for carrying out research in the last 3 years.

Table 3.17: Software Procured in last 3 Years

Sl. No	Particulars	Department	Amount (Rs)
1.	N I Instrument Lab View Software	Mechanical Engineering	7,71,308.00
2.	Creo Parametric 2.0 (50 Licenses for CAD/CAM Lab)	Mechanical Engineering	4,98,780.00
3.	Cadem 10.0	Mechanical Engineering	2,31,000.00
4.	IBM Rational Seed KSA programme	Information Science & Engg. Dept.	3,50,563.00
5.	Cadence VLSI Products – 40 Licenses	E&C Engineering	10,81,375.00
6.	Stat ease Design Expert Software Academic Version – 10 Licenses	Biotechnology Engg.	2,18,259.00
7.	Psim + Motor+ Digital + Sim Coupler (1 Networked Dongle) – 05 user. Psim+ Motor+ Digital + Sim Coupler + Thermal Module + Renewable Energy Module + Sim Coder Module + F2833xTarget+F2803xTarget+SmartCtrlPro+ModCoupler (VHDL or Verilog) + Motor Control Design Suite (1Standalone Dongle)-05 License.	E&E Engg.	11,99,625.00
8.	MATLAB R2014b with toolbox for signal processing & communication, image processing & computer version -10 Licenses.	E&E Engg.	10,15,965.00
9.	ORCAD PCB Design University Edition.15 Licenses.	E&E Engg.	9,49,500
10.	PSCAD -25 Licenses.	E&E Engg.	4,51,875
11.	MAT Lab R2015A Software	E&C Engg.	7,58,387
12.	UTLP Kit –An embedded system development board with normal and linux mode support	E&C Engg.	9,00,092

13.	Universal M V development Kit , Universal Board with Xilinx FPGA	E&C Engg.	2,24,303
14.	Bank Quest	MBA	240.00
15.	Chartered Secretary	MBA	1,000.00
16.	The Management Accountants	MBA	1,000.00
17.	Sage Mgt. Pack	MBA	27,300.00
18.	Proquest ABI-Inform Complete Journals	MBA	3,45,500.00
19.	Proquest health & medical complete journals	MBA	Subscribed to whole Nitte University
20.	Microsoft IT Academy(Advance) Subscription	CSE	68,570.00 per year

3.3.2 Does the College have an information resource centre to cater to the needs of researchers? If yes, provide details on the facility.

- The institute has a digital library to collect the information and references needed for research
- The college subscribes to following online journals
 - o ASME - 30 journals
 - o ASCE - 32 journals
 - o IEEE - 200 + journals
 - o Taylor and Francis
 - o DELNET
 - o Science direct
- E-learning library resources like NPTEL, Coursera, Audacity, ProQuest and Knimbus are available for access for continuous learning process.
- The College has department level research coordinators to update about the conferences, project proposals etc.,
- Standard books and codes for civil engineering are available in the civil engineering department library and can be utilised by the research scholars.
- Internet facility is provided so that students can have access to journals.

3.3.3 Does the College provide residential facilities (with computer and internet facilities) for research scholars and faculty?

- The college has 51 on campus residential quarters for research scholars and faculty.
- In addition, the college has a well furnished guest house, with 20 rooms. Research scholars who are desirous of staying are provided rooms. The guest house has 310Mbps Wi-Fi connection.

3.3.4 Does the College have a specialized research centre/ workstation to address challenges of research programmes? If yes, give details.

Yes. The College has the following centers of excellence/specialized research centers

a. Centre for Tool Based Micro Machining Research

The research center focuses on development of tool feed control system, work piece positioning system, and vibration assisted micromachining in Micro Milling, Micro Drilling, and Micro Electro-Discharge Machining operations. This research center is one of the state-of-the-art research center developed by NMAMIT Nitte and has won several awards since last three years.

b. Centre for System design, fabrication and testing

The research center focuses on design and development of active vibration isolation systems, piezosteping actuators, inchworm actuators, flapping type micro air vehicle, Mini piezo-hydraulic drive system, valve less micro pump, and design of active valves for piezohydraulic pumps.

c. Center for Condition Monitoring Research

This research lab consists of test rigs and instrumentation necessary for carrying out vibration based condition monitoring studies. The lab has been developed based on a VTU research grant and has been in existence since 2008. In this lab, condition monitoring studies on gears and bearings have been successfully completed. In addition some industry oriented condition monitoring studies has also been carried out successfully. This lab has been able to produce 2 Ph.D. and 5 M.Tech level projects.

d. Center for Advanced Machining Research

This research lab consists of tool makers' microscope, surface roughness analyzer and vibration data acquisition system and a digital camera. This lab has been developed based on a AICTE-RPS research grant and IE(I), Kolkata PG research grant and has been working since 2013. In this lab machining studies are being carried out and till now surface roughness evaluation in high speed machining of Titanium based alloys using vibration has been carried out. Further a computer vision system for surface roughness evaluation has been developed, which helps in processing of machined surface images. Currently machining of magnesium based alloys are being investigated. This lab has been able to produce 1 Ph.D., 2 M.Tech and 1 B E projects.

e. Centre for I. C. Engines Research

Research is focused on performance enhancement and reduction of emissions from I.C. Engines consuming alternative fuels. The experimentation on performance characteristics, P- θ diagram and heat release data are conducted on

- Computerized 4 stroke fixed compression ratio diesel/dual fuel engine
- Computerized 4 stroke variable compression ratio diesel/dual fuel engine
- Computerized 4 stroke twin spark plug petrol engine

f. BT Tissue Culture Lab and Instrumentation Lab

- Plant tissue culture lab was developed from Grand Naine banana tissue culture project funded by DBT. Large scale banana tissue culture plantlets production was undertaken in this lab for the economic empowerment of rural marginal SC/ST farmers and weaker sections of Udupi District, Karnataka
- Chicory plant tissue culture was also under taken leading toward Ph.D.
- Instrumentation lab is an integrated lab used by UG, PG and Ph.D. students for the project work and research. All Instruments available in the lab are extensively utilized for carrying out research

g. Centre for High Performance Computing (CHPC)

Multi-core and many-core architecture based research is carried out at CHPC focusing on CPU and GPU based parallel application development and optimizations. CHPC also focuses on use of machine learning on big data and security analysis using parallel architectures. CHPC also focuses on optimizing Neural Networks on CUDA based GPUs. The research team consists of faculty, research scholars, M. Tech. and B. Tech. Students

h. Research and Innovation Centre (RIC)

To promote research and innovation, a separate 3 storey Research and Innovation Center (RIC) of 8000 Sq ft is constructed.

RIC of NMAMIT has rooftop mounted solar PV panels that power highly efficient DC appliances including fans, lights and air conditioners. This unique net-zero energy micro-grid is being used as a test-bed for validating novel grid integration strategies of advanced distributed energy sources and storage technologies. Focused research on developing next generation of power electronics interfaces for smart grids, power converters for electric vehicles and renewable energy utilization, and solid-state transformers is being carried out at RIC.

i. E&E Research Lab

All research works in the area of Power Systems, Power electronics and Renewable Energy make use of the available software MATLAB, PSIM, ORCAD, and PSCAD.

j. Civil Engg Research Lab

Research work is mainly focussed on Environmental engineering, Concrete and highway, Remote Sensing and Geographical Information System (RS and GIS) and earthquake resistant systems. The software like ERDAS image, STAAD Pro (2005), E-Survey and CYPE are utilised for the research works.

k. MCA Research Lab

Faculty members of MCA department pursue research in the areas of Image Processing, Web Mining and IOT utilizing the available software like Matlab, R and Cooja simulator. In the area of Data Mining, Weka 3 Open Source Machine Learning Software is utilized.

l. Physics and Chemistry Research Centre

- Physics research centre involves in Preparation and characterization of materials towards using them for various applications. It will be of utmost importance to obtain materials in the required structural and microstructural form to achieve optimum efficiency in the applications they are used in. There are various techniques available for obtaining materials in their bulk single crystalline form and also in thin film form.
 - o The centre has established a Crystal Growth Laboratory for growing single crystals of various organic molecules at different conditions using crystal growth setup and grown crystals are characterized by various techniques for nonlinear optical applications.
 - o Two important and widely used techniques for preparing materials in their thin film form are Vacuum deposition and Spray pyrolysis technique. Vacuum deposition is a physical method in which the deposits are obtained by evaporating the material in vacuum and condensing them on suitable substrates. The method is particularly suitable for applications requiring very high purity of the deposits, like in electronic devices. On the other hand, Spray Pyrolysis is a chemical method which is useful for large area deposits, like for solar cells.
 - o The Physics research centre has also established a Thin Film Laboratory for the preparation and study of thin film deposits for device applications. It has procured a Spray Pyrolysis Set up at a cost of about Rs. 6 lakhs which is being used to prepare samples of materials useful for opto-electronic applications. Other essential instruments like Electronic Microbalance, Hot air oven, etc. have also been added to the Laboratory. Efforts are on to procure a vacuum deposition system so that the Laboratory will have the capability to prepare and study various technologically important materials in the thin film form for device applications.

- Chemistry Research Centre has a high precision synthesizer and using microwaves the reactions at a faster rate are carried out. The distillation unit controls the temperature. NiO and Li doped NiO nanoparticles were synthesized using the Microwave Synthesizer. Presently, CoO nanoparticles are being synthesized.
 - Removal of impurities from the precursor solution is achieved using Centrifuge which has a provision to control the speed at 4 different levels.
 - The furnace is used for sintering the precursor powder to obtain the final product. Temperature up to 300 degree Celsius can be maintained.

3.3.5 Does the College have research facilities (centre, etc.) of regional, national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

YES. The research facilities available in the college are utilized by researchers from other laboratories and institutions.

Table 3.18: Research Facilities and Its Utilization

Department	Research facilities available	Outside agency utilizing the facility
Mechanical Engg.	Computerized diesel engine	MITE, Moodbidri
	Computerized diesel engine	St. Joseph Engineering College, Mangalore
Civil Engg.	Universal Testing Machine	Lamina Foundries, Nitte
	Compressive Testing Machine	Kshema, Deralakatte, Alva's College, PRED, PWD, KRIDL Agency
Biotechnology Engg.	Atomic absorption spectroscopy/ HPLC	St. Aloysius College. Mangalore. KMC Mangalore. Euchem biologicals, Manipal. NITK, Surathkal. KSHEMA, Deralakatte. AB Shetty Dental College, Deralakatte NGSM Pharmaceutical Sciences, Deralakatte
	Transesterification Equipment	Local Colleges

3.4 Research Publications and Awards

3.4.1 Highlight the major research achievements of the College through the following:

(a) Major papers presented in regional, national and international conferences (Last 5 years)

661 research papers are published in last 5 years

(b) Publication per faculty (Last 5 year):

Publication per faculty (2012-2016) = $661 \div 292 = 2.26$

(c) Faculty serving on the editorial boards of national and international journals:

- Dr. Krishna Shenai, Director, R&D**
 - Editor of IEEE J. Electron Devices Society (JEDS)
 - Member, Executive Committee, Electronics and Photonics Division (EPD), Electrochemical Society (ECS), Pennington, NJ

- o Member, Executive Committee, Dielectric Science & Technology (DS&T), Electrochemical Society (ECS), Pennington, NJ
- o M. Dudley, M. Bakowski, N. Ohtani, **K. Shenai** and B. Raghothamachar (Editors), ECS Transactions: GaN and SiC Power Technologies 6, vol. 75, issue 12, PRiME 2016/230th ECS Meeting, Oct. 2-7, 2016, Honolulu, Hawaii.
- **Dr. Bharath B. R.** Asst. Professor, Dept. of Biotechnology Engineering is serving in the Editorial Member of International Journal of Computational Biology and Bioinformatics (IJCOB), Strings Publications.
- List of senior faculty who are on the review panel of various International Journals is given in **Appendix E.11**.

(d) Faculty members on the organization committees of international conferences, recognized by reputed organizations / societies

- **Dr. Krishna Shenai**
 - o Distinguished Lecturer, IEEE Electron Devices Society, 1998-2016
 - o Selected as **Distinguished Lecturer (DL) by the IEEE Power Electronics Society (PELS)** for years 2017 and 2018.
 - o **Dr. Krishna Shenai has been selected as an Honorary Advisor to the Centre of Excellence in Nano electronics at Electrical Engineering of IIT Bombay** effective from 06-03-2017.
 - o Delivered Keynote Lecture on “Distributed energy for developing economies – Challenges and opportunities,” at 8th National Conference on Advances in Energy Conversion Technologies (AECT 2016), Manipal University, Manipal, India, Jan. 28-30, 2016.
 - o Co-Organizer, Fall 2016 PRiME/ECS Symposium: GaN and SiC Power Technologies 6, Honolulu, Hawaii, Oct. 2-7, 2016.
 - o Delivered Keynote Lecture on “Applications and technologies of power semiconductor devices,” presented at 1st Int. Conf. Coatings, Thin Films, Multilayer Devices & Systems, NFTDC, Hyderabad, India, Dec. 14-16, 2016
 - o Co-Founder and General Chair, First IEEE International Conference “Sustainable Green Buildings and Communities(SGBC)” 18-20 Dec 2016, IIT Madras Research Park Auditorium, Chennai, INDIA
 - o Organizer and Lecturer, half-day short course entitled “Power Semiconductor Switch Modules for Energy Efficiency in Microgrids.” The short course was held on Dec. 18, 2016 at IITM Research Park, Chennai as an integral part of First IEEE Int. Conf. Sustainable Green Buildings and Communities (SGBC).
 - o Member of a panel session entitled “Solar DC Infrastructures and SiC Manufacturing in India.” The panel session was held on Dec. 19, 2016 at IITM Research Park, Chennai as an integral part of First IEEE Int. Conf. Sustainable Green Buildings and Communities (SGBC). The panel session was moderated by Professor Ashok Jhunjhunwala, Institute Professor at IITM and Scientific Advisor to Minister of Power and Renewable Energy, Government of India, Delhi.
 - o Member, International Steering Committee, Second IEEE Int. Conf. DC Microgrids (ICDCM), June 27-29, 2017, Nurnburg, Germany.
 - o As per the request of Department of Science & Technology (DST)/Department of Heavy Industry (DHI), spearheaded the formation of two Consortia to develop electric vehicle (EV) technologies for 2-wheelers, 3-wheelers and 4-

wheelers. At present, working as a key member of both Consortia proposal teams

- o Associated with Niti Aayog in developing a project plan for the manufacture of high-voltage silicon IGBT and SiC power MOSFETs in India
- **Dr. Neelima B (Department of CSE)**
 - o Program committee member, 14th International Symposium on Parallel and Distributed Computing, held in Limassol, Cyprus, 29th June – 2nd July 2015
 - o Organizing member of the 29th IEEE International Parallel & Distributed Processing Symposium held during May 25-29, 2015 at Hyderabad, INDIA (www.ipdps.org)
 - o Organizing member of annual IEEE International Conference on High Performance Computing (HiPC), India Since 2012 to till date. (www.hipc.org)
- **Dr. Shivaprakasha K S (E&C)**
 - o Technical Program/ Review Committee
 - o IEEE TENCON 2016, November 22 – 25, 2016, Marina Bay Sands, Singapore (Organized by IEEE).
 - o International Conference on Signal Image Processing Communication & Automation (ICSIPCA 2016), December 08-10, 2016, JSS Academy of Technical Education, Bengaluru, Karnataka, India.
 - o 6th International Conference on Electronics, Communications and Networks (CECNet 2016), December 11- 14, 2016, Macau.
 - o 2nd International Conference on Contemporary Computing and Informatics, December 14-17, 2016, Amity University, Noida, India.
 - o International Conference on Big Data Analytics and Computational Intelligence, March 23-25, 2017, Chirala, AP, India.
 - o International Conference on Recent Advances on Computer Communication and Software (RACCS 2017), February 16-18, 2017, G D Goenka University, Gurgaon.
- **Dr. K.V.S.S.S.Sairam- (Department of E&C)**
 - o IEEE Discover 2016, August 13-14, 2016, National Institute of Technology Karnataka (NITK), Surathkal.
- **Dr Nagesh Prabhu (Dept of E&E)**
 - o Advisory committee member of National conference on Advances in Energy Conversion Technologies, AECT Jan 28-30, 2016, MIT Manipal.
 - o Member of National Advisory committee for “International Conference on “Innovations in Power and Advanced Computer Technologies” 21-22, April 2017, VIT University, Vellore.
 - o Sponsorship Committee member of International conference on Distributed Computing, VLSI, Electrical circuits and Robotics (DISCOVER-2016) Organised by NITK-Surathkal on 13-14th August 2016.
- **Dr Satyendra Kumar (Dept of E&E)**
 - o Publicity Chair for International Conference on Sustainable Green Buildings and Communities (SGBC) 18 - 20 Dec 2016, IIT Madras Research Park Auditorium, Chennai, INDIA.
- **Dr Niranjan N Chiplunkar**
 - o Program Chairs International conference on Distributed Computing, VLSI, Electrical circuits and Robotics (DISCOVER-2016) Organised by NITK-Surathkal on 13-14th August 2016.

3.4.2 Does the College publish research journal(s)? If yes, indicate the composition of the editorial board, publication policies and whether it is listed in international database?

Yes. The institution has two Research Journals listed in international database.

1. Editorial Board of the “NMAMIT Annual Research Journal” (ISSN No: 2249-0426) is as follows:

- o Dr. S. Y. Kulkarni, M. S. Ramaiah Institute of Technology, Bangalore
- o Dr. N. S. Sriram, Vidya Vikas College of Engineering, Mysore
- o Dr. C. Vaman Rao, NMAM Institute of Technology, Nitte
- o Dr. Ashok Babu T. P., National Institute of Technology Karnataka, Suratkal
- o Dr. Jaganath Nayak, National Institute of Technology Karnataka, Suratkal
- o Dr. Shridhara S., Indian Institute of Technology Bombay, Mumbai
- o Dr. K. V. V. Murthy, Indian Institute of Technology, Gandhinagar
- o Dr. Navakanth Bhat, Indian Institute of Science & Communication, Bangalore
- o Dr. Gopalakrishna Kini, Manipal Institute of Technology, Manipal
- o Dr. Khalid, Vellore Institute of Technology, Vellore

2. NMR (Nitte Management Review – A Transdisciplinary Research Journal, ISSN: Print 2231-6043, Online 2395-1907), both in Online and Print format, to promote research publications by members of the staff and outside academicians. The research articles are considered for publication only after getting comments and suggestions from the two eminent professors who are working in the same area of research.

Editorial Board:

- o Dr. K Sankaran - Editor-in-chief. Director, Dept. of MBA, NMAMIT, Nitte.
- o Dr. N. K. Thingalaya – Chairman Editorial Board, Chairman, Academic Council, Dept. of MBA, NMAMIT
- o Dr. G.V. Joshi Asst. Editor, Department of MBA, NMAMIT, Nitte

Members:

- o Dr. M. S. Moodithaya Registrar, Nitte University
- o Dr. Femida Handy, Professor, University of Pennsylvania, USA
- o Dr. Ajith Kumar, Professor, XLRI Xavier’s School of Management, Jamshedpur
- o Dr. Lucas Mejis, Professor, Erasmus University, The Netherlands
- o Dr. Waswa Balunywa, Principal, Makerere University Business School, Uganda
- o Dr. Thoman Chalmers McLaughlin, Professor, University of New England,
- o Dr. Gauri Kulkarni, Assistant Professor, Loyola University, Maryland, USA
- o Dr. N. S. Shetty, Professor Emeritus, Department of MBA, NMAMIT, Nitte
- o Dr. Sudhir Raj, Professor, Department of MBA, NMAMIT, Nitte
- o Prof. Krishna Prasad, Asst. Professor, Department of MBA, NMAMIT, Nitte

The Journal has the following publication policies:

- (i) Only papers with less than 20% plagiarism check will be accepted for publication
- (ii) All the papers will be reviewed by International / National reviewers on invitation
- (iii) Papers which are not written according to IEEE format is not accepted for publication
- (iv) The best paper from ICETE Conference held in the college is considered for publication after proper reviewing process

3.4.3 Give details of publications by the faculty:

a) Number of papers published in peer reviewed journals (national / international) – (Last 5 years): 301

b) Monographs: NIL

c) Chapters in Books: 20 (The details are given in the table below)

Table 3.19: Chapters in Book

Sl.No	Author/Dept	Chapter/Book Name	Publisher
1.	Pai, Jnaneshwar Maroor/MBA	Chapter 2: Inclusive Growth and Financial Inclusion for Social Development in the book titled Social Entrepreneurship Authored by C. Paramasivan (2016),	New Century Publications, New Delhi, ISBN: 9788177084221.
2.	Dr. C. Vaman Rao/BT	Three times in Encyclopedia of Toxicology (2013),	Elsevier's USA
3.	Dr. Muralidhara/ Mech	Chapter 11: Investigations on Machining of Micro channels on silicon wafer using micro EDM/Advances in manufacturing technology-2012	Universities press ISBN-9788173717550
4.	Dr. Nagesh Prabhu/E&E	Static Compensators (STATCOMs) in Power Systems: Chapter 17 "Analysis and Damping of Subsynchronous Oscillations Using STATCOM" pp 557-593., 2015	Springer Publications, Singapore ISBN:978-981-287-280-7
5.	Mr. Krishna Prasad	Securing Energy Future for India/ Developmental Challenges in the 12th Five Year Plan - Issues, concerns and Deliberations	NMR, Nitte,2011
6.	Mr. Krishna Prasad	Access to Capital Growth of SME's through SME Exchange in 12th Five Year Plan/ Development Challenges in 12th Five Year Plan	NMR, Nitte,2012
7.	Prof. Radhakrishna Sharma	Access to Capital Growth of SME's through SME Exchange in 12th Five Year Plan/ Development Challenges in 12th Five Year Plan	NMR, Nitte,2012
8.	Dr. Ashalatha K	Solid Waste Management- A Reality Check in Karkala Taluk, Udupi District/ Innovations in Management	Excel Publishers India
9.	Dr. Ashalatha K	Recent Developments, Problems and Prospects of Retail Banking/ Challenges and Opportunities in Services Sector	NMR, Nitte, 2012
10.	Dr. Vanishree Joseph	Impact of Gendered Political Institutions on Human Development	Concept Publishers 2012

11.	Dr. Ashalatha K	Fostering Women's Economic Empowerment and Inclusive Growth through Restructuring of Higher Education In India/ Economic Empowerment of Women	Eagle Eye Publications, 2013
12.	Mr. Jnaneshwar Pai Maroor	Fostering Women's Economic Empowerment and Inclusive Growth Through Restructuring Of Higher Education In India/ Economic Empowerment of Women,	Eagle Eye Publications, 2013
13.	Dr. Ashalatha K	Impact of Information Availability on the Quality of Managerial Decision: A Comparative Case Study of Corporation Bank and Syndicate Bank/ Envisage 2020: Emerging Business practices	Excel India, 2013
14.	Dr. Vanishree Joseph	Women in Local Governance: An Analysis of their Agency Functions/ Development, Freedom and Welfare	Concept Publishers, 2014
15.	Dr. Vanishree Joseph	Methodology for an Evaluative Study/ Sage Research Methods Cases	SAGE Publications, 2015
16.	Mr. Vinayak B. Shet, Mrs. Louella C. Goveas, Dr. C. Vaman Rao, Dr. Ujwal P./BT	Optimization of Na ₂ CO ₃ pretreatment by RSM approach for releasing reducing sugars from cocoa pod shells in the Book Biotechnology and Biochemical Engineering	Prasanna B.D. et al. (eds.) Biotechnology and Biochemical Engineering, Springer, DOI 10.2007/978-981-10-1920-3_09, pp. 85-91(2016).
17.	Mr. Sandesh K., Dr. Ujwal P. /BT	Design and fabrication of miniature bubble column bioreactor for plant cell culture in the Book Biotechnology and Biochemical Engineering	Prasanna B.D. et al. (eds.) Biotechnology and Biochemical Engineering, Springer, DOI 10.2007/978-981-10-1920-3_18, pp. 163-169 (2016).
18.	Dr. Surendra Shetty and Sarika Hegde	Machine Learning Approach for Carnatic Music Analysis- Engineering and Technology Recent Innovations and Research	International Research Publication House, ISBN: 978-93-86138-06-4, 303-327(2016)
19.	Pai Jnaneshwar Maroor	"A Pragmatic case study of the impact and intricacies of micro financing on financial inclusion" Rediscovery of Inclusive Growth	National centre for Inclusive Growth and Development Research, Mysore, December 2016, PP- 150 -166. ISBN: 978-81-910230-6-0
20.	Shyama Prasad Sajankila, Vinayaka B. Shet	Effect of Traditionally Synthesized Carbon Nano Particles as Biofuel Blend on the Engine Performance.	Springer 2017

(d) Details of Books with ISBN numbers with details of publishers (Last five years) : 21 No.s**Table 3.20: Books Published with ISBN**

Sl.No	Name	Name of the book with publisher detail
1	Dr. C. Vaman Rao / Bio Tech	Immunology-(ISBN-978-81-7319-657-7) 3rd Ed 2016 Narosa Publishing House, New Delhi
2		Immunology-Alpha Science, UK (ISBN 1-84265-253-2)
3		Immunology-A Text Book- 2nd Ed. (ISBN: 978-81-7319-662-1) Narosa Publishing House, New Delhi. In Press
4	Dr. Shyama Prasad Sajankila/ Bio Tech	Manipal Laboratory Manual for Biotechnologists (Manipal University Press), ISBN:978-93-82460-02-2 2012
5	Dr. Chetan D. M	Health and Pharmaceutical Biotechnology (ISBN-978-81-7008-990-2) Laxmi Publications - New Delhi Molecular Biology (ISBN: 978-81-8986-635-8) IK International, New Delhi
6	Dr. Niranjana N. Chiplunkar / CSE.	VLSI CAD, PHI, Publisher, New Delhi 2011 ISBN: 97881 203 42866
7	Dr. Nagesh Prabhu / E&E	Static Compensators in Power Systems: published by Springer Publications, Singapore 2015. ISBN: 978-981-287-280-7.
8	Dr. Thingalaya /MBA	Gramin Banks Revisited Published by Nitte University, Mangaluru in 2013
9	Dr. Radhakrishnan K/Civil	Proceedings of International Conference on Emerging Trends in Engineering 2014 -- ICETE Vol. I & Vol II 2014 Publisher: Excellent Publishing House, New Delhi-110070 ISBN: 978-93-83083-80-0
10	Dr.K.Sankaran / MBA	Quadrant Puzzles, Notion Press, 2014 978-93-83808-93-9
11	Dr. G. V. Joshi / MBA	Bank Finance for Agri Business, Indian Institute of Banking and Finance, 2013
12	Dr. G. V. Joshi / MBA	Inclusive Rural Development in Realty – Triumph of SKDRDP, Sri Kshetra Rural Development Project Dharmasthala , 2012
13	Dr. G. V Joshi/ MBA	Struggles and Challenges in development: governance and Management Issues in a Regional Context. NMAMT, Nitte (2016)
14	Dr. Vanishree Joseph/ MBA	Capability of Elected Women Representatives on Gender Issues in Grassroots Governance, Concept Publishers, 2011, ISBN 9788180697333
15	Dr.D.K.Sreekantha/ CSE	Credit Risk Evaluation of MSME using Soft Computing Techniques, (ISBN 978-3-659-67369-6), LAMBERT, Feb 2015
16	Dr. K S Shivaprakasha/ E&CE	Information Theory and Coding, (ISBN 9788126553051), Wiley (India), 2015
17	Dr. Anil Kumar H.S. and Ramakrishna B	Fundamentals of Intellectual Property Rights (ISBN 978-1-946556-31-8) Notion press, Chennai, 2017

18	Dr. D.M.Chetan	Key words based: Biology: Multiple Choice Questions (MCQs) For NEET and Other Medical Entrance Examinations. New Delhi Publisher 2017, ISBN: 978-93-85503-70-2
19	Dr. D.M.Chetan	Chapter wise Biology: Multiple Choice Questions (MCQs) For NEET and Other Medical Entrance Examinations Blue Rose Publisher 2017, ISBN:978-93-86126-66-5
20	Dr. D.M.Chetan	Chapter wise Chemistry: Multiple Choice Questions (MCQs) For NEET and Other Medical Entrance Examination. Blue Rose Publisher 2017, ISBN:978-93-86126-85-6
21	Dr. D.M.Chetan	A TO Z Biology, General Multiple Choice Questions (MCQs) for Staff Selection Commission, Exams like IAS,IPS,IFS,IRS,NDA, and for Joint entrance examinations (JEE), Blue Rose Publisher 2017, ISBN: 978-93-86126-32-2
22	Dr. D.M.Chetan	A TO Z Chemistry, General Multiple Choice Questions (MCQs) for Staff Selection Commission, Exams like IAS,I,PS,IFS,IRS,NDA, and for Joint entrance examinations (JEE), Blue Rose Publisher 2017, ISBN: 978-93-86126-67-2

(e) Edited Books**Table 3.21: Edited Books**

Sl. No.	Author(s)	Book Title	Publisher	Year of publication
1.	Dr. N.S. Shetty/ MBA	Redefining the Roles of Business, NGOs and Governments: Mission for a Better Global Society	Manak publisher	2011
2.	Dr. G.V.Joshi/ MBA	Redefining the Roles of Business, NGOs and Governments: Mission for a Better Global Society	Manak publisher	2011
3.	Dr.N.K.Thingalay a/MBA	Redefining the Roles of Business, NGOs and Governments: Mission for a Better Global Society	Manak publisher	2011

(f) Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.)Papers in Web of Science: **143**Citation in Web of Science: **447****(g) Citation Index – range / average (since 2010): Range: 0-358, Average: 2.976****(h) Impact factor – range / average: Average : 2.642, Range: 0-3.4,****(i) h-index (Total): 12****(j) SJR (Total): 9.735****(k) SNIP (Total): 18.619****3.4.4 Indicate the average number of successful M.Phil. and Ph.D. scholars guided per faculty:**

31 research scholars have completed their Ph.D. The average number per faculty = 0.7

3.4.5 What is the stated policy of the College to check malpractices and misconduct in research?

- The college organizes research scholar's conclave (NMReCon) every year where the research scholars present their progress in front of subject experts. The advice / suggestions are given by experts will help the young researchers to incorporate desired changes to enhance the quality of research work by avoiding malpractices.
- All researchers are advised to publish their research works in the reputed conference and journals.
- All research papers of faculty members are screened through plagiarism software.
- All M.Tech project reports and conference papers should comply with plagiarism check of less than 25%.

3.4.6 Does the College promote interdisciplinary research? If yes, how many inter departmental / inter disciplinary research projects have been undertaken and mention the number of departments involved in such an endeavour.

Yes. The following table gives information about participating departments and title:

Table 3.22: Interdisciplinary Projects

Sl.No	Department Involved	Title of the project	Cost of the project	Year
1	Mechanical – E&C	Investigation on machining depth control in micro electro- discharge machining Process using 3 D Process simulation	Rs.12,40,000	2010-2012
2	Mechanical – E&C	Embedded control system design for position & tracking control of a prototype actuator	Rs.16,14,000	2012-2015
3	Electrical-E&C	Implementation of PHASOR measurement unit.	Rs.20,638	2015-2016
4	Electrical-Biotechnology	Modeling & implementation of FLOW batteries.	Student Project	2015-2016
5	Biotechnology & Civil	Study on Biomaterial stabilized soil.	Student Project	2014-15
6	Biotechnology & Civil	Cellulose nano fiber reinforced mortar -A study	Student Project	2013-14
7	Biotechnology & E&C	Biosensor satellite project	Rs.20,000	2012-13
8	MCA / EE	GSM /Bluetooth based remote control of Irrigation pump sets.	Rs.8,000	2016-17
9	EC & MECH	Photo Exhibition on Light Beyond Bulb (A programme of United Nations)	Rs. 11,251	2015-16
10	Biotechnology & KS Hegde Medical Academy	Attenuation of Pseudomonas aeruginosa virulence by dietary phytochemicals from vegetables as quorum sensing inhibitors	Rs. 18,40,000	2014-17

The other interdisciplinary research works carried out are listed below:

- A project titled “Microbial growth sensor”, was carried out in collaboration with Electronics & Communication Engineering dept., in the academic year of 2012-13 under the guidance of Dr. Ujwal P. Professor, Dept. of Biotechnology Engineering and Mr. Durgaprasad Dept. of E&C.
- A project titled “Cellulose nanofiber reinforced mortar-A study” was carried out in collaboration with Civil Engineering dept., in the academic year of 2013-14, under the guidance of Mr. Vinayaka B.Shet, Asst. Professor, Dept. of Biotechnology Engineering and Dr. Srinath Shetty, Professor & Head, Dept. of Civil Engineering.
- Dr. Samson Ojoawo, Ladoko Akintola University of Technology, Ogbomoso, Nigeria, Postdoctoral Research Associate in the Dept. of Civil Engineering, NMAMIT (2014-15), worked on a project titled “Bioremediation of waste water” in the Dept. of Biotechnology Engineering under the guidance of Dr. C. Vaman Rao, Professor and Head and Dr. Udaya Kumar G, Professor, Dept. of Civil Engineering.
- Dr. Vanishree Joseph has collaborated with The Institute of Development Studies (IDS), United Kingdom, in connection with the project funded by Coffey International Development entitled “GSDRC”. The consultancy commenced on 6th June 2015 and ended on 19th June 2015. During this period she served as a gender expert for topic guide on Political Economy State-Business Relations.
- Dr. Vanishree Joseph coordinated the Project “Evaluation of Working Women’s Hostel sanctioned under the scheme of assistance for the Construction/Expansion of hostel Building for working Women with a day Care Centre for Children” sponsored by Ministry of Women and Child Development, Government of India, 2011-2013.
- The Dept. of E&E has signed a MoU with M/s HEXMOTO Ltd, for promoting collaborative research in the area of power electronics. A M.Tech student has taken up project and developed the solar grid tie inverter for supplying active power to grid during 2016.
- Biosensor satellite project is taken up Dept of Biotechnology and E&C under the guidance of Dr. Ujwal P (Biotech) and Prof. Durgaprasad (E&C). 4 students each from Biotechnology and E&C are involved in constructing a macro module for future possible use in satellite systems. This project was sponsored by Nitte Education Trust, Mangalore.
- A Ph.D. scholar from department of E&C is pursuing interdisciplinary research work, under the guidance of Dr. K.V.S.S.S Sairam, Professor, department of E&C, NMAMIT, Nitte and Dr. Shashikanth Karinka, Professor, department of Mechanical Engineering, NMAMIT, Nitte.

3.4.7 Mention the research awards instituted by the College.

- The institute gives away the best researcher award based on highest cumulative research incentive points earned by the researchers.
- The college has been giving research incentive to faculty members who are involved in various research activities such as publishing papers, executing projects, reviewing papers etc.

3.4.8 Provide details of Research Awards Received by the Faculty

- **Dr Krishna Shenai**
 - o Distinguished Lecturer, *IEEE Electron Devices Society*, 1998-2016
 - o Selected as Distinguished Lecturer (DL) by the IEEE Power Electronics Society (PELS) for years 2017 and 2018.
 - o Selected as an Honorary Advisor to the Centre of Excellence in Nano electronics at Electrical Engineering of IIT Bombay effective from 06-03-2017.
- **Dr. Srinivas Pai P** has been awarded the best Researcher for the year 2012-13.
- **Dr. Muralidhara** won the best paper award in international conference held in **IITM** titled Investigation on proposed tool wear compensation technique for micro EDM on Jan 2009
- Best project of the year 2009 at 32nd series SPP sponsored by KSCST Bengaluru, was awarded to a project titled “A study on solid waste microflora and its application in biodegradation” carried out by Anusha Jain , Kavitha Puranik ,Louella Concepta Goveas , Varsha under the guidance of **Dr. Chetan D.M.** and **Dr. C. Vaman Rao.**
- Best project of the year 2011 at 34th series SPP sponsored by KSCST Bengaluru, was awarded to a project titled “Reduction of FFA from oil using solid catalysts under microwave irradiation” carried out by Rashmi, Gauthami, Jane, Nagashree, under the guidance of **Mr. Venkatesh Kamath H.**
- **Dr. Shashirekha B. Rai** of Mathematics department received certificate of excellence for the paper presented in an International conference on Mathematical Modeling and Applied Soft Computing during July 11-13, 2012 held CIT, Coimbatore
- **Dr. Narasimha Marakala** won the best paper award in **ICETE-2012 held at J. J. Mugdam college of Engg. Kolhapur** titled “Combined effect of thermal and fluid induced vibration in slender pipe”
- **Mr. Narasimha Bailkere** Faculty, Dept. of Mechanical Engg., and Ph.D. scholar won Best paper award in the international conference RACE-2012 held at **MIT Manipal during Jan-2012** titled “performance study on twin plug SI Engine at different Ignition timings”
- **Goveas LC**, “Nutritional value and Sensory Analysis of traditionally fermented bamboo shoot foods of Arunachal Pradesh and Manipur” at **XXII Indian Convention of Food Scientists and Technologists (ICFOST-2012) on SAFEST INNOVATIONS** organised by CSIR-CFTRI, Mysore during December 6-7th, 2012. Pg 30 (Abstract). Awarded **Best Oral Presentation**
- **Dr. K Rajesh Shetty** won the Best paper award at International Conference on Advanced Computing and Communication (ICACC-2010) held at Amala Jyothi College of Engineering Kottayam on May 3rd and 4th 2010.
- **Mrs. Niju Rajan**, Dr. Ratnamala Rao, Dr. Muralidhara won the Best paper award at IEEE sponsored International Conference on Advance Computing and Communication Systems (ICACCS-2013) held at Sri Eshwara College of Engineering Coimbatore during 19th to 21st Dec, 2013.
- **Mr. Anil Kumar Bhat** & Zenitha Rehman won the Best Paper Award in the two day National conference on Advances in Communication and Signal Processing held at SJEC College of Engg., Mangalore on 13th & 14th August 2014.
- **Dr. Muralidhara** won the best paper award in international conference held in **Shri Eshwar college of Engg. Coimbatore in Dec 2013** titled Experimental Investigation on active vibration isolation using piezo electric actuator

- **Dr. Srinivasa Pai.P** won the Certificate of Achievement for having guided the Best M.Tech Thesis (II Prize) titled “Fuzzy logic based Prediction of performance and emission parameters of a dual fuel CI engine” submitted by A. Adarsh Rai during **42nd Annual National Convention of ISTE held at Hyderabad in 2013**
- **Adarsh A Rai**, Faculty, Dept. of Mechanical Engg. And M.Tech Student of ESE won Best M.Tech Thesis (II Prize) titled “Fuzzy logic based Prediction of performance and emission parameters of a dual fuel CI engine” during **42nd Annual National Convention of ISTE held at Hyderabad in 2013**
- **Dr. Muralidhara**, Professor, Department of Mechanical Engg. received second consolation prize for the presentation of his research work “ Development of Micro-Electro-Discharge machining (Micro-EDM) with Piezoactuated tool feed system” in the **exhibition of Academia project at IMTEX Forming 2014 held at Bangalore during 23-28 Jan-2014**
- **FKCCI** (Federation of Karnataka Chamber of Commerce and Industry) awarded Cash prize of **Rs. 50,000/** and a Rolling Trophy for a student project on “An investigation into Bioethanol Production from Unconventional Bioresources” carried out by Anjali Pai ,Vikas and Punith under the guidance of **Dr. C.Vaman Rao**
- The research work entitled “**Development of Tool Based Micromilling/Microdrilling Machine with Piezoactuated Workpiece Feeding System**” presented by **Muralidhara, Rathnamala Rao, and Veerasha R. K.** has been awarded **FIRST PRIZE** at Academia-Industry Pavilion at **International Machine Tool Exhibition-2015 (IMTEX-2015)** organized by Indian Machine Tool Manufacturers’ Association (IMTMA) at **Bangalore International Convention Center** from 22nd to 28th January, 2015.
- The research work entitled “**Reductive Hydrometallurgical Process for the Recovery of Cobalt and Lithium from Spent Lithium Ion Batteries using Tartaric Acid and Ascorbic Acid as Leaching Agents**” presented by G.P. Nayaka, K.V Pai, J. Manjanna and **G. Santhosh** has been awarded **FIRST PRIZE** at 8th KSTA Annual Conference jointly organized by KSTA and BIT Bangalore on “On Science and Technology for GenNext Urban Space” from 5th to 6th Nov, 2015.
- **Louella C Goveas, C Vaman Rao**, “Biochemical characterization of surfactants produced by *Brevibacterium* sp. (MTCC 10313) under stress conditions”, International Conference on New Frontiers In Chemical, Energy And Environmental Engineering (INCEEE-2015), organised by Department of Chemical Engineering, National Institute of Technology Warangal Telangana held on March 20 – 21st 2015. Pg 300-301 (Full Paper).Awarded **Session Best Oral Presentation** in Biotechnology session.
- **Louella C Goveas, C Vaman Rao**, “Bioremediation of lead by *Brevibacterium* spp. (MTCC10313)” International Conference on Water: From Pollution to Purification” organised by School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala held on January 23 – 26th 2015. Pg 112 (Abstract). Awarded **Third Place** in the Poster presentation
- **Louella Concepta Goveas, C Vaman Rao**, “Comparison of growth kinetics of *Brevibacterium* sp. MTCC 10313 used for Heavy Metal Remediation of Effluents”, National Conference on “Advances in Environmental Biotechnology

for Sustainability” organised by Department of Biotechnology, Alva’s College, Moodbidri held on February 6 – 7th, 2015. Pg 47 (Abstract).Awarded **Best Paper**.

- **Best project of the year 2014** at 38th series SPP sponsored by **KSCST Bengaluru**, was awarded to a project titled “Unipolar SPWM based reactive Power Compensator” carried out by Nishanth, Saurav, Apoorva and Madumitha, under the guidance of **Dr Nagesh Prabhu**
- ANZMAC New Zealand Best Paper in the International Category won by **Dr. K. Sankaran**, Director, MBA department in 2012.
- Awards Received by **Dr. Neelima B (Department of CSE)**
 - o Invited and placed in the list of “Women Who CUDA” by CUDA in Action Team of NVIDIA. Details @ <http://www.nvidia.com/object/women-and-cuda.html>
 - o Received prestigious IEEE-TCPP (Technical Committee on Parallel Processing) Travel Grant for attending 28th IEEE IPDPS-14 held at Arizona, USA during 19th to 23rd May, 2014 to present a paper titled “Predicting an Optimal Sparse Matrix Format for SpMV Computation on GPU.”
 - o Granted International Travel Grant from Department of Science and Technology, Govt. of India to attend a 13th ISPDC-14 held in France during 24th to 27th of June, 2014 to present a paper titled “A GPU Framework for Sparse Matrix Vector Multiplication on GPU.”
 - o Best Poster award for the paper titled “SWIFT: A Fast Enhanced Sting Matching Algorithm for Heterogeneous Architectures” at 22nd IEEE HiPC-Student Research Symposium-2015, given by IEEE-TCPP, IEEE Computer Society and ACM.
 - o Best Student Poster Award for the paper titled “String Sorting on the GPU using Hybrid Architectures” at ACM-PoPL-2015 held at Bombay India, Jan-2015 given by ACM.
 - o Best Paper Award for the paper titled “Graphics Processing Unit (GPU) Implementation Methodology of AERMOD model 2nd International Conference on Recent Advances in Sciences and Engineering-ICRASE-2013. 29th to 30th April, 2013, Organized by Association of Scholars and Professional-ASP at Hyderabad, India.
 - o Best Paper Award for the paper titled “Analysis of Threaded Applications on Multi-core Platform” at National Conference on Ubiquitous and Pervasive Computing, NMAMIT, Nitte, 24th and 25th Jan- 2008
- **Dr. Balasubramani R** is recognized for the contribution to WOSA14 (World Summit on Accreditation – 2014) organized by NBA, New Delhi
- **Dr. Balasubramani R & Prof. Ashwini B** are recognized as Silver Level Partner by Infosys-Campus Connect
- **Dr. Muralidhara**, The research work entitled “Design Fabrication and Testing of piezoactuator based workpiece feeding system for CNC Micromilling machine” has won **4th best research work award** among the 160 research projects presented by 37 different institutions from different parts of India at Industry-Academia Pavilion in International Machine Tool Exhibition-2017 (**IMTEX-2017**) organized by Indian Machine Tool Manufacturer’s Association (IMTMA) during 26th January to 1st February, 2017 at Bengaluru International Exhibition Center BIEC.

3.4.9 State the incentives given to faculty for receiving state, national and international recognitions for research contributions.

The Institution felicitates faculty members on receiving recognitions for their contributions at National and International levels. Every year faculty members who have been awarded Ph.D. are felicitated.

3.5 Consultancy

3.5.1 What is the stated policy of the College for structured consultancy? List a few important consultancy services undertaken by the College.

- The college has the policy of sharing the consultancy earning in 60:40 ratio with faculty.
- The faculty members and staff can utilize the equipment and tools available in the laboratory for carrying out consultancy services.
- The faculty members are permitted to carry out field work related to the consultancy during working hours.

Some of the important consultancy projects undertaken are:

- Udupi District Human Development Report 2012 of Zilla Panchayath Udupi – a consultancy project (MBA Department)
- Design of Jetty for St. Mary's Island (Civil Department)
- Third party inspection for local governing authorities (Civil Department)
- Development of software for billing for Shri Durgaparameswari Temple, Kemmannu (MCA Department)
- Software for Panchayath to carry out a demographic survey of the entire Nitte Village under Nerekere Kshema to study the village life and their problems. The analysis of survey can be done using software developed by the students of MCA.

3.5.2 Does the College have College-industry cell? If yes, what is its scope and range of activities?

Yes

- The institution has recruited a dedicated Director for Industry Institution Collaboration (IIC) to oversee the collaboration activities.
- Document on "Status of Institute-Industry Collaboration across Departments" is prepared to understand the present status, synergy and focus of the departments on IIC.
- The range of activities includes identification of expertise and skill available with the faculty members.
- Preparation of brochures related to consultancy services.
- Interacting with industry for students' projects, Internship, Curriculum development, on the job training and open elective.
- Constitution of corporate advisory board and organizing annual industry conclave are planned.

Following are the details of college- industry interaction undertaken during the last four years.

- Establishment of NVIDIA CUDA teaching centre, presently renamed as GPU Education Centre (Received US \$2500 and 5 NVIDIA GPU cards)
- Offered an Audit course titled "Introduction to Parallel Programming and CUDA"
- GPU and Accelerator concepts were included in core subject of PG-CSE 9CSE101: Advanced computer Architecture and Parallel Programming)
- Offered an Elective based on GPUs(Title: Heterogeneous Parallel Computing)

- Department of E&E has interaction with M/s HEXMOTO Controls Pvt. Ltd. and as a result company has started its incubation center in the college campus.
- MCA dept. has interacted with many companies, which has benefitted the students in the form of live project, in establishing state of the art labs in the institution and offered employment.

3.5.3 What is the mode of publicizing the expertise of the College for consultancy services? Mention the departments from whom consultancy was sought.

- A brochures containing detailed information on expertise is made available to the consulting firms from time to time.
- Information about Industry – Institute Interaction cell is published in the college website for information dissemination.
- College makes an effort to invite experts, CEO's from the Government and public sector enterprises as chief Guest for conferences, Graduation day programs, etc., This helps in building a relationship and gives an opportunity for consultancy projects.
- The government organizations like Udupi Zilla Panchayat, KIBADB, KRIDL etc., local industries like Lamina Foundries, Nitte, RNS Infrastructure Ltd, UPCL, GML, Kemmannu Durga Parameshwari Temple, Nitte etc., have offered consultancy projects.
- The department of Civil Engineering has executed consultancy contract with the following firms:

Table 3.23: Consultancy Contract (Civil Engineering Department)

JPCL Projects Site	Sree Vinayaka Hollow Bricks
Ganesh Industries	Sri. Bhuvanendra Residential School
K.R.I.D.Ltd.	Karkala Municipality
GML Infracon	Sharada Associates
Sri Balaji Associates	Deepak Associates
Rashmi Constructions	Crystal Blocks
KIADB	RNS Infrastructure Ltd.
Nayath Residential Park	In - process Engineers Ind. Pvt. Ltd
Manvitha Hollow Blocks	Ahmed Infra Projects Pvt. Ltd
Aghasthya Infratech	Lamina Foundries
Mahaganapathi Developers Power Corp. Ltd	Sharief Constructions

- MBA Department has executed several consultancy works for Udupi Zilla Panchayat, Udupi. These include: Comprehensive District Development Plan 2007-2012, Human Development Report for Udupi Zilla Panchayath, Eleventh Five Year Plan for Udupi District and Preparing District human development report of Udupi district etc.

Department of CSE

- On Advanced OpenGL for Honeywell Technology Solutions lab Pvt. Ltd. 8-12 Sept.2015
- On OpenVX for Tata Elxsi Ltd. 5-6 Feb.2015
- Ornaments Inventory Management System using Java for Mulki Venkataramana Temple from 10 June 2015
- Consultancy & training for the DDU GKY program funded by ITCOT Consultancy & Services and Ministry of Rural Development in June-July 2015

- Income generated to the college: - 2 Lakh

Dept of E&E

- Offers consultancy for Power Electronic converters to M/s HEXMOTO Controls Pvt. Ltd Mysore.
- Income Generated: Lab Equipment's worth Rs. 2,55,000 are donated by HEXMOTO PVT to carry out advanced power electronics experiments.

3.5.4 How does the College encourage the faculty to utilise the expertise for consultancy services?

- The college has a policy of sharing the consultancy earning in 60:40 ratio with faculty.
- The faculty members and staff can utilize the equipment and tools available in the laboratory for carrying out consultancy services.
- The faculty members are permitted to carry out field work related to the consultancy.

3.5.5 List the broad areas of consultancy services provided by the College and the revenue generated during the last four years.

Broad areas of consultancy are,

1. Preparation of report on Gender Sub plan Preparation
2. Study on the impact of the Project in Belthangady Taluk
3. Preparation of District Human and Development Report of Udupi District
4. Conducting Surveying for evaluating extent of specified land
5. Conducting Surveying for evaluating catchment of a river basin
6. Preparation of contour maps
7. Preparing feasibility report for a water resources project
8. Testing of engineering materials like Soil, Concrete, Steel, timber, aggregates, bitumen, PVC pipes used for water supply
9. Non – destructive testing on existing concrete structures
10. Evaluation of 'Safe Bearing capacity' of foundation soil
11. Designing/Vetting of ground level/type RCC water tanks,
12. Designing of cement concrete mixer for required compressive strength
13. Planning and designing of water supply system
14. Analysing the adequacy of foundations of existing structures for future expansion in the vertical direction
15. Designing of water front structures
16. Software for Billing
17. Software development for Demographic Survey
18. Design of Power Electronic Converters

Table 3.24: Consultancy Services Revenue Generated During the Last Four Years

Year	Agency	Nature of Consultancy work	Revenue earned (Rs)
2012-13	Nayath Residential Park, Sharada Associates, Deepak Associates, Crystal Blocks, RNS Infrastructure Ltd, In process Engineers Ind.Pvt.Ltd, Asha Hollow Blocks, Ahmed Infra Projects Pvt.Ltd, Rashmi Constructions, Lamina Foundries, Sharief Constructions, MARS Planning &Engg, Durgaparameshwari Associates,	Cube Testing, Steel Testing	3,53,395

	Megha Associates		
2013-14	Adarsh Industrial Chemicals, KIADB Zonal Office, Sharada Associates, UPCL Projects Site, Ganesh Industries, Pilar, K.R.I.D.Ltd., Ashtech (I) Pvt.Ltd., GML Infracon, Sri Balaji Associates	Testing and Consultancy Concrete cube Testing, Steel Testing, and Water Testing.	7,62,153
2014-15	Ashtech (I) Pvt.Ltd. Sharada Associates, Rashmi Constructions, Aghasthya Infratech, Nirmithi Kendra, Udupi, PRED, Karkala, PWD&IWP Departments	Cube Testing, Steel Testing	11,88,764
2015-16	PRED, KPWP&IWT, T.M.C., Nirmithi Kendra, KRIDL	Third party inspection, Consultancy and Lab test	9,84,162
Total			32,88,474

3.6 Extension Activities and Institutional Social Responsibility (ISR)

3.6.1 How does the College sensitize the faculty and students on Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience.

The college has established certain groups like AURA, Hands of Hope, AnnaDana, Samvedana, NSS etc. which have been started with the intention of sensitizing the students to problems and needs of the society and Institutions in the immediate neighborhood.

- **AURA and Hands of Hope**

A large group of students are oriented to working with the disadvantaged and carry out activities to contribute their might through engagements with the needy on a regular basis.

- **Anna Dana Group**

'Anna Dana' is another regular activity of food re-distribution that our students engage in.

- **College NSS Wing**

The NSS wing organizes Blood donation camp every year

- **Samvedana- MBA Students' Outreach Group**

o The student centric social sensitivity activities are carried out under the association named 'Samvedana'. The activities of this association are carried out by the student members under the guidance of a faculty member. Students voluntarily become members of this association and organize social sensitivity programs. From the academic year 2015-16, the activities of students under various associations including Samvedana will be a credited course. This emphasizes the importance extended to extension activities in the campus.

- The MBA department also organizes an event known as NITTE UTSAV wherein the local artisans get an opportunity to showcase their products and get inputs to market their products. About 1500 public participate in this programme.

- Faculty members of the institute deliver lectures in the programs organized by EDC and STEP of NMAMIT.

- The college has established a unit called "Nere kere Kshema" (Welfare of the neighbourhood) constituted of members from society and the institution itself.

Activities of the “Nere kere Kshema” are carried out by involving students, staff and faculty from our sister Institution (Medical College).

- The Institution has provided space for the meeting of the local Rotary club which has some of our faculty members as members. The faculty members are sensitized to societal problems through the activities of the Rotary club.

Other activities and interactions with outside world

- The college has carried out many eco-friendly tasks in the college relating to Energy, Climate and Air, Social Outreach, Going Green, Conservation of Food, Management of Waste, Saving Water, and Collaborating with the media about spreading the green message.
- Awareness was created about the harmful effects of open burning of waste. This was a common practice around Nitte but such burning has now been stopped to some extent.
- A short video highlighting the issues affecting our planet was made by students.
- More than 250 biodiesel saplings were planted in Justice K. S Hegde Garden (**Sanmathi**) and around.
- Posters were put up in hostel messes and canteen regarding the “**Avoiding the wastage of food.**”
- An initiation to achieve zero waste campus is practiced by compulsory use of paper bags in place of plastic bags, providing dustbins everywhere and recycling the metals used in the workshop.
- Posters were put up around college and in hostels regarding the wastage of water
- Creating a software for Gram Panchayat by MCA department
- Mobile repair training programme for diploma holders and local boys
- Summer Internship for Rural school students under Technology Barrier Reduction Programme sponsored by Motorola Solutions Foundation
- A ‘**Clean Drive**’ was organized in 2013 in the campus in collaboration with the NSS and Aura, the social organizations of the college. The biodegradable and non-biodegradable wastes collected from in and around the entire campus were segregated. The biodegradable wastes were used as manure and the non-biodegradable waste was saved for future use.
- During World Wildlife Day, a ‘Scavenger Hunt’ event was conducted in 2013 at Dr. Shivarama Karantha Wildlife Sanctuary, Pilikula, Mangalore. Many school children from Mangalore District participated and were enlightened about the beauty of nature, and their responsibilities towards care of nature.
- More than 2000 biofuel saplings have been planted in and around the campus.
- **Teach good** – teaching program on computer basics to rural students by ACE (Association of Computer Engineering) in 2013-14 at Govt. School, Karkala.
- Interaction with students of Chethana Special School: The students of Computer Science Engineering (UG) have interacted with 40 students of Chethana Special School, along with few faculty members, in October 2014.

Impact: The students have been able to strike a chord of empathy with differently challenged students. This has helped the students to understand the difficulties of a certain section of the society

- **Interaction with students of White Doves:** 65 students of Computer Science Engineering (UG) have interacted with 105 inmates of White Doves, Mannagudda, Mangalore in September, 2014.



Impact: The students have been able to realize how lucky they are considering the sufferings of the inmates. This will make the students responsible citizens.

- The other activities where, the students and staffs were directly interacted with the public are listed below:
 - Scope for rural artisans to showcase their products
 - Rural Artisans & Self-help groups
 - Monetary & exposure benefits to the beneficiaries
 - Visit to special school “Manasa” for especially abled Children of the school
- The institution busses are utilized for free travel of neighbouring school children

3.6.2 How does the College promote College-neighbourhood network and student engagement, contributing to holistic development of students and sustained community development?

The **Samvedana Group** has interacted with the neighbourhood in the way listed below:

- Associated with a Government run school in the village near the college (Bola) from 2014 and conducted Computer basics training programs, spoken English training and provided personality development inputs to school children.
- Donated solar lamps under the banner ‘belaku’ to needy children attending schools in the neighbourhood.
- Donated two computers to the school so that students and teachers will have access to computer for easy learning.
- Organized eye check up and eye donation pledging camp in the campus for the local residents.
- Student members visited old age home and spent one day with the senior citizens.
- Student members visited schools for differently abled children and organized a few games for them.
- The annual B School fest organized by MBA department is based on a specific theme. This has helped students to work around the concept and thereby the social outreach gets importance. The themes chosen during the last four years are:
 - 2015-Sustainability and Innovation
 - 2014-Sustainability
 - 2013-Strategic Initiation
 - 2012-Corporate Social Responsibility

3.6.3 How does the College promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/International agencies?

The college has NSS unit and promotes the participation of students and faculty

- NSS unit has planted 150 biofuel saplings along with faculty during 2016.
- One Day Free Eye Screening and Cataract Session was organized in the campus by NSS in association with Prasad Netralaya Udupi. More than 100 people from the local village were benefited from the program.
- Blood donation camps are conducted every year.
- Swatch Bharath Abhiyan, Clear drive has been organized regularly.

3.6.4 Give details on social surveys, research or extension work (if any) undertaken by the College to ensure social justice and empower the under-privileged and most vulnerable sections of society?

Extension work undertaken by the College under 'Nere Kere Kshema' Scheme. College organizes on regular basis Medical, dental camps and treatment for psychiatric patients in association with KSHEMA and A.B.Shetty Dental College managed by Nitte Education Trust (NET) for the under privileged people in and around Nitte village.

- College in association with NET, grants financial assistance up to Rs. 50,000 per family for construction/renovation of houses every year for below poverty line (BPL) families.
- Several under privileged and deserving families in the Nitte village were given help in getting the old age pension from the government.
- The college provides the required support and also coordinate with the government departments to get the tricycle, four wheel cycles to differently abled persons in and around Nitte village.
- Employments for the under privileged society are provided on priority basis for recruitments at the college for all cadres.
- Local students with merit are given free education by NMAMIT for MBA/MCA/Engineering programs.
- All residents of Nitte village get free education up to High School/PUC in the education institutes run by Nitte Education Trust. This is carried out under the supervision of NMAMIT.
- In association with NET, public roads of Nitte village are maintained by the Institute.
- A Kannada medium primary school is managed by NMAMIT in Nitte village for the benefit of all people of Nitte village.

Other extension works undertaken

- Software for Kemmannu Durgaparameshwari Temple, Nitte (Completed)
- Software for NSAM English Medium School, Nitte (Completed)
- Software for Psychiatry Project (Completed)
- Development of Police App (On going)
- Panchayat Project, Madantyar (On going)
- Many Faculty members of NMAMIT are members of Rotary Club of Nitte and engage in several extension activities.
- Providing Laboratory facilities to AMIE students registered under Institution of Engineers (IE)-India

- The college in association with Foundation for Advancement of Education and Research (FAER) and Motorola Solutions has conducted summer internships “FAER - Motorola Solutions Technology Barrier Reduction Program” for rural school students of 9th Standard from 20-04-2015 to 15-05-2015. 22 faculty members as resource persons and 10 student volunteers have conducted the programme successfully.
- School outreach program ‘**Spark**’ is organized by the students of the department of E&E where they will train students from High School for various computer skills and personality development skills.
- The Institution facilitates the use of computers for nearby ITI students to ensure the learning of different design software’s used in the field of mechanical engineering.

3.6.5 Give details of awards / recognition received by the College for extension activities / community development work.

The activities of the students and the college are highly appreciated by the public, in general.

- The beneficiaries, school managements have honored our teachers and students on Teachers Day and Annual day of the School.
- **Appreciation and honor received by Samvedana group for the following activities:**
 - o Teaching English & Life skills to underprivileged Children of Ramakrishna Higher primary school, Bola. The students of Samvedana group were honoured by the school management during their annual day.
 - o As part of social responsibility computers have been donated to Children of Ramakrishna Higher Primary School, Bola.

3.6.6 Reflecting on objectives and expected outcomes of the extension activities organized by the College, comment on how they complement students’ academic learning experience and specify the values and skills inculcated?

- The students who participate in the programmes mentioned in the preceding sections have been able to understand how to organize and manage an event, preparations required, planning the execution and perform self-evaluation.
- It encourages the students to take-up socially relevant project in their academic studies

Additionally, the following benefits have been garnered by the students:

- Empathy, Minimising wastage
- Team work
- Leadership activities
- Attitudinal and behavioural changes
- Responsibility and Accountability
- Concern and fellow feeling
- Understanding the importance of discipline
- Satisfaction of helping others

3.6.7 How does the College ensure the involvement of the community in its outreach activities and contribute to the community development? Detail the initiatives of the College which have encouraged community participation in its activities.

The college advertises in all the popular dailies and puts up banners at selected location about the scheduled activities.

The college with help of its sister concerns is engaged in socially beneficial activities and as a result community voluntarily participate in the programmes.

- Free transportation is provided for the community of Nitte and nearby villages to attend community development activities.
- In the last fifteen years, over 20,000 dental patients have been treated in and around Nitte village
- In association with KSHEMA, Kowdoor Grama Panchayat and Youth Association, free eye check camp was held in 2015
- Ladies club and college women cell work together for women empowerment
- Cleaning the neighborhood along with the villagers.
- Providing demonstration and information about Biodiesel to local people and students through our Biofuel demonstration and Information Centre
- A group called Care of Nature (C.O.N) interacts with local people in giving information about saving energy, clean and green environment.
- A platform for students from nearby schools to perform and showcase their talents is provided during Nitte Utsav
- Products of local entrepreneurs are promoted during Nitte Utsav (Earthen Pots, Vanity bags, Kitchen equipment etc.)

3.6.8 Does the College have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?

- The college motivates the students to involve in various social activities
- All social activities are organized and guided by Faculty coordinator and students' performance and involvement is monitored as students volunteer for various activities through NSS, Samvedana and many student clubs. The performance of students is evaluated.
- The promotion of citizenship roles, Professional Growth & Individual Development (PGID) is ensured by organizing numerous activities.

3.6.9 Give details on the constructive relationships (if any) with other institutions in the nearby locality in working on various outreach and extension activities.

In association with:

- Karkala Police Station officers are involved in an event of ETTIN organized by Department of MBA.
- Students conducted a study on drinking water project in Belapu Grama Panchayat in 2015.
- Students conducted a study on Waste Management and awareness level of various schemes of government for rural population in Kallya Grama Panchayat in 2015.
- Udupi District Blood Bank under Ministry of Health, Government of Karnataka, and the department of MBA conducted the blood donation camps at the Institute to ensure a minimum of 100 bottles of blood collection every year since 2010.

3.6.10 Give details of awards received by the institution for extension activities and/contributions to the social/community development during the last four years.

- National Award for best Human Development Project was awarded to Faculty members of MBA and the department has submitted Human Development Report to Udupi Zilla Panchayat during 2015.

3.7 Collaboration

3.7.1 How has the College's collaboration with other agencies impacted the visibility, identity and diversity of activities on the campus? To what extent has the College benefitted academically and financially because of collaborations?

Collaboration involves a diverse set of activities, no single parameter is able to capture the full range of such collaboration; and NMAMIT is taking all the steps to ensure to utilize the multidimensional parameters for successful collaboration with other agencies.

The following steps have been taken to improve and strengthen Industry-Institute Collaboration at NMAMIT in various programs.

- A document on five year Strategic Plan (2015-2020) for improving and strengthening Industrial collaboration at NMAMIT has been prepared by considering the various aspects of engineering education.
- A study on Industry-Institute Collaboration across Departments of NMAMIT on the identified parameters has been carried out to understand the present status and focus of the department on Industry-Institute Collaboration.
- An initiative **Mission 360 Degrees - Collaboration through Synergy** has been launched to build the institution through the synergy among intra departments between faculty members, inter & service departments, alumni and industries.
- The identified organizations are being approached in a structured way by indicating the possible areas of collaboration as detailed below.

Table 3.25: Details of Collaboration

Dept.	Organizations	Academic Benefits	Financial Benefits
Civil	Karkala Town Municipal Council, Karkala	-	Many consultancy projects have been executed with the organizations
Civil	Karnataka Rural Infrastructure Development Limited, Udupi	-	
Civil	Nirmithi Kendra, Udupi	-	
Civil	Nitte University, Mangalore	-	
Civil	Panchayath Raj Engineering Division, Udupi		
Civil	Public Works, Port and Inland Water Transport Department, Udupi		

Mechanical	Ashok Leyland, Chennai	Revision of curriculum 'Automotive Electronics' Revision of laboratory manual 'Metrology & Measurements' Created avenues to setup a joint state-of-the-art automotive laboratory	--
Mechanical	Central Institute of Plastics Engineering & Technology	Training programs for 2nd & 3rd year students	--
Mechanical	Indian Welding Society / Welding Research Institute of Bharat Heavy Electricals Limited (BHEL), Trichy	Formation of IWS students' chapter for the technical development of the students Avenues to introduce new courses on welding technology	--
Mechanical	Lamina Foundries, Nitte	Faculty development programs Student development programs Guest lectures / seminars Industrial visit / industrial training Project guidance	--
Mechanical	Lamina Suspension Products Limited, Mangalore	Faculty development programs Student development programs Guest lectures / seminars Industrial visit / training Project guidance	--
Mechanical	National Institute of Design, Ahmedabad	--	Received Rs. 1.02 lakh for student design projects under Design clinic scheme for micro small and medium enterprises of Government of India
EEE	Hexmoto Controls Pvt. Ltd., Mysore	Execution of academic / live projects for UG and PG students Placement	The company has invested money on establishing a R&D centre at NMAMIT. Advanced equipment are received for P.E. Lab (Rs. 2,55,000/-)
ECE	Electronics Corporation of India Limited, Hyderabad	Execution of academic / live projects for UG and PG students	--
BTE	Borg Scientific, Chennai	Industrial training / internship for the students	--

BTE	Maxi Bond, Bangalore	Industrial projects	--
BTE	Provimi Animal Nutrition India Pvt, Ltd., Bangalore	Industrial training / internship for the students	--
BTE	Texas Upcycle Bioenergy, USA	Industrial projects for the students	--
CSE	Intel	Introduction of audit course on Internet of Things UG projects on Embedded systems and IoT applications	Establishment of Embedded systems lab with emphasis on ATOM family of processors (received Rs 2 lakhs + 10 ATOM kits) Extension of Intel Embedded systems initiative (received Rs 1.45 lakhs) Extension of Intel Embedded systems initiative (received 40 Arduino boards)
CSE	IBM India Pvt. Ltd., Bangalore	Introduction of a good number of elective subjects from 2nd through 8th semester viz. Introduction of Open Source Software and Open Standards, Introduction to PHP using IDE, Web Programming through PHP & HTML, Cloud Computing Architecture, Data Mining and Predictive Modeling, Warehouse & Multidimensional Modelling, Security in Cloud, Mobile Analytics, etc.	--
CSE	Microsoft	Workshops on Windows App Development for the students and faculty	--
CSE	Robosoft Technologies, Udupi	Final year internship for UG students	--
ISE & CSE	Infosys Limited, Bangalore	Open elective 'Essentials of Information Technology' for 8th sem non IT students Core subject 'Business Intelligence & its Applications' for 7th semester CSE students	--

		Offer projects for placed students Electives designed by the company on (i) Introduction to Aircraft design (ii) Design of Aircraft Structures.	
ISE & CSE	IBM India Pvt. Ltd., Bangalore	Skill development programs, Curriculum development, Placement Industrial problem to doctoral candidates Joint workshops / seminars To setup laboratory	--
ISE & CSE	A1 Logics, Mangalore	Industrial training / internship for the students Industrial projects for the students, Guest lectures / seminars by the industry	--
ISE & CSE	VMware IT Academy Bangalore	Industrial training / internship for the students Industrial projects for the students Guest lectures / seminars by the industry	--
ISE	Huttirifly Infotainment, Mangalore	Industrial projects for the students	--
ISE	NVIDIA	UG & PG students projects on high performance computation and parallel computing applications NVIDIA GPU cards for the research purpose used by the research scholars	Establishment of NVIDIA CUDA teaching centre, renamed as GPU Learning Centre (Received US \$2500 and 5 NVIDIA GPU cards worth 40000 each) Reg. fee for conference for students, provided by the company
ISE	Swadeshee, Udupi	Industrial projects for the students	--
MCA	Indygo Software Systems Private Limited, Bangalore	Industrial projects Placement	--
MCA	RV Telecom Thinking Hats P Ltd., Ahmedabad	Industrial projects Placement	--
MCA	Weltrix Pty Ltd Australia	Industrial projects Placement	--

MBA	University of Pennsylvania, Ritsumeikan University, Japan Erasmus University, MUBS, Uganda	Academic activities. International conferences	--
All the departments	Al Manaratain Company, UAE	Industrial training Placement , Industrial visits	--
BTE	Karnataka State Biofuel Development Board, Govt. of Karnataka	--	Setup biofuel information & demonstration centre

3.7.2 Mention specific examples of, how these linkages promote

- * **Curriculum development**
- * **Internship, On-the-job training**
- * **Faculty exchange and development**
- * **Research, Publication**
- * **Consultancy, Extension**
- * **Student internships and placement**
- * **Any other, please specify**

➤ **Curriculum development**

- Infosys and Robosoft offered a course for Computer science students.
- SPAN Infotech introduced an elective “Essentials of Information Technology”, for 8th sem students placed in SPAN Infotech. The course was framed by SPAN Infotech.
- IBM has introduced many core and electives subjects for all semesters of computer Science branch.
- Mechanical Engineering students study electives ((i) Introduction to Aircraft design. (ii) Design of Aircraft Structures) designed by Infosys.
- Revision of syllabus ‘Automotive Electronics’ as per the industry’s requirements designed by Ashok Leyland, Chennai
- Updation of laboratory manual ‘Metrology & Measurements’ by Ashok Leyland, Chennai

➤ **Internship, On-the-job training**

- Hexmoto controls has provided Internship for two M.Tech students of Dept of E&E
- Large number MCA students have been exposed to the live projects offered by the many companies with whom the college has collaboration.
- Some of the MCA students get 6 months training during their 6th semester project development.
- MoU with Institute of Plastic Engg.& Technology, Mysore, has provided. Opportunities for the student of Mechanical Engg.to learn about plastic technologies (2 week training is provided) – 4 students participated.
- Interaction with Electronics Corporation of India Limited (ECIL), Hyderabad to execute academic / live projects for UG and PG students

➤ **Faculty exchange and Development**

- Two staff and students were deputed for two days workshop organized by Intel

and IISc, Bangalore.

- Faculty members were provided with training by IBM to handle classes on IBM subjects.
- 5 days Faculty Development Program provided by the Society for Educational & Entrepreneurship Development (SEED), Chennai.

➤ **Research, Publication**

- Interaction with NVIDIA has resulted in 10 research Publications in the department of Computer Science
- Faculty members of E&E dept. have published 14 research papers in collaboration with Industries.

➤ **Consultancy, Extension**

- Solar Battery Charger design for HexMoto Controls Ltd. Mysore.
- High frequency inverter for HexMoto Controls Ltd. Mysore.
- Solar Inverter for Digital Circuits, Bangalore.
- Adequacy of foundation of a building for an additional floor- APMC, Karkala
- Design of Passenger Jetty near St. Mary's Island.
- Testing of materials physical properties for other agencies.

➤ **Student internship and placement:**

Large numbers of students have been inducted into the company once they have finished with internships/live projects. The details are as follows:

Table 3.26: Internships

Branch	2016-17	2015-16	2014-15
Civil	02	02	-
Computer Science	54	81	67
E&C	23	13	04
E&E	04	-	01
Information Science	10	14	25
Mechanical	02	-	-
M.Tech(Software)	01	-	-
M.Tech (CS)	02	-	-
M.Tech (MECS)	-	01	-
M.Tech (PE)	-	01	-
MCA	02	23	04
Total	100	135	101

Table 3.27: Live projects of MCA students

Company Name	Year	Number of Students
HP	2008-2011	09
Sonic Wall	2008-2011	07
Sonic Wall	2009-2012	04
SUN+	2010-2013	04
Pinacca	2011-2014	04
SUN+	2011-2014	07
TechVerve	2011-2014	04
ThoghtTrix	2011-2014	10
TTH	2011-2014	07
Hexmoto Controls	2012-2016	07

Table 3.28: Campus Placement Details

Branch	2016-17 (as on 24.2.2017) #	2015-16	2014-15	2013-14
Biotechnology	8	7	15	11
Civil	26+ 2*	27	17	15
Computer Science	252 +5*	169	132	111
E&C	245+1*	162	140	117
E&E	40	48	38	32
Information Science	50	44	59	46
Mechanical	85	127	96	63
M.Tech (SSE)	1	NA	NA	NA
M.Tech (CCT)	1	-	-	-
M.Tech (CNE)	-	1	-	5
M.Tech (CS)	2	4	4	5
M.Tech (DEC)	-	3	10	7
M.Tech (ESE)	-	-	6	NA
M.Tech (MECS)	-	2	4	4
M.Tech (PE)	1	2	NA	NA
M.Tech (VLSI)	2	2	5	10
MCA	14 +1*	66	55	14
Total	727+9*+95**	664+85**	582+77**	440+70**

On-going * Post degree internship ** MBA Placements

3.7.3 Does the College have MoUs nationally / internationally and with institutions of national importance / other universities / industries / corporate houses etc.? If yes, explain how the MoUs have contributed in enhancing the quality and output of teaching-learning, research and development activities of the College?

Yes. The college has MoUs with National and International institutions and Industries
Contribution of MoUs National level

➤ **MoU with Intel**

- The MoU resulted in the introduction of audit course on Internet of things. The facility provided by the company was used for UG projects. These have produced positive impact on improving the teaching – learning process.

➤ **MoU with IBM**

- The company introduced many electives which have made the learning meaningful.
- The staff members were trained by the company to teach specific subject to enhance effective teaching - learning process.

➤ **MoU with TTH Consultancy Ahmadabad, Techverve Solutions Private Ltd, Pinnacle, Pinaka, Indigo, RedHat, Thoughtrix, Weltrix Australia**

- Students have worked on the software project given by company under the guidance of industry expert as well as faculty (MCA). This has contributed in developing the technical and communication skills of students and faculty.
- The firms provided the institute with state-of –the art facilities for the students to work with (in MCA), thus making them industry ready. Hence, many of the students were absorbed by the firms.

- The firms established lab/facilities (TTH and Techverve) in the college. The projects of the firms were carried out in these labs by our students, thus helping them to become better professionals.
 - The staff members were made part of the firms project, thus enabling them become better teachers.
- **MoU with Thinking Telecom Hats, Ahmedabad, Tech Verve Solutions, Bangalore, Pinacple Media Solutions, Udupi, Pinaka Informatics Private Limited, Bangalore, Indygo Software Systems Private Limited, Bangalore, RedHat, Bangalore, Weltrix Pty Limited, Australia, Thoughtrix Software, Bangalore, BloomFresh Edibles Pvt. Ltd, Bangalore (MCA dept)**
- Android App Development
 - Android and mobile applications development
 - Software development on Web Applications
 - De-duplication – Memory management
 - Online Application Development
 - Students carry out project either during summer vacation or as part of academic activities. The projects are guided by both industry people and faculty which helps in achieving following objectives for both faculty and students
 - Exposure to the latest technologies
 - Understanding the way of communication and working culture of industries
 - Managing time and improvement of communication skills
- **MoU with KRIDL, Udupi, T.M.C. Karkala, PWD, Udupi, PRED Udupi, Udupi Nirmithi Kendra**
- Consultancy opportunity for MBA and Civil department has been created.
 - Design opportunity was obtained in the construction of Jetty at St. Mary's Island. Many faculty members were part of the design process. They were richer by the practical real life experience.
 - Civil engg department has been empanelled for third party inspection by Udupi District Civil Authorities. This has enhanced the outlook of the institution and provided an opportunity for the faculty to interact with the outside world.
- **MoU with INFOSYS**
- Introduction of several elective subjects on various domains.
 - Introduction of Audit courses.
 - An opportunity is provided for the placed students to carry out their final year project internships in the respective companies.
- **MoU with NVIDIA**
- Resulted in setting up of NVIDIA CUDA Teaching centre.
 - The audit course "Introduction to Parallel Programming and CUDA" has been introduced.
 - The hardware and software provided by the industry are used by the students for carrying out the experiments in the regular labs
 - Final year UG and PG projects are carried out using the hardware and software provided by the industry

➤ **MoU with VMware, Bangalore, A1 Logics, Mangalore, Huttirifly Infotainment Mangalore, Swadeshee Pangala, Udupi (ISE Dept)**

- The MoUs have contributed in enhancing the quality and output of teaching-learning, research and development activities in the following way:
- Introduction of several elective subjects on various domains
- The hardware and software provided by the industry are used by the students for carrying out the experiments in the regular labs
- Introduction of Audit courses
- Final year UG and PG projects are carried out using the hardware and software provided by the industry

➤ **MoU with Kanara Small Industries Association (KSIA)**

- The MBA Department is associated with the Kanara Small Industries Association (KSIA) - an association of entrepreneurs from Baikampady industrial estate in Mangalore (about 30KM from Nitte). Due to the above understanding, all the students from MBA department get an opportunity to visit a unit in the industrial estate to study the operations of the unit for 15 days and complete Industry Project, which is a part of the MBA curricula. In the near future, the institute is likely to take up consultancy services on labor issues and power distribution issues in the industrial estate in addition to this, our students conducted a survey, as a part of proposal to develop the Industrial Township in the same locality. In addition to this, KSIA has requested the institute to conduct MDP on leadership, IT Applications, Skill development/enhancement etc. This proposal is now under active consideration.
- The college has entered a MoA with NRDC, New Delhi for patenting and commercialization of ideas. The patenting is free and commercialization with 50:50 profit sharing.

International level

➤ **MoU with AMD University relations**

- Open CL programming is taught to the students.

➤ **MoU with Penn State University resulted in the following activities:**

- The faculty exchange programme has resulted in faculty members (involved in research) interacting with their faculty members.
- Four faculty members (2 from biotechnology and 2 from mechanical engg) spent a month in Penn State University in 2013. The faculty from biotechnology carried out research in their area of interest, and faculty members from mechanical engg. explored the possibility of future research exchanges. The sojourn was financed by NMAMIT.
- The Institute has organized 4 international conferences in collaboration with foreign Universities School of Social Policy and Practice of Pennsylvania University has organized study tours for their students to India during the last five years.

➤ **MoU with Ritsumeikan University, Japan, has resulted in the following activities:**

- PG students who their 6-month projects in Ritsumeikan University, Japan, have been able to do quality research using high end equipment available there. They

have been able to publish quality papers.

- Because of active collaboration, Ritsumeikan University, Japan, invited 10 UG students for cultural interaction in 2015.
- One M.Tech students was sponsored by Japan government to work on 6-month project work at Ritsumeikan University in 2015.
- Prof. Suryanarayana and Prof. Venugopal have visited Ritsumeikan University during 11-26 June 2015 and interacted with research groups of interested area.
- A group of 10 under graduate students underwent 10days scholarship programme at Ritsumeikan University Campus on **‘Experience on Artificial Intelligence’** in Japan during Dec 18th to 24th 2016.
- Under “Student Exchange Program- Project Based Learning” of Ritsumeikan University, a team 13 undergraduate students (11 boys and 2 girls), one male graduate student (as a teaching assistant) headed Prof. Yukihiro Hirose (15 in total) visited NMAM Institute of Technology, Nitte during February 3 – 10, 2017. They carried the preliminary investigation on the issues and problems pertaining to **traffic and power supply** faced by Indian society, and also proposed the solution through site visits and field work during the program.

➤ **MoU with Makerere University, Uganda has resulted in the following activities:**

- The faculty from Makerere University was partners for International Conference held in MBA Department.
- Participation of faculty of MBA Department in International Conference held at MUBS, Uganda.
- In collaboration with the Makerere University Business School, Uganda the Institute organized 2 international conferences at Nitte. Dr. G. V. Joshi, Professor was appointed as Visiting Professor at MUBS and Dr. Waswa Balunywa, Principal of MUBS was appointed as visiting Professor at MBA Department.

➤ **MoU with Rotterdam School of Management has resulted in the following activities**

- In collaboration with Rotterdam School of Management, Erasmus University, Netherlands, the MBA Department organized two international Conferences.

➤ **MoU with National University of Singapore has resulted in the following activities:**

- The three students belonging to VIII semester underwent an internship training programme from Feb 16th to March 21st 2015 at National University of Singapore, Dept. of Biological Sciences.
- The training programme was on Isolation and molecular characterization of a plasmid, RNA isolation, Extraction of DNA fragments from gel, Sequencing PCR and cleanup, cDNA synthesis, qRT-PCR, Colony PCR, RAPD, Sonication and isolation of DNA fragments, Blunting and ligation of DNA fragments, Genomic DNA extraction and Transformation of Arabidopsis. Students are confident of using these techniques that they have learnt during their training programme.
- Dr. Waswa Balunywa of MUBS and Dr.Famida Handy from Pennsylvania University are in the Editorial Board in our Research Journal- Nitte Management Review

3.7.4 Have the College industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities?

Yes. The following laboratories / centres have been established in the college in collaboration / interaction with the industries:

Table 3.30: Laboratories in Collaboration / Interaction with the Industries

Department	Name the Laboratory / Centre	Company
CSE/ISE	Business intelligence lab	Infosys
	Mobile application development lab	Robosoft
	Centre of excellence in high performance computing	NVIDIA and AMD
	Multi-core and GPU programming labs	NVIDIA and AMD
	Embedded systems lab	Intel
	IBM lab(Center of Excellence)	IBM
E&E	Advanced power electronics laboratory: SPMPS Kit: TWR-SMPS-Rs.75,000.00 BLDC Motor kit with Arm cortex M4-Rs.70,000.00 Hexmoto general purpose AC drive-Rs.40,000.00 High Voltage Motor control kit-Rs.75,000.00	Hexmoto, Mysore
Mechanical Engg.	Ashok Leyland–NMAM Institute of Technology Joint State-of-the-Art Automotive Laboratory is being established in the academic year 2017-18.	Ashok Leyland

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical Facilities

4.1.1 How does the College plan and ensure adequate availability of physical infrastructure and ensure it optimal utilization?

- The physical infrastructure requirement of respective academic year is planned well in advance and the proposal is placed before the Governing Council and approval is sought along with sanction of the budget and the same is executed.
- The major projects are done in phases.
- The college has created state of the art sports complex
- The policy of the institution is to provide the best in-class infrastructure to facilitate effective delivery of teaching learning process and research. The policy also includes
 - Upgradation of the existing infrastructure through annual planning
 - Based on increase in student strength.
 - ICT enabled class rooms for effective content delivery.
 - To meet industry expectation and R&D requirements.
- In addition to the above, the infrastructure planning pertaining to the following are periodically enhanced.
 - Auditorium
 - Seminar halls
 - R&D Laboratories
 - Sports and physical fitness facilities.
 - Awards received by the students for sports and academics speak for themselves for the Optimal utilisations of the facility.
 - The details of sports and other related events conducted are available with the Sports Director.



Fig 4.1: Aerial View of the College

Table 4.1: Utilization of funds for infrastructural development

Funds for infrastructural development	Cost (in Lakhs)			
	2012-13	2013-14	2014-15	2015-16
Building	316.19	540.76	1875	977.1
Land	46.62	61.53	0	0
Furniture	55.42	118.7	62.11	58.1
Equipment	107.02	218.98	136.42	94
Computers	43.8	20.12	71.58	73
Transport	202.22	210	342.38	19.1
Sports	10.37	20.42	23.4	16.4

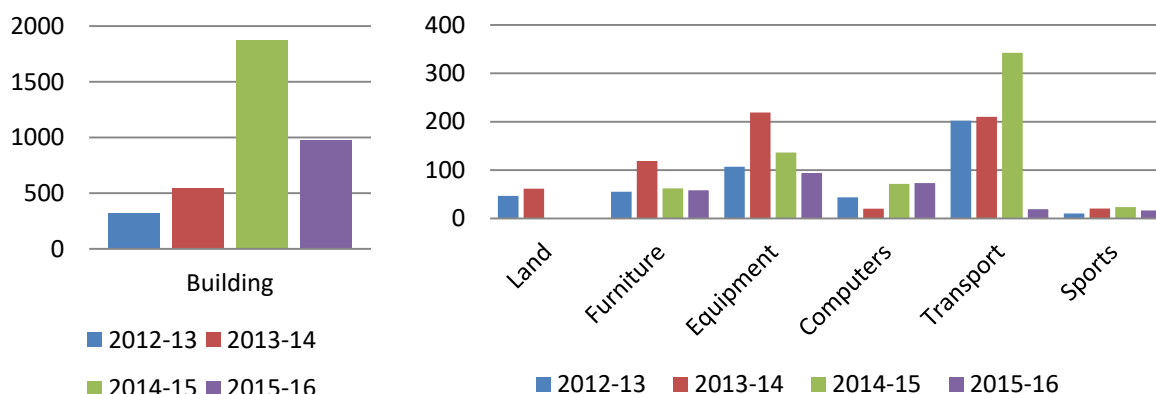


Fig 4.2: Utilization of funds for infrastructural development Cost (in Lakhs)

4.1.2 Does the College have a policy for creation and enhancement of infrastructure in order to promote a good teaching-learning environment? If yes, mention a few recent initiatives.

YES. The college has a policy for creation and enhancement of infrastructure in view of promoting good teaching learning environment.

- The college provides individual cabin/cubicle to the faculty members with internet facilities.
- All classrooms are equipped with LCD projectors.
- Family quarters for faculty members have been provided.
- Wi-Fi facility is available at academic and hostel premises.
- Project initiative groups (ELIXIR, ARM LAB, Aero Club) are formed and provided with required equipment and space for conduction of activities.
- Software development and incubation centers are provided for students to carry out the projects.

4.1.3 Does the College provide all departments with facilities like office room, common room and separate rest rooms for women students and staff?

YES,

- Every Department has its own office with clerical assistants and computational facilities.
- The Institute has spacious separate rest rooms for Women staff and lady Students.

4.1.4 How does the College ensure that the infrastructure facilities meet the requirements of students/staff with disabilities?

- Ramp for physically disabled at prominent places and wheel chair facility are provided.
- Elevator facilities at 3 different points are provided so that a disabled person can have easy access at campus.

4.1.5 How does the College cater to the residential requirements of students? Mention Capacity of the hostels and occupancy (to be given separately for men and women):

Hostels are well equipped with the modern facilities in a pollution free environment. The details are described below.

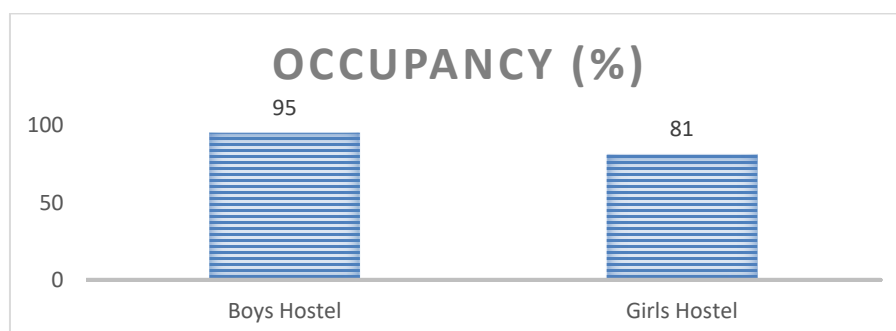


Fig 4.3: Hostel Occupancy

Boys	1308	Capacity	1383	Occupancy	95%
Girls	622	Capacity	771	Occupancy	81 %

- **Recreational facilities in hostel/s like gymnasium, yoga center, etc.**
 - o The College has a Gymnasium with Multi-Gym facility constructed at a cost of about Rs.50 lakhs.
 - o An exclusive coach for Gymnasium has been recruited.
 - o Indoor games, TV and Reading room facilities have been provided.
 - o Yoga camps are being arranged regularly for the benefit of staff and students.
 - o Cultural evenings are organized in the hostel and all the festivals are celebrated in the campus.
- **Broadband connectivity / Wi-Fi facility in hostel/s.**

All the Hostels are provided Wi-Fi Connection with 310 Mbps bandwidth.

4.1.6 How does the College cope with the health related support services for its students, faculty and non-teaching staff on the campus and beyond?

- The college has a well-equipped Health center with a well-qualified Doctor and Paramedical staff.
- An ambulance vehicle is available 24X7 for service.
- Medical Insurance coverage is provided for all the students and staff to take care of the exigencies.
- The Non-teaching staffs are covered under ESI scheme for medical benefits.
- Visiting doctor facility is available at evenings in the boys and girls hostel.
- Resident Doctor is available in the college premises.
- The college has liaison with its own sister organizations like Nitte Psychiatric and Dental Hospital, Nitte Gajria Super Specialty Hospital (secondary reference) and Justice K S Hegde Charitable Hospital of Nitte University (Tertiary reference) for the need of medical emergencies of any individual connected with the college at any moment.
- College arranges for spraying of pesticides at college and hostel premises to control vector borne diseases.
- Litters/solid wastes from the campus are separated at source and disposed in appropriate manner.
- Overflow from the septic tanks is being treated with sewage treatment plant and treated recycled water is used for flushing of toilets and gardening.
- Water purifiers are installed in the hostels and college.
- Overall campus cleanliness is ensured by dedicated housekeeping team.

4.1.7 What special facilities are made available on the campus to promote interest in sports and cultural events?

The college has created a state-of-the-art sports complex “B.C Alva Sports Complex” with indoor (14,000 Sq. ft) and outdoor stations with international standards. The details of facilities are listed below.

1. Special facilities available on the campus

Table 4.2: Special Sports Facilities

Sl. No	Details	Special Facility	Number / Capacity
1	Indoor facilities	Badminton	3 courts
		Basket Ball (State of the art wooden flooring)	one court
		Table Tennis	3
		Volley Ball	1
		Carom and Chess	Adequate
		Modern Multi-gymnasium Center	
		Individual Exercise Stations	
		Pavilion	200 capacity
2	Out Door facilities	Turfed Cricket ground	1
		Cricket pitches	2
		Cricket practice pitches	3
		Standard Athletics Track	400 meters
		Hockey field	1
		Volley Ball courts	3
		Hand Ball court	1
		Basket Ball courts	2
		Foot Ball field	1
		Throw ball, Net ball	1
		Auditorium	4000 seating capacity



Fig 4.4: Indoor Stadium and Indoor Basket Ball Court

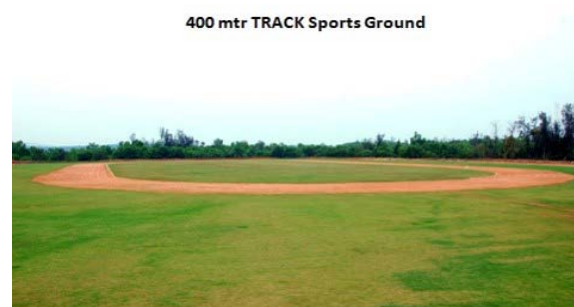


Fig 4.5: BC Alva Sports Complex and 400 m track sports ground



Fig 4.6: Gymnasium

2. Incentives to Sports persons by the College

- Free boarding, lodging, medical facility, sports kit and standard equipment to eligible sportspersons who are sponsored by the Nitte Education Trust.
- Arrangements for special Middle Semester Examination (MSE) for sports persons if they remain absent to regular MSE on account of their participation in VTU and other important competitions.
- Sports kit carrying T-shirt, shorts and equipment like cricket kit and other equipment to the sports persons during participation of VTU and important competitions.
- Track suits are provided to the sports persons who secure first or second position in VTU and other important competitions.
- Cash awards are given to outstanding achievers during College Day programme.
- Free medical aid and Physiotherapy are given in case of any injury or illness.

➤ Cultural Events:

The college has excellent infrastructure to organize cultural events as given below.

AC auditorium

- Sambhram – 450 Capacity
- MBA – 350 capacity

AC Seminar Halls (100 capacity) - 04

- Shambhavi, Phalguni, Sowparnika and MCA hall

Non-AC Seminar Hall (150 capacity)

- Abhyudaya

Non-AC Auditorium (4000 capacity) - 01

- Sadananda

- Every year Intercollegiate Cultural event “**Anandotsava**” is organized by the Institution so as to provide Platform to show the talents in cultural activities. Every year from more than 25 Engineering colleges, about 1000 Students are participating. More than 30 events will provide an opportunity to show their talents in “Anandotsava”.
- To encourage our students to involve in the cultural activities we have different clubs such as Kalanjali, Stereo Club, Photography Club, Aero Club etc. Depending upon the interest, students can join these clubs where they will be given proper training. Through this clubs our students are participating in Cultural Program organized by VTU and also the other engineering colleges.

4.2 Library as a Learning Resource

4.2.1 Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student user friendly.

Yes.

- **Committee Composition:** The Library Advisory Committee is composed of Principal as the Chair Person, Librarian as the Member Secretary and all the heads of departments as members.
- **Significant initiatives:**
 - o The Library Advisory Committee is the responsible body, which frames the norms and regulations of the Central Library to see that the library functions in an efficient way as a student/ user friendly.
 - o The committee meets once or twice in a semester and observes the functioning of the library and guides for its better functioning.
 - o Any user services, facilities, infrastructure, equipments etc., required to be added/procured is discussed and executed as per the requirements.
 - o As planned and forwarded by the department heads, the library budget for the academic year is discussed, finalized and approved by the committee.
 - o The member secretary of the committee will submit the annual report once in a year and take the committee's approval.
 - o The committee also ensures that all the state-of-the-art facilities are provided in the library immediately for the users.
 - o In the last five years, the committee has increased the library area, added thousands of new titles, subscribed to numerous E-resources through VTU consortia and provided multi access facility across the Wi/Fi campus to these digital resources.
 - o An audio-visual section helps the users to take part in NPTEL, EDUSAT and other educational programs/films in their self-study process.
 - o The committee also supports all the '**Library and Literary Club**' activities organized for the benefit of students for their academic excellence.

4.2.2 Details of the Library Facilities:

Total area of the Library: 3100 Sq.M.

- Reference Section : 700 Sq. M. : for 350 users
- Reading Room : 300 Sq.M. : for 270 users
- Periodical Section : 300 Sq.M. :for 80 users
- Stack Area : 1000 Sq.M.
- Audio Visual Section : for 35 users
- Digital Library : 40 Sq.M. for 15 users
- Office, passages, etc. : 760 Sq.M..
- **Layout of the library:**
 - o Individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources.
- **Access to the premises:**
 - o Using the prominent display of clearly laid out floor plan; adequate signage; fire alarm; access to differently abled users and mode of access to collection).
- **Adequate signage:** All the sections are indicated by sign boards for the convenience of users at different sections of the library.
- **Fire Alarm:** Fire extinguisher is provided for use at emergency.



Fig 4.7: Main Library



Fig 4.8: Library (Reference Section)

Table 4.3: Working Hours

Working Days	8.00AM to 8.00PM
Holidays	9.00AM to 4.00PM
Before Examinations days	8.00AM to 9.00 PM
During Examination days	8.00AM to 12.00 Midnight
During Vacation	8.00AM to 4.00PM

- **Access to differently abled users:** Lift and ramps are provided for the differently abled users and special care is taken by the library staff to provide all the necessary services to differently abled users.
- **Mode of access to collection is Open access:** The library has provided open access to its collection for the better use of resources. The books are classified according to DDC classification scheme and have been organized in the book racks with necessary sign boards and shelf lists.
- In Journal section, all the journals are displayed branch wise and place numbers are provided for the convenience of the users.
- In the library layout plan, users are provided with respective places of different display cabinets bearing branch name and individual place numbers of journals subscribed to the branch.
- A library handbook is provided at all the sections, which includes all the information about the library system and other regulations about the efficient use of user services.
- General instructions about the library are being provided during the orientation and training sessions are organized on regular basis to all the fresher's.

4.2.3 Give details on the library holdings

i. Print (Books, back volumes and thesis)

Table 4.4: List of Printed Journals

Departments	2016-17		2015-16		2014-15		2013-14	
	N	IN	N	IN	N	IN	N	IN
Biotechnology Engg.	7	4	7	4	7	1	7	1
Civil Engg.	19	4	19	4	16	6	16	6
CS&E	12	2	12	2	6	1	6	1
E&CE	10	2	11	3	7	3	7	3
E&EE	9	1	8	1	4	1	4	1
IS&E	14	1	9	1	2	-	12	-
Mechanical Engg.	12	5	15	5	12	5	12	5
Mathematics	5	-	5	1	5	-	5	-
Physics	5	2	5	3	5	2	5	2
Chemistry	4	2	3	3	4	3	4	3
Humanities	28	2	27	3	33	4	33	4
MCA	5	1	5	1	6	2	6	2
MBA	110	8	57	8	57	8	57	-
Total	240	34	183	39	164	36	174	28

N-National and IN-International

Table 4.5: Statistics of books procured during the year

Departments	2016-17		2015-16		2014-15.		2013-14.	
	Titles	Vol.	Titles	Vol.	Titles	Vol.	Titles	Vol.
Biotechnology Engg.	2	7	67	204	29	57	5	31
Civil Engg	19	52	60	291	64	176	32	317
CS&E	25	62	56	264	87	247	42	243
E&CE	31	126	101	613	110	239	51	232
E&EE	17	48	77	250	50	157	19	113
IS&E	8	21	36	126	112	157	11	49
Mechanical Engg	24	80	76	310	121	638	40	515
MCA	8	36	12	57	18	46	8	37
Mathematics	1	3	5	25	9	16	11	50
Physics			3	16	5	17	7	52
Chemistry	1	6	4	21	14	96	4	17
Humanities	7	7	246	257	402	505	90	107
MBA			202	457	65	110	375	409
Total	143	448	945	2891	1086	2461	695	2172

ii. Non Print (Microfiche, AV):

- **Audio Visual:** An audio visual section for 35 users is provided with necessary resources relevant for the courses.

iii. Electronics, e-Books and e-Journals.

Table 4.6: E-Resources

Type of E- resource	Total
E-Journals	6197
E-Books	13139

SL No.	E-Resources
1	ASCE (GIST)
2	ASME (GIST)
3	IEEE-IEL Online (VTU)
4	Springer E-Journals
5	K Nimbus
6	Proquest
7	INDEST-AICTE Consortium
8	VTU Consortium
9	DELNET E-Journals , E-books, Thesis and Dissertations

Table 4.7: VTU-Consortium Subject Wise Breakups of e-Resources

E-Resources	Subject Coverage	Resources	No. of E-Resources
IEEE-IEL Online	Electrical and Electronics Engineering + Computer Science + Telecommunications and Computer Science Engineering and Related Allied Disciplines	IEEE: Journals, transactions, and magazines, including early access documents – 190 (active & archival) Conference proceedings – 1400 + annual Standards- 3043 (active & archival) IET: Journals - 82 (active & archival) Conference proceedings – 20 + annual VDE Verlag* Conference proceedings – 20 + annual Alcatel –Lucent* Journals – 1 (bell labs tech journal) Back titles from 1872 to till date	273 Journals 6514 Conf. proc. 3043 Standards
Elsevier Science	Engineering + CS + EE + ME + EC + CV *Allied branches of Engineering)	Aerospace- 3 Automotive-1 Biomedical- 10 Chemical-22 Civil-35 Computer Science-83 Electrical and Electronic-38 Engineering (Gen)-25 Mechanical-73 (Back Issues from 2000 to 31st Dec 2015)	288 Journals
Springer E-books Journals	Electrical & Electronics Mechanical, Civil , Computer Science Engineering (Allied Subject) Chemistry and Material Science Mathematics Physics	Electrical & Electronics – 58 Mechanical – 44 Civil - 13 Computer Science – 93 Engineering (Allied Subject) – 39 Chemistry and Material Science – 162 Mathematics - 167 Physics - 104 Back titles from 1997 to till date	680 Journals
ASCE	Civil Engineering	Journals-35, Back file from-1983- till date	35 Journals

Taylor & Francis	Engineering + CSE + ME + CV and Allied Science	Allied Science-330, Mechanical-34, Textile -10. Engineering & Technology-69. Electrical-17. Computer Science-27, Civil & Structural-30, BioTechnology-17, (Back Issues from 1997 to 2015)	535 Journals
Proquest	Engineering and Technology Collections-2016 3900 e-Journals (All Engineering and it's Allied branches it includes Architecture) PQETC)	Full text Indexed (Back issues from 2000)	3900 Journals 7800 Abstract
Proquest	ABI Inform Global-2016 2900 E-Journals (Master of Business Administration) (PQABIG)	Full text Indexed (Back issues from 2000)	2900 Journals 10300 Abstract
K-Nimbus: Digital Library Platform	All subjects 12 K + Resources	OA resources: Journals + e-Books + e-Theses + Educational videos	12 K +
Remote Access Solution	Cloud Based	1. 24 X 7 seamless access 2. Admin control for librarians 3. Usage report for individual college can take 4. Secured remote access full text content	

iv. Special Collections:

Table 4.8: Special Collection

Year	Text books	Reference Books
2011-12	1953	785
2012-13	1277	550
2013-14	1521	720
2014-15	2036	425
2015-16	2891	945

4.2.4 What tools does the library deploy to provide access to the collection?

- **OPAC (Online Public Access Catalogue)**

- o OPAC is provided to users to search books. By providing the acquisition number, the computer provides the section, shelf number and the rack number of that particular book.

- **Electronic Resource Management package for e-journals.**
 - For the E-resources subscribed under VTU consortia and other digital libraries, users are provided multi access to all the packages and are enabled to access these online packages across the academic area by applying login and password using institution IP address.
- **Federated searching tools to search articles in multiple databases:**
 - The users are able to search articles in multiple databases with the help of searching tools provided by the individual distributors like IEL, ASME, ASCE, SPRINGER, TAYLOR & Francis, DELNET, SCIENCE DIRECT etc.
- **Library Website:**
 - The institutional website provides a brief account of the library and its resources/user services. In addition to this, the library holdings are merged with Developing Library Network (DELNET), the biggest library network of Asia, which provides access to more than 5250 libraries across the world.
- **In-house/remote access to e-publications:**
 - The E-resources provided under consortia are made accessible across the Wi-Fi campus through LAN. The In-house Digital Library also provides access to these databases within the library.

4.2.5 To what extent is the ICT deployed in the library?

- **Library automation:**
 - The library is automated in the year 1990 by developing In-house software using 'FoxPro'. In the year 2013, commercial software by name 'easylib' has been purchased to simplify the library content management activities. 'Barcode' system is followed for book transactions at all the sections.
- **Total number of computers for public access:**
 - Sixteen computers are provided for the public access inside the library.
- **Total numbers of printers for public access:**
 - One printer has been provided for public access.
- **Internet band width speed:**
 - 310 Mbps
- **Institutional Repository:**
 - Student Project Report, Faculty Publications, Departmental Conference Proceedings are the institutional repository made available for users in the library both in print/electronic mode department wise.
- **Content management system for e-learning:**
 - Participation in Resource sharing networks/consortia (like Inflibnet)

4.2.6 Provide details about

- **Average number of walk-ins**

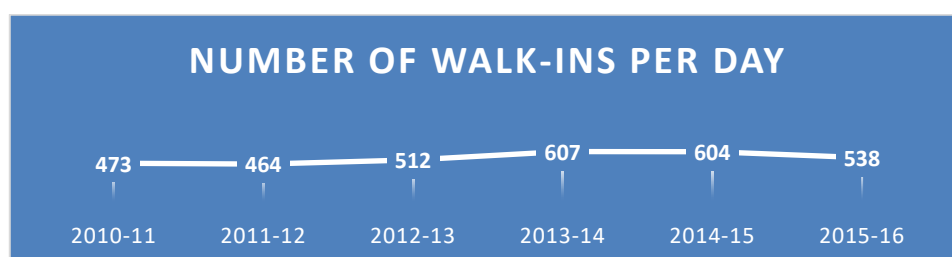


Fig 4.9: Average number of walk-in

- **Average number of books issued/returned**

Table 4.9: Number of Books Issued/Returned

Year	Average number of Books issued per day	Average number of Books returned per day
2010-11	295	295
2011-12	326	326
2012-13	381	381
2013-14	420	420
2014-15	436	436
2015-16	475	475

- **Ratio of library books to students enrolled**

Table 4.10: Ratio of Library Books to Students Enrolled

Year	No. of students in roll	No. of books in stock	Ratio
2010-11	3357	62515	1:19
2011-12	3703	34813	1:18
2012-13	4101	66580	1:16
2013-14	4493	68558	1:15
2014-15	4727	71160	1:15
2015-16	4873	74652	1:15

- **Average number of books added during last three years:** 2153 Volumes
- **Average number of login to OPAC:** 10
- **Average number of login to e-resources:** 20
- **Average number of e-resources downloaded/printed:** 07
- **Number of information literacy trainings organized:** Once in every semester and daily for individual students are provided with all information who come in search of e-resources.

4.2.7 Give details of the specialized services provided by the library

- **Manuscripts:**
 - **Not Applicable** So far no manuscripts procured to the library.
- **Reference:**
 - Reference service is provided during the entire working hours of Library.
- **Reprography:**
 - There are five reprography machines provided in the academic building including library to provide reprographic service to the users.
- **ILL (Inter Library Loan Service):**
 - Inter Library Loan service is provided through DELNET on regular basis. In addition to this the required books/articles are also provided from the libraries of neighboring institutions.
- **Information Deployment and Notification:**
 - The users are informed about the resources procured to the library on regular basis through notification both by printed circulars and E-mails. Individual SMS is also deployed for communicating the information.
- **OPAC:** Yes (Refer 4.2.4)
- **Internet Access:** Yes (Refer 4.2.5)
- **Downloads and Printouts:** Yes
- **Reading list/ Bibliography compilation:** Yes

- **In-house/remote access to e-resources :** Yes
- **User Orientation:** Yes
- **Assistance in searching Databases :** Yes
- **INFLIBNET/IUC facilities:** DELNET and VTU Consortia

4.2.8 Provide details on the annual library budget and the amount spent for purchasing new books and journals.

Table 4.11: Library budget and expenditure

Academic Year	Budget (In Lakhs)	Procurement of Books		Books Cost (In Lakhs)	Journals (In Lakhs)
		Titles	Volumes		
2011-12	52.00	1286	2744	9.98	4.72
2012-13	44.25	1032	1827	9.25	5.16
2013-14	38.5	936	2026	8.01	6.25
2014-15	42.00	1086	2461	21.69	6.97
2015-16	45.00	945	2891	17.88	4.59

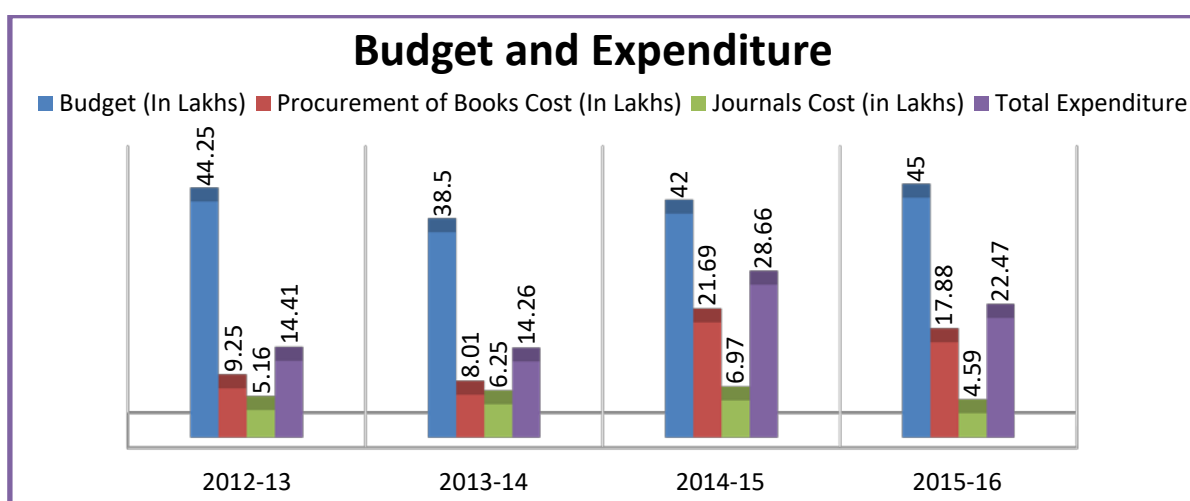


Fig 4.10: Annual Library Budget and Expenditure

4.2.9 Does the library get the feedback from its users? If yes, how is it analysed and used for improving the library services

Yes

- Feedback is taken from all the students and analysed.
- The concerns/suggestions are sent to the Library Advisory Committee for taking appropriate policy decisions to improve library system services.

4.2.10 List the infrastructural development of the library over the last four years

Table 4.12: Infrastructural development of the library over the last four years

2010-11	Refurnished and reorganized the reference section by adding 50 more seating. 3-day National work shop on Dspace, RSS, Audacity and library blogs.
2011-12	Organized "JNANA RATHOSTAVA"- a one week long library festival in view of silver jubilee celebration of the Institution. Added four computer systems to the digital library.
2012-13	Added one scanner, Head phone and speaker to the digital library. Installation of EASYLIB library management software;

4.2.11 Did the library organize workshop/s for students, teachers, non-teaching staff of the College to facilitate better Library usage?

Yes.

- Library has organized workshop/s for students, teachers, and non-teaching staff of the College.
- Conferences, Seminars, Workshops, Staff Development Programme conducted

Table 4.13: Conferences, Seminars, Workshops, SDP

SL No.	Theme	Date
1	Library Week: 2016	8 th -13 th February 2016
2	Library Week: 2015	19 th – 24 th January 2015
3	2-Day International Conference on ‘Building Knowledge Centres’	1 st -2 nd January, 2015
4	Library Week: 2014	13 th – 19 th February, 2014
5	Library Week: 2013	28 th Feb-6 th March, 2013
6	3-Day National Workshop “Research Methodologies & Effective publication practices”	25-27 July, 2012
7	Library Week: 2012	6 th to 11 th February, 2012
8	Jnanarathostava :2011	31st Jan to February5,2011
9	3-day National workshop on Dspace, RSS, Audacity & Library Blogs	9th – 11th June, 2010
10	2-Day National Workshop on Web Technology for Effective Management of Library and Information Services	26th & 27th February, 2009
11	2-Day National seminar on In Search Of Information Power-Future Challenges For Techno Libraries	11th & 12th September, 2008
12	State Level Workshop on Current Trends In Information & Communication Technology In Library & Information Centers.	7th & 8th December, 2007

4.3 IT Infrastructure

4.3.1 Does the College have a comprehensive IT policy addressing standards on IT Service Management, Information Security, Network Security, Risk Management and Software Asset Management?

Yes. The college has a comprehensive IT policy.

- Users are expected to use IT resources only for academic and official purpose.
- Every computer is installed with legal software only.
- Security updates and vulnerability patches to the servers and other critical systems are carried out regularly.
 - o Internet access policy, filtering and network security measures are instated via Unified threat management (UTM) system. The Internet access is regulated by the latest hardware based UTM technology from Cyberoam. Every Internet traffic access is provided though user authentication based Captive Portal of the UTM.
 - o The Staff computer network, network of desktops in Laboratories and Hostel networks are separated through different VLANs.
 - o All academic servers at the server room are connected to a sophisticated Layer 3 managed switch and access to the data is restricted only through the specified server applications only.

- IT infrastructure is maintained by the appointed system engineers and monitored by a senior faculty from the Computer Science and Engineering department.

4.3.2 Give details of the College's computing facilities (hardware and software).

- Number of systems with configuration
 - o Institute has 1529 Desktop Computers and 30 Laptops available in Laboratories, Research Labs, Internet Lab, Language Lab, Library etc. Out of 1529 desktop computers, 535 computers are of Intel Core i5 configuration or above.
- Computer-student ratio
 - o For UG 1:4 (1 Computer: 4 Students)
 - o For PG 1:2
- Dedicated computing facility
 - o Every engineering department has dedicated computing facilities.
 - o For basic science and humanities departments following common to all facilities are available.
 - The Language Lab computing facility maintained by Dept. of Humanities.
 - The Digital Library Center maintained by Dept. of Library.
 - o The Internet lab maintained by Dept. of Mechanical Engineering.
 - o Based on the departmental requirement most of the teach staff are provided with individual desktop computers with Internet facilities.
- **LAN facility:** Every computer facility provided to the faculty and students are connected to the Institute intranet either through cabled LAN setup or by Wi-Fi network.
 - o **Wi-Fi facility:** Apart from the Institute's academic area, all the hostel blocks (NET Gents hostel, NET Ladies Hostel and PG Ladies hostel, PG Gents hostel) are also connected to Internet through the Wi-Fi facility. These networks are connected to the Internet backbone through Optical Fiber Cables.
 - o **Propriety software / Open source software:** Institute owns more than 100 Licensed System and Application software and many open source software are used at department levels.

Table 4.14: Propriety software

Sl. No	Item Description	Qty	Date of Invoice	Cost	Dept
1.	Foxpro Professional V3.11	3	24.11.95	21121.00	CS
2.	Oracle RDBMS on Windows	1	24.11.95	50507.00	CS
3.	MS-p73-00156 Windows Svr Std 2003	1	24.02.04	1600.00	CS
4.	MS-228-00789 SQL Svr 2000 Std AE OLPNL	1	24.02.04	13330.00	CS
5.	Pentsoft Teleteach simulation CD's (1each)	5	19.10.00	51400.00	CS
6.	OR-DBPERLI CMEDWN 98 Personal Oracle GI on Win98+ Media	1	30.01.04	16590.00	CS
7.	MS-P73-00315 Windows Svr2003 Eng OLPNL AE	1	24.02.04	5400.00	CS
8.	Oracle Database 10g Release(10.1.0.2) CD Pack V4 for Microsoft Windows	9	24.02.04		MCA
9.	MSDN Academic alliance FPP MSDNAcademicAllianceRenew	1 1	04.08.06	49920.00	CS

10.	Microsoft IT Academy Program	1	29.06.09	39520.00	CS
11.	Nios embedded software	1	18.06.09	43000.00	
12.	SPEC Benchmark CPU 2006 V1.2	1L	11.01.12	\$202	CS
13.	Ansys software version 10.0	15	29.09.15	995000.00	ME
14.	'STAAD' Pro 2005(built 1001)	5	27.02.06	442000.00	CV
15.	Mipower software version 6.00	1	14.09.06	664295.00	EE
16.	MTAB Software	1	29.03.07	1032283.00	EE
17.	Erdas Imagine Software Version9.1	1	20.06.07	619300.00	CV
18.	Complete set of VLSI Lab software	1	03.07.07	780000.000	EC
19.	N I Instruments lab view software	50	10.06.14	7,71,308.00	ME
20.	Creo University plus software		28.10.12	4,98,780.00	ME
21.	Adobe Dream weaver software	1	28.07.11	56,000.00	CS
22.	Easy Lib Library software		20.11.13	47,475.00	LIB
23.	IBM Rational SEED KSA programme		02.07.14	3,50,563.00	IS
24.	Cadence VLSI Products – 40 licenses	40	06.01.15	10,81,375.00	EC
25.	Stat ease Design Expert Software Academic Version – 10 licenses	10	27.09.14	2,18,259.00	BT
26.	Psim+Motor+Digital Psim+Motor+Digital+all components (1Standalone Dongle)	5 1	18.12.14	11,99,625.00	EE
27.	MATLab R2014b with toolbox for signal processing & communication, image processing & computer version.	10	29.12.14	10,15,965.00	EE
28.	MATLab R2015A Software	10	24.08.15	7,58,387.00	EC
29.	Microsoft Software through Campus agreement/ Dreamspark/ MSDN(subscription)	500	30.6.201 6	66,757.00	CS

- o **Number of nodes/ computers with Internet facility:** More than 300 desktops are connected to the Internet facility. Every faculty and student of the institute is eligible to connect their personal laptops to the institute network and Internet facilities.
- o **Any other:**
 - Institute computing facility is connected to Internet via 310 Mbps Internet Leased Line from BSNL India.
 - A dedicated Internet lab facility is available to all the student for free of cost on registration.

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

Institution properly plans to upgrade the IT infrastructure to ensure

- Every classroom is equipped with LCD projector.
- Power backup to projectors in all class rooms shall be provided in stages
- Upgradation of ICT infrastructure.
- To maintain the computer student ratio 1:4 with the increase in intake.
- To enhance internet bandwidth to accommodate additional students as per the increased intake.
- Enabling modern teaching methods by providing facilities for e-content development and other related facilities.

- Developed ICT based course material in association with Nitte Institute of Communication

4.3.4 Give details on access to online teaching and learning resources and other knowledge, and information provided to the staff and students for quality teaching, learning and research.

- Institute hosts Moodle server to facilitate faculties to share teaching resources, conduct online classroom activities and host a forum for the subject they are teaching.
- Institute hosts a separate E-Vidya server with support from VTU which contains NPTEL Video Library. Institute has access to EDUSAT from VTU, INDEST and DELNET and maintains a digital library.
- NMAMIT is one of the centers for the IIRS Outreach Programs under Indian Space Research Organisation (ISRO) and by December 2016, Institute had already offered 3 courses from IIRS and 39 course completion certificates are issued by IIRS.
- From AY 2016-17 NMAMIT is also the part of NITK's NME ICT initiative of MHRD. ECE department has planned training and development in this venture. A FDP in this regard was organized in November 2016.
- Faculty members are encouraged to enroll and get certified on the courses of their interest from MOOC courses, NPTEL, edX, IIRS etc.

4.3.5 Give details on the ICT enabled classrooms/learning spaces available within the College and how they are utilized for enhancing the quality of teaching and learning.

- All classrooms are equipped with LCD Projectors.
- Larger class rooms are equipped with Classroom PA systems.
- Few labs and seminar rooms are equipped with smart boards.
- Network/Internet connections are provided to all the seminar rooms and academic areas on the basis of demand.

4.3.6 How are the faculty facilitated to prepare computer aided teaching-learning materials? What are the facilities available in the College or affiliating University for such initiatives?

- Training to faculty is provided from experts from industry and academia. Training from Wipro through Mission 10X, Campus Connect of Infosys etc. are scheduled regularly. Faculties are deputed for further training whenever necessary. In-house facilities like E-Vidya NPTEL repository, EDUSAT, Moodle, digital library cater to the needs of the faculty.
- In association with Nitte Institute of Communication, many video lecture sessions are recorded for few of the selected courses by our faculty members and these lectures videos, notes, slides have been uploaded in Moodle for benefit of students and faculty members.
- Few departments have built a hardware/software based simulation environment to support the teaching/learning made in the classrooms. (To mention a few – Network Simulation and trainer kits at ISE, Intel funded low power embedded and IoT lab at CSE dept, CNC Simulation and Robotics simulation environments at Mechanical dept., Virtual Lab center at ECE etc.)

4.3.7 How are the computers and their accessories maintained? (AMC, etc.)

- 904 computers covered by AMC. As per the institute AMC policy, full time engineers are deputed to the institute by the AMC third party to maintain the computers covered under AMC.
- 49 desktop computers are covered by manufacturer's warranty and rests of the computers are maintained by college IT staff.
- The institute has employed 3 full time technical staff for maintaining the IT assets of the institute.

4.3.8 Does the College avail of the National Knowledge Network connectivity directly or through the affiliating University? If so, what are the services availed of?

Yes. Following setups are available for the staff and students at the Institute

- E-Vidya – NPTEL repository, hosted on Campus Intranet services.
- VTU's EDUSAT center to relay EDUSAT courses
- INDEST – AICTE Consortium at Central Library
- DELNET and other major resources for research at Central Library

4.3.9 Provide details on the provision made in the annual budget for update, deployment and maintenance of the computers in the College?

- Around Rs. 60,00,000/ is reserved in annual budget for upgrading and maintenance of IT facilities at the institute.

4.4 Maintenance of Campus Facilities**4.4.1 Does the College have an Estate Office / designated officer for overseeing maintenance of buildings Class-rooms and laboratories? If yes, mention a few campus specific initiatives undertaken to improve the physical ambience.**

Yes

- The construction and maintenance department is headed by the resident engineer and assisted by qualified, experienced technical staff specifically, graduate Senior Engineers (3 No's-2 EEE and 1 Mech), Junior Engineers (1No- Civil), Supervisors (2 No's-1 EEE, 2 Civil) and required number of supporting staff.
- Complaints pertaining to class rooms and laboratories are entered by the respective departmental staff in the complaint book of maintenance section in RE and the maintenance team attends to the complaints on priority basis.
- The Institution has created and maintains good ambience in the campus by developing Garden, Lawn, Playgrounds, Parking area, Student activity center, Open air auditorium (4000 capacity) and Temple.
- A dedicated garden team is maintaining all gardens in the campus.

4.4.2 Does the College appoint staff for maintenance and repair? If not, how are the infrastructures facilities, services and equipment maintained? Give details.

Yes

- The team consisting of resident engineer, senior engineers, junior engineers and supporting staff appointed by the college arrange for the repairs and routine maintenance of the buildings, campus, takes care of water supply, rain water harvesting and electricity.

CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the College have an independent system for student support and mentoring? If yes, what are its structural and functional characteristics?

Yes.

- The college has ‘**Abhyuday**’ the department of Counselling, Student welfare, Training & Placement that is vibrant in its activities and has a **vision** of seeing an NMAMITian as **a cheerful, healthy, articulate, enthusiastic team player, socially-ecologically conscious, ethically upright, technically competent, an universal citizen who is eminently employable.**
- The department is committed towards students’ overall wellbeing and comprises
 - o Head: Qualified and experienced Mental Health Professional
 - o Placement Executive
 - o Supportive faculty coordinators from various departments
 - o Motivated & Trained student volunteers and
 - o Committed & experienced departmental ministerial staff and also alumni volunteer & support to mentor the students.
- From the time the students enter the portals of NMAMIT, **Team Abhyuday** does everything possible through various inputs, participatory activities spread throughout students’ stay in the college.
- The department helps those in need directly or by utilizing tangible and intangible resources available with peers, senior students, distinguished alumni, industry mentors, enthusiastic faculty, friends of NMAMIT, life coaches, library, the social media and the Internet to get the students ahead in this competitive world.
- At the time of admission, during their orientation, the students are provided anticipatory guidance on common problems they are likely to encounter as adolescents. They are also provided with a booklet on “**Desirable Behaviours on campus**” for ready reference, as a guiding tool.
- Students are encouraged to seek help of the counsellor, senior students, faculty, and peer helpers depending on the type of the problems faced by them.
- Students with personal problems are assisted to resolve or minimize their problems through consistent supportive therapeutic help. They are referred and followed up promptly for major psychiatric problems to the rural health centre managed by NET.

➤ **Team Abhyuday & Volunteerism:**

- **Fresher’ & Lateral Students’ Orientation** are conducted with the active help of trained senior students who volunteer and having good academic record.
- The students develop compassion, competence & leadership. The receivers become givers eventually.
- Several avenues for personal growth are provided to students to work with juniors/peers formally or informally; through training & supervision in orientation for freshers’ and lateral entry students (FOP & LOP).
- The freshers’ are made to feel comfortable by over 100 trained senior students on the second day of orientation through an innovative, structured, participatory programme aiming at providing comfort, confidence, friendship, information, anticipatory guidance and to wipe out fear of ragging.

Table 5.1: Major Activities of Abhyuday

Fresher orientation with the help of trained senior student volunteers	To help adapt, make friends, know caring seniors, anticipatory guidance.
First years	Mission Prerana for change to make them wholesome world class citizens
Second years	Orient lateral entry student to help belong, boost morale, help with English and Mathematics subjects
Third years	Preparation for placements: Crack the campus (Training by campus placed students in aptitude. Technical, HR interview preparation, GDs)
Final years and PG	Etiquette: Being successful; orientation to be professionals; work with non-placed students, need based training programme
All students	Professional Counseling services: Club Membership to cater to 12 talent related areas of functioning; use of peer helpers; celebrating Abhyuday Diwas
Prevention of Sexual harassment & gross indiscipline	Ingenious methods of dealing with Sexual harassment; Use of Counseling; Red Dot in placements and community service

5.1.2 What provisions exist for academic mentoring apart from class room work?

Through academic mentoring cell and Abhyuday, are responsible for student mentoring.

- **Academic mentoring cell** of the college keeps track of the academic progress of 1st year students.
 - o The cell headed by a senior professor monitors the students' well-being, regularity in attendance, academic performance and behaviour in the class rooms.
 - o Based on class advisors' feedback about a student, suitable action is taken involving parents and student counsellor to enhance student performance.
 - o For academically weak students, remedial classes are arranged. In the beginning of the semester each faculty member is allotted 2 students who scored less than 55% in subjects of previous qualifying examination (PUC/+2).
 - o With consistent input by the faculty, 1st year coordinator and the student counsellor help in enhancing the self-esteem of an individual.
 - o Progress report after MSE is dispatched to the parents that help in early parental intervention.
 - o Effectiveness of faculty advisor is analysed at the end of the semester to see the outcome of intervention.
 - o After every semester a parent-teacher meeting is held for a holistic understanding of the ward.
- Activities of **Abhyuday**
 - o **Pride of NMAMIT:** Class toppers clarify doubts of first year students with suggestions & guidance;
 - o **Peer assistance:** clarification of doubts in difficult subjects/ teaching them the fundamentals of a subject.
 - o **Seniors assistance:** Structured classes in C programming, Data structures, CAEG.
 - o **Buddy:** A student with good subject knowledge helps in revision whenever need arises.

- **For Placement purposes:** Need based classes on computer languages by placement student volunteers and faculty coordinators.
- Alumni conduct classes on certain topics of relevance e.g. security systems.
- **Student resource directory:** Abhyuday maintains and monitors the records of bright interested students and help seekers' requirements.
- The department associations conduct workshops, seminars, special lectures and technical talks that help in enhancing knowledge in core subjects.
- The Alumni Cell organizes relevant lectures & student interactions with the help of visiting alumni.

5.1.3 Does the College provide personal enhancement and development schemes for students? If yes, describe techniques employed e.g., career counselling, soft skill development, etc.

Yes.

➤ **Career Counselling**

- **'Crack the Campus'** is an endeavour of bright senior students, to introduce all pre final years to aptitude tests & the processes of campus selections in a structured manner.
- **Career Counselling Workshop**, a 2 day' skill building workshop by Accenture and Wipro for all final year students is conducted.
- **Alumni address** and interact with students throughout the semester as mentors.
- At "Mission Prerana for change" Alumni **entrepreneurs** deliver motivation talks.
- **ESD:** Employability Skill Development programme for III year students, 1 hour per week is conducted to enhance their employability skills and help the students to face the interviews effectively.
- **"Crack the aptitude"** weekly aptitude tests are conducted for pre-final and final year students under AIMS.
- Aptitude test sampling both at Placement Orientation Programme and MPC

➤ **Soft skill development**

- **Mission Prerana for Change:** A value addition for all first year students held in two cycles (around 500 in each batch), conducted every Wednesday afternoon.
- Placement department organizes Public speaking exposure both at Fresher's Orientation Programme and Mission Prerana for Change.

➤ **Coaching classes in Spoken English**

- **Students with language problems** are guided through soft skills and communication association (SACA), structured and informal programmes, language lab etc.
- Skill development through Individual Effectiveness Lab is being conducted for II year students, to enhance their speaking, reading, writing skills and to develop the personality.
- **Enhancing Self Competence:** A two credit course for II year students will enable to,
 - Introspect and learn more about oneself
 - Learn social behavior and etiquette
 - Develop positive attitude and values in life
 - Learn to be effective in communication and interactive skills
 - Educate on writing and presentation skills and also to educate oneself on legal and ethical aspects

➤ **Slow Learners**

- Students with special needs are attended to and assisted closely to succeed in academics.
- Dropouts are given helping hand through counselling by Institutional mental health professional, peer helpers and special classes held for them exclusively.
- For students who are academically poor, special coaching classes in specific subjects are conducted free of cost.
- Special sessions on group discussions and interviews are conducted for weaker students.

➤ **Socially and Economically Backward Students**

- **Assistance to the disadvantaged:** Socially and economically backward students are provided assistance to deal with inferiority feelings and the competitive demands of college.
- **Students with disability, ill health, chronic problems** are guided and assisted throughout their academic career and later.

➤ **Preparation for Competitive Exam**

- Placement department arranges coaching classes for GRE, GMAT in association with TIME.
- Guidance on entry into the Armed forces and Civil services is provided.
- Workshops are conducted to bring awareness about GATE.

➤ **Other Activities**

- **Clubs & associations under Abhyuday aim to identify student' talents & interests to channelize energies in a healthy manner, which are as follows:**
 - Kalanjali, the Dance club
 - ClicZ, the Photography club
 - Aura & Hands of Hope, the reaching out to the needy club
 - Grey matter, the Quiz club
 - Thorana, the Event management club
 - Stereo Club for music
 - Taaleem, the theatre club
 - Silver Screen the Movie club
 - SACA, a Soft skills and Communication Association
 - Rachna, the art club
 - Yoga for health
- **Various branch associations**, fully managed by students, organize a lot of programs and activities for the benefit of students that include quizzes, aptitude tests, technical seminars, and invited talks.
- The interdisciplinary **Robotic and Aero club** conducts various events and workshops for the registered members to make students technically strong.
- SAE Baja, a National event, an all-terrain vehicle modelling contest is an opportunity for students to exhibit their strength in technology, dedication, research, ability in team work and working with deadlines.

5.1.4 Does the College publish its updated prospectus and handbook annually? If yes, what are the activities / information included / provided to students through these documents? Is there a provision for online access?

Yes

- The college publishes updated prospectus, handbook annually, which contains
 - The details of degree programmes offered

- o The formalities for the registration for the course
- o Rules and regulations for adding/ dropping /auditing/ withdrawal of course options.
- o Semester wise course structure (syllabus)
- o The rules and regulations for attendance
- o Evaluation system for the course work and communication of results
- o Vertical progression
- o Appeal procedure for review of grades
- o Requirements for the award of degree
- o Rules and regulations to be followed in the campus
- o List of available scholarship and eligibility.
- o Calendar of events
- Handbook is available online (www.nmamit.nitte.edu.in) and is also available in Moodle.

5.1.5 Specify the type and number of scholarships / freeships given to students (UG/PG/M.Phil/Ph.D./Diploma/others in tabular form) by the College Management during the last four years. Indicate whether the financial aid was available on time.

Table 5.2: Scholarships / Free ships

Type of Scholarship	2016-17		2015-16		2014-15		2013-14	
	NS	Amount Rs lakh	NS	Amount Rs lakh	NS	Amount Rs lakh	NS	Amount Rs. lakh
Scholarship / Assistance Merit	90	27.00	-	-	-	-	-	-
Fee concession	450	295.60	574	408.99	465	271.85	393	229.97

NS – Number of Students

- Scholarships—GATE, Teaching assistantship, Endowment etc. are provided.

5.1.6 What percentage of students receives financial assistance from state government, central government and other national agencies? (e.g., Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)

- a) Central Government offers minority scholarships for students and Institute students avails the same.
- b) The student belonging to SC/ST/OBC categories avail scholarship/freeships from State Government.

Table 5.3: SC/ST/OBC Scholarship/ Freeships

Type of Scholarship	2016-17		2015-16		2014-15		2013-14	
	NS	Amount Rs lakh	NS	Amount Rs lakh	NS	Amount Rs lakh	NS	Amount Rs. lakh
SC/ST Scholarship	*	*	*	*	187	68.15	185	64.92
SC/ST Fee Concession	*	*	*	*	137	45.82	130	43.41

* Yet to receive

Total scholarships received by the students in the last academic year 2015-16

Sl. No.	Description	No. of Students	Amount (INR)
1	Scholarship (Gov)	2452	6,61,79,110

5.1.7 Does the College have an International Student Cell to cater to the needs of foreign students? If so, what measures have been taken to attract foreign students?

As there are no international students, there is no International Student's Cell.

5.1.8 What types of support services are available for

- **Overseas students**
- **physically challenged / differently abled students**
- **SC/ST, OBC and economically weaker sections students to participate in various competitions/conferences in India and abroad**
- **Health centre, health insurance etc.**
- **Skill development (spoken English, computer literacy, etc.,)**
- **Performance enhancement for slow learners / students who are at risk of failure and dropouts**
- **Exposure of students to other institutions of higher learning/corporates/business houses, etc.**
- **Publication of student magazines**

Yes. The following services are available in the institution

- **Overseas students**
 - NRI students are provided separate accommodation in the hostel.
- **Physically challenged / differently abled students**
 - Counselling and close monitoring of students with disabilities is taken up by Team Abhyuday.
 - Ramp and wheel chair are provided.
- **SC/ST, OBC and economically weaker sections students to participate in various competitions/conferences in India and abroad**
 - Spoken English classes for the needy are conducted through special coaching classes, SACCA and language labs.
 - The institution offers monetary benefits to bright but economically weaker students to attend conferences, workshops and presentation of papers
- **Performance enhancement for slow learners / students who are at risk of failure and dropouts**
 - Students with special needs are attended to and assisted closely to succeed in academics.
 - Dropouts are given helping hand through counselling by Institutional mental health professional, peer helpers and special classes held for them exclusively.
 - For students who are academically poor, special coaching classes in specific subjects are conducted free of cost.
 - Special sessions on group discussions and interviews are conducted for weaker students
- **Health centre, health insurance etc.**
 - A Medical Health centre with a qualified doctor, medical interns, ambulance and other facilities are provided in the campus.
 - A rural mental health centre with professionals from our sister concern KSHEMA provide help to students and staff with major psychiatric disorders.
- **Skill development (spoken English, computer literacy, etc.,)**
 - Encouraging the students to take part in various intercollegiate cultural fests and competitions of other institutions of higher learning, gives them exposure.

- o Participation in student parliament, hackathons, events enabling leadership are given wide publicity.
- **Exposure of students to other institutions of higher learning/ corporates/business houses, etc.**
 - o To bridge the gap between institute and industry, industrial training and internships is encouraged. Visits to industries and corporate houses are also organized through the departments.
- **Publication of student magazines**
 - o Student magazines are published by various departments through their associations.

5.1.9 Does the College provide guidance / coaching classes for Civil Services, Defence Services, NET/SLET and any other competitive examinations? If yes, what is the outcome?

Yes.

- **Defence Services:**
 - o Seminars on Indian Air Force Awareness Campaign by Wg. Commander Sandeep Bhandary ,
 - o Guest Lecture on "Career Opportunities in DRDO" & "Military Balance around Indian Sub-Continent" by Mr. P S Rao, Retd. Jt. Director (N R), Ministry of Defence, Govt. of India that focusing on military technology nano, power, stealth, electromagnetic interference, electronic warfare, strength, head counts, intelligence agencies, desert warfare, uav, missiles and DRDO's contribution in defence and existing opportunities.
 - o Seminars on 'Overseas Education Opportunities' by M/S Impel.
- **Competitive Examinations:**
 - o **Mock GATE Test:** The Placement department conducts a Free Mock GATE Test with the assistance of the GATE Academy.
 - o Presentation by **GATE forum Educational Services Pvt Ltd** : on how to prepare for GATE exam to Pre-final and Final year engineering students.
 - o **Kiosk by GATE Forum about TarGate Test Series by "GATE FORUM" Team**
 - o **CAT Training** workshop through TAPMI Manipal.
 - o To encourage students to take up civil service examinations experts and alumni are invited to give talks on these.
 - o About 120 students have cleared GRE/CAT/GATE

5.1.10 Mention the policies of the College for enhancing student participation in sports and extracurricular activities through strategies such as

- **Additional academic support, flexibility in examinations**
 - o Special classes are arranged to the students who miss the regular classes due to participation in sports/NSS/ inter collegiate Cultural competitions.
 - o Provision is made for Continuous Internal Evaluation components and Semester End Exams for such students in the form of Make-up examination and supplementary semester.
 - o Grace marks are awarded to the students who represent the college in sports at University/State/National level.

- **Special dietary requirements, sports uniform and materials**

- In consultation with the resident doctor of the Institute, the Department of sports specifies diet requirements for each student based on his/her health conditions.
- The Institute supplies the material for Uniforms and other items to each student
- Students who are sponsored athletes are provided with egg and milk during the special coaching session. Prescribed uniform and materials like shoes, studs, stockings, guards, protectors etc. are provided for the students who represent the college at University level sports/games.

5.1.11 Does the college have an institutionalized mechanism for placement of its students? What services are provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurial skills?

Yes.

- The college has structured mechanism for placements of students. The college has in house dedicated placement team which provides placement and training services to students.
- The team is committed to identify the prospective recruiters, visit them, understand the expectation of the organizations and train the students to match their expectations and facilitate on-campus and off-campus placement drives.
- The department follows a policy of permitting only those students who have very good academic scores to go for a 'Dream' or 'Core' option once placed in a service based company that recruits people in large numbers. This is shared with students' right at the beginning so that they make consistent efforts to achieve academic proficiency. A student with 8.25 CGPA, selected by a large recruiter is permitted to apply for a 'Dream'/ 'Core' company and once selected by a core company; he/she foregoes the previous offer and remains with the Dream Company.
- **Employability Training:** The students are oriented towards employability from the fresher' orientation, familiarization onwards through;
 - Mission Prerana for change;
 - Team Abhyuday activities;
 - IEL classes; through lectures by alumni; through special lectures offered by companies; through addresses by the placement department;
 - Crack the Campus, Uday Abhyuday, Pride Abhyuday organized by the department;
 - Placement volunteering;
 - Special orientations provided for M.Tech students;
 - Programmes organized by FACE; Business Fundamentals – agencies who offer training services;
 - The placement portal where students are required to register; through the Placement helpdesk, a Facebook page that provides information & clarifies their doubts.
 - Companies are contacted using personal contacts, visits to industries, by writing to them, through LinkedIn, alumni assistance & recommendation; students interning or recruited; parents of students and friends of NMAMIT. Also when industry heads inaugurate events on campus

- o The Department visits industries to establish or strengthen contacts, attends meetings organized by companies for placement officers and discusses the merits of our students and persuades them to visit the college.
- o Students are encouraged to do internships and gain industry exposure and their performance during that training helps the companies form a favourable impression of our students. Invariably once the company visits us, they find our ambience, hospitality, student discipline, participation and performance satisfactory to return to us again.
- **Departments have signed MoU with IT firms to accomplish the above, have setup their operational units here.**
 - Entrepreneurship Development Cell**
 - o The Entrepreneurship Development Cell organizes activities and interested students attend training programmes.
 - o Students undergo internships and gain industry exposure. Over 150 industries have been helping us by providing vocational training or internship.

5.1.12 Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus annually for the last four years).

Table 5.4: Institutional Placement Details

Year	Company Visited	Total Placements
2016-17 (as on 01/03/2017)#	40	727+95**
2015-16	78	664+85**
2014-15	67	582+77**
2013-14	49	440+70**

Table 5.5: Branch wise Placements

Branch	2016-17 (as on 01.3.2017) #	2015-16	2014-15	2013-14
Biotechnology	8	7	15	11
Civil	26+ 2*	27	17	15
Computer Science	252 +5*	169	132	111
E&C	245+1*	162	140	117
E&E	40	48	38	32
Information Science	50	44	59	46
Mechanical	85	127	96	63
M.Tech (SSE)	1	NA	NA	NA
M.Tech (CCT)	1	-	-	-
M.Tech (CNE)	-	1	-	5
M.Tech (CS)	2	4	4	5
M.Tech (DEC)	-	3	10	7
M.Tech (ESE)	-	-	6	NA
M.Tech (MECS)	-	2	4	4
M.Tech (EPE)	1	2	NA	NA
M.Tech (VLSI)	2	2	5	10
MCA	14 +1*	66	55	14
Total	727+9*+95**	664+85**	582+77**	440+70**

On-going. * Post degree Internships, ** MBA placements

Placement details for 2015-16 and 2016-17 are available in **Appendix E.12**

Table 5.6: List of Companies Regularly Visit for Campus Selection

Aavishk	L&T Infotech	Accord Software	99 Games Online Pvt .Ltd.
Accenture	Mectongroup	Analytics Quotient	ACT (Atria Convergence Technologies)
Amazon	MindTree	HP Enterprise India	Allegion India Private Limited
Anglo Eastern	MuSigma	Indyago, Bangalore	Alpha 9 Marine Services
Bosch Limited	Next Novity	Infosys Limited	Anthem Bioscience Private Limited
Cadence	Nutanix	Karmic Semiconductor	DELL Sonicwall Security
Cognizant	Polycab Wires	Krisam Automation	Exabit Solutions, Udupi
Crowdfire	PRDC	Mangalore infotech	Global Delight Technologies
DELL R&D	Red Hat	Manhattan Associates	Hexmoto Controls Pvt. Ltd.
FACE	Robert Bosch	Odessa Technologies	Laurus Infosystems (India) Pvt. Ltd.
Firmnxt	Seventh Sense	Oracle Cloud Services	Manipal Group (Zeta Cyber)
HP	Sony India	PEOL Technologies	Ninestars Information Technologies Ltd.
IBM GBS	Span Infotech	Persistent Systems	PBS (Harsha Group) Pvt. Ltd.
IMS Health	TCS	Semnox Solutions	Pinaca Information Solutions
Indian Navy	TDPS	Sonata Software	Pinacle Imaging & Media Services
Informatica	Techjini	Teach for India	Robosoft Technologies
Intech DMLS	Trivium	Tech Mahindra	Seagate Technology HDD (India) Pvt.Ltd.
IQSS	TVS Group	Trigent Software	Siemens Technology & Services Pvt. Ltd.
Juego Studio	UST Global	Ymedia Labs	Societe Generale Global Solution Center
Juego Studio	VMware	Wipro Technologies	Sunplus Solutions, Bangalore
Maventic	Wipro GIS	LM Wind Power	Toyota Kirloskar Motor Private Ltd.
SAP Labs			Walmart Global Technology Services

5.1.13 Does the College have a registered Alumni association? If yes, what are its activities and contributions to the development of the College?

YES.

- The institution has a registered alumni association “Wenamitaa”.
- The alumni website www.wenamitaa.in contains the details of alumni Meet, Reunion, galleries, alumni activities, alumni entrepreneurs, alumni achievements and higher studies are highlighted.
- A face book page wenamitaa, alumni association, with 3400 registered alumni is active. Alumni Meet and Reunions are conducted every year.
- Me-NMAMIT the Dubai Chapter of wenamitaa is active in conducting various events in Dubai.
- Be-NMAMIT Bengaluru Chapter of wenamitaa was inaugurated on 26th June 16 at Bengaluru.

- Alumni visiting institutions offer their services through technical and motivational talks. They are invited as judges, chief guests.
- Alumni of the institution provide
 - o Assistance in campus placements.
 - o Funds up to Rs 10,000/ each for best projects in 8 departments,
 - o Silver medals for 2nd rank students of all UG and PG branches,
 - o Sponsoring UG students for paper presentation to reputed Institutions,
 - o Personal sponsorship for projects
 - o Alumnus Mr. Sanjeeth Shetty has instituted SSFP awards for best outgoing students for the past five years.

5.1.14 Does the College have a student grievance redressal cell? Give details of the nature of grievances reported and how they were redressed.

Yes,

- The institution has a grievance redressal cell to find the solutions for problems faced by the students during the course of study
- Grievance Redressal Cell is constituted as per AICTE norms.
- The day to day student grievances are addressed by HODs/Principal in consultation with the cell members.
- The examination related grievances are addressed through DUGC/DPGC.

5.1.15 Does the College have a cell and mechanism to resolve issues of sexual harassment?

Yes

- **Prevention of Sexual Harassment (PrOSH) cell** headed by mental health professional as Chair with senior teaching and non-teaching faculty of both genders; and students of both genders are the members of the cell which is published in the Institute website.
- The students are also informed about the cell during the orientation programme and email id of the Chair is provided.
- Information is also brought to the notice of the students by displaying on the Notice Board.

5.1.16 Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?

Yes

- The anti-ragging team has been constituted as per UGC norms.
- No major ragging incident has occurred, since the Institution is taking care to implement the policies of Government to curb ragging in Educational Institutions. Strict action has been taken when misbehaviour has been observed.
- The Hostel wardens are taking care against ragging by regular visit to the hostels with a team of HODs of all the departments.

5.1.17 How does the College elicit the cooperation from all stakeholders to ensure overall development of the students considering the curricular and co-curricular activities, research, community orientation, etc.?

The college has taken all possible steps in making use of goodwill extended by alumni/industry/parents/NGO that provide support in many ways. The following exercises have been carried out in this direction

- The college Governing Council has Alumni, Employers and faculty as members, apart from senior external members.
- These members give constructive inputs for the overall improvement of the Institute.
- The college seeks feedback from the employers of students, with regard to the technical competence of students and tries to adopt their suggestions by suitably modifying its course contents.
- The parents are requested to give their inputs on the infrastructural or any other facility in the college to the Heads of the departments
- Alumni meeting with staff and students of the institution.
- Industrial experts are invited at department forums for interaction with students/scholars/social workers and for delivering expert lectures.

5.1.18 What special schemes/mechanisms are in place to motivate students for participation in extracurricular activities such as sports, cultural events, etc.?

➤ **Sports**

- Special classes are arranged to the students who miss the regular classes due to participation in sports/NSS/ inter collegiate cultural competitions.
- Provision is made for Continuous Internal Evaluation components and Semester End Exams for such students is made available in the form of Make-up examination and supplementary semester.
- Grace marks are awarded to the students who represent the college in sports at University/state/National level.
- In consultation with the resident doctor of the Institute, the Department of sports specifies diet requirements for each student based on his/her health conditions.
- The Institute supplies the material for Uniforms and other items to each student
- Sponsored athletes are provided with egg and milk during the special coaching session. Prescribed uniform and materials like shoes, studs, stockings, guards, protectors etc. are provided from the college for the students who represent the college at University level sports/games.

➤ **Cultural Events:**

- Every year Intercollegiate Cultural event “**Anandotsava**” is organized by the Institution so as to provide a platform to show the talents in cultural activities. Every year from more than 25 engineering colleges about 1000 Students are participating in more than 30 events.
- To encourage our students to involve in the cultural activities we have different clubs such as Kalanjali, Stereo Club, Photography Club, Aero Club etc. were depending upon the interest. Students can join these clubs where they will be given proper training. Through these clubs our students are participating in Cultural Program organized by VTU and also the other engineering colleges.

5.1.19 How does the College ensure participation of women in ‘intra’ and ‘inter’ institutional sports competitions and cultural activities? Provides details of sports and cultural activities in which such efforts were made?

- College provides equal opportunity and encouragement to both girls and boys to take part in sport and cultural activities.
- The college provides financial ,logistics and all necessary support for their participation

- This is quite evident from the results that have obtained by the college in such activities.
- Here are some examples of **Sports/Games where girl students have won laurels to the college.**
 1. Ms. Rakshith K.G.-2nd Year, B.T-Athletics held at Kalyani University West Bengal(2013)
 2. Ms. Himani P. Hegde-3rd year, E&C,-Created a new meet record of VTU with a distance of 31.09 mts. In Discuss Throw during the VTU athletic meet 2013
 3. During 2013-14 our Cross country Women's team won the Championship in VTU level have been selected for the Inter University for the year 2013
 4. Individual championship was bagged by Ms. Kathyayani, 1st Year MBA-participated in Cross Country held at Udaipur
 5. Ms. Rakshith K G., II year B.T., and Ms. Soumya S M-1st year B.T- Participated in Cross Contry held at Udaipur
 6. Mr. Srajan Rai M.C., 1st year, BE – 2nd place in Long Jump with a distance of 6.40 mts.
 7. Ms. Kathyayani – 1st year, MBA – 3rd place in 4X400 mts. relay
 8. Ms. Soumya S.M. – 1st year, BT – 3rd place in 4 X400 mts. relay
 9. Ms. Suwartha I.S. – 2nd year, BE – 3rd place in 4 X400 mts. Relay

5.2 Student Progression

5.2.1 Provide details of programme-wise success rate of the College for the last four years. How does the College compare itself with the performance of other autonomous Colleges / universities (if available)

Table 5.7: UG Results and Programme-wise success rates

Branch	May/June Examination - 2012			May/June Examination - 2013			May/June Examination - 2014			May/June Examination - 2015			May/June Examination - 2016		
	TA	P	P %	TA	P	P %	TA	P	P %	TA	P	P %	TA	P	P %
CSE	149	144	96.64	117	115	98.29	163	160	98.16	165	165	100	232	227	97.84
E&C	155	139	89.68	149	122	81.88	157	146	92.99	167	155	92.81	211	187	88.63
E&E	68	67	98.53	69	63	91.30	77	70	90.91	77	76	98.70	73	71	97.26
CIVIL	76	70	92.11	73	63	86.30	66	63	95.45	87	80	91.95	154	141	91.56
BTE	44	40	90.91	33	32	96.97	27	24	88.89	39	37	94.87	24	23	95.83
MECH	156	142	91.03	146	131	89.73	161	151	93.79	233	211	90.56	242	208	85.95
ISE	67	66	98.51	70	68	97.14	70	68	97.14	81	77	95.06	74	74	100
Total	715	668	93.43	657	594	90.41	721	682	94.59	849	801	94.35	1010	931	92.18

TA- Total Appeared, P- Pass, P% -Pass %

Table 5.8: PG Results and Programme-wise success rates

Branch	May/June Examination - 2012			May/June Examination - 2013			May/June Examination - 2014			May/June Examination - 2015			May/June Examination - 2016		
	TA	P	P %	TA	P	P %	TA	P	P %	TA	P	P %	TA	P	P %
MCA	89	89	100.00	89	89	100	88	88	100	120	120	100	114	105	92.11
MBA	117	110	94.02	167	147	88.02	178	167	93.82	157	138	87.90	170	150	88.24
DEC	24	24	100.00	25	25	100	24	24	100	25	25	100	25	23	92.00
SCS	27	27	100.00	26	26	100	24	24	100	23	23	100	25	24	96.00
MES	15	15	100.00	18	17	94.44	18	17	94.44	15	15	100	9	9	100
CCT	05	02	40.00	18	16	88.89	18	17	94.44	19	19	100	18	18	100
LVS	-	-	-	18	18	100	18	18	100	18	17	94.44	18	17	94.44

MMD	-	-	-	-	-	-	17	16	94.12	17	16	94.12	17	15	88.24
SCN	-	-	-	-	-	-	18	18	100	17	17	100	18	17	94.44
EPE	-	-	-	-	-	-	-	-	-	-	-	-	16	14	87.5
Total	277	267	96.38	361	338	-	435	411	94.48	406	390	96.01	430	392	91.16

5.2.2 Providing the percentage of students progressing to higher education or employment (for the last four batches) highlight the observed trends.

Table 5.9: Students Progression

Student Progression	2012-13	2013-14	2014-15	2015-16
UG TO PG	8-10%	8-10%	10-12%	12-15%
PG TO MPHIL	NA	NA	NA	NA
PG TO Ph.D.	2-5%	2-5%	2-5%	2-5%
Employed: Campus selection -UG	75%	68%	70%	73%
Other than campus recruitment -UG	15-20%			
Campus selection -MCA	50%	78%	70%	64%
Other than campus recruitment -MCA	40%	15%	20%	30%
Campus selection -MBA	35%	44%	48%	50%
Campus selection -MTECH	6% (6/105)	23% (31/137)	18% (24/134)	8% (12/146)

5.2.3 What is the Programme-wise completion rate/dropout rate within the time span as stipulated by the College/University?

- As per the guidelines of the compliance agencies including the university the minimum period of awarding graduation degree is 4 years (3 years for lateral entry) and maximum period of 8 years (6 years for lateral entry).
- In case of M. Tech. and MBA programs minimum completion period is 2 years and maximum 4 years. In case of MCA minimum completion period is 3 years and maximum 6 years
- The following table shows the completion rate of students who have obtained the degree in minimum period.

Table 5.10: Completion Rate: UG: 2012-16 Batch

Branch	Student admitted	Change of Branch	Change of college/left the college	Lateral entry student admitted	Total students in 3 rd semester	Students passed out (final year)	%
Civil	143	-5+3	6	24	159	142	89.30
Mechanical	216	-2	5	34	243	219	90.12
E&E	68	-2+1	6	12	73	66	90.41
E&C	195	-4+10	6	36	231	204	88.31
CSE	203	+7	5	36	241	228	94.61
ISE	70	-6+5	3	14	80	71	88.75
BTE	37	-7	4	-	26	22	84.62
TOTAL	932		35	156	1053	952	90.41

Table 5.11: Completion Table: PG: 2012-14, 2013-15, 2014-16 Batches

Course (MTech)	Intake	2012-14			2013-15			2014-16		
		T	P	%	T	P	%	T	P	%
CSE	25	25	24	96	25	23	92	25	22	88
DEC	25	25	24	96	25	25	100	25	24	96
ESE	18	18	17	94	15	15	100	9	9	100

CCT	18	18	17	94	18	18	100	18	18	100
VLSI	18	18	18	100	18	17	94	18	17	94
MMD	18	17	16	94	17	16	94	18	15	83
CN	18	18	18	100	17	17	100	18	17	94
EPE	-	-	-	-	-	-	-	16	14	88
MBA	120/180	179	173	97	161	145	90	171	153	89
MCA	90/ 120	90	88	98	120	119	99	115	111	97

T-Total Students, P-Pass, % - Pass Percentage

5.2.4 What is the number and percentage of students who appeared/qualified in examinations like UGC-CSIR-NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central / State services, Defence, Civil Services, etc.

- Generally 10-15% of the students will appear for GATE/GRE/TOFEL/CAT and about 5-8% of them will qualify. Some students will go for the higher studies after 2 or 3 years of industrial experience. About 120 students have qualified GRE/CAT/GATE as per the Recorded data. However on an average 5% students opt for pursuing higher studies

5.2.5 Provide details regarding the number of Ph.D. /D.Sc. /D.Litt. theses submitted, accepted, resubmitted and rejected in the last four years.

Table 5.12: Ph.D. /D.Sc. /D.Litt. theses

Ph.D. Thesis	2016	2015	2014	2013
Submitted	01	04	08	07
Accepted	01	04	08	07
Resubmitted	-	-	-	-
Rejected	-	-	-	-

Table 5.13: Ph.D. awarded to faculty members

Sl. No	Faculty	Designation	Department	Year
1.	Dr. Srinath Shetty K	Professor	Civil Engg	2013
2.	Dr. Radhakrishnan K	Professor	Civil Engg	2013
3.	Dr. Akshatha Shetty	A.P. III	Civil Engg	2014
4.	Dr. Parameshwaran	Professor	Civil Engg	2015
5.	Dr. Mahadeve Gowda	Professor	Civil Engg	2016
6.	Dr. D.K. Sreekantha	Professor	CSE	2014
7.	Dr. B. Neelima	Professor	CSE	2015
8.	Dr. Rajesh Shetty K	Professor	E&C	2013
9.	Dr. SSSS Sairam	Professor	E&C	2013
10.	Dr. Rekha Bhandarkar	Professor	E&C	2014
11.	Dr. Veenadevi S.V	Professor	E&C	2015
12.	Dr. Sharad M Hegde	A.P III	Maths	2013
13.	Dr. Karuna Pandith	Professor	MCA	2014
14.	Dr. Surendra Shetty	Professor	MCA	2013
15.	Dr. Chetha D.M	Asso. Prof	Biotech	2013
16.	Dr. Bharatha B.R	A.P III	Biotech	2014
17.	Dr. Anil Kumar HS	Asso. Prof	Biotech	2015
18.	Dr. Mallikappa	Professor	Mechanical	2014
19.	Dr. Narasimha Bailkeri	Professor	Mechanical	2014
20.	Dr. Manjunath K.B	A.P III	Physics	2014

5.3 Student Participation and Activities

5.3.1 List the range of sports and games, cultural and extracurricular activities available to students. Provide details of participation and program calendar.

- The details of range of sport and games is given in Section 4.1.7
- Every Odd semester college organizes state level technical fest “Technidarshan” where about 2000 students from 25 colleges across the state participate in about 45 technical events.
- Every year Intercollegiate Cultural event “Anandotsava” is organized by the Institution so as to provide Platform to show the talents in cultural activities. Every year from more than 25 Engg. Colleges about 1000 Students are participating. More than 25 events will provide an opportunity to show their talents in this “Anandotsava”.
- Department of MBA conducts Intercollegiate cultural and business competitions called “Ettin” every year
- MCA department conducts intercollegiate Cultural and technical event called “Semaphore” every year.
- MBA department students also arrange a business show called “Nitte Utsav” wherein good numbers of local people also participate.
- To encourage students involve in the cultural activities different clubs such as Kalanjali, Stereo Club, Photography Club, Arrow Club etc. are in place. Through this clubs students are participating in Cultural Program organized by VTU and also the other engineering colleges.

Achievements of Students in Sports and Games

- N.M.A.M. Institute of Technology, Nitte has secured 3rd rank in the achievements of sports and game activities conducted by VTU Belagavi during the year 2016 and secured one overall championship trophy, 06 team championship trophies, 03 Runner up trophies, 05 zonal championship trophies and 02 zonal runner up trophies.
- Department of Physical Education, NMAMIT, Nitte also organized VTU Inter collegiate tournaments in Cricket, Handball, Hockey Zonal competitions and NET Inter Collegiate Weight Lifting, Power Lifting and Best Physique competitions, VTU Cross Country both men and women and district level cross country competitions successfully.
- Mr. Harshavardhan, VIII Sem, Civil represented VTU Cross Country team in successive two years in All India Inter University Cross Country Championship held at Alva’s College, Moodabidiri in the year 2015 and 2016 and secured silver medal in Pole Vault in VTU Athletic Meet held at Dr. T.T. Inst. of Technology, Kolar.
- Mr. Sudhir S. Kotian, VI Sem, Civil represented VTU Cross Country team in successive 2 years in All India Inter University Cross Country Championship held at Alva’s College, Moodabidiri in the year 2015 and 2016.
- Ms. Trisha D’Souza, II Sem, E & E, represented VTU Cross Country team in All India Inter University Cross Country Championship held at Alva’s College, Moodabidiri in the year 2016 and Secured gold medal in 5,000 mts run in VTU Inter Collegiate Athletic meet held at DR. T.T. Inst. of Technology, Kolar.
- Ms. Ashwija G. Shetty, VIII Sem, C.S., represented VTU Soft Ball team and participated in All India Inter University Soft Ball Competition held at Lovely Professional University, Punjab from 5th to 11th February 2016. She also selected to represent VTU team in Soft Ball to participate in All India Inter University

competition to be held at M.G. University, Kottayam from 28th January to 01st February 2017.

- Mr. T. Kumaraswamy, 1st year M Tech., represented VTU Power Lifting team and participated in All India Inter University Power Lifting Competition held at Acharya Nagarjuna University, Guntur from 11th to 14th January 2016. He also secured Gold medal in Power Lifting under 93 kg category and 3rd place in Weight Lifting under 94 kg category in VTU Inter Collegiate Weight Lifting and Power Lifting competitions held at GAT, Bangalore.
- Mr. Lalithraj K.M., VIII Sem, E & C, represented VTU Power Lifting team and participated in All India Inter University Power Lifting Competition held at Acharya Nagarjuna University, Guntur 11th to 14th January 2016. He also secured bronze medal in Power Lifting under 66 kg category in VTU Inter Collegiate Weight Lifting and Power Lifting competitions held at GAT, Bangalore.
- Ms. Prathima, VIII Sem, IS represented VTU Volley Ball team and participated in South Zone Inter University Volley Ball Women Competitions conducted at Krishna University, Machali Patna from 10th to 15th February 2016.
- Mr. Glanish Pinto, II Sem, BE & Mr. Anush, IV sem, MBA, represented VTU Badminton team and participated in South Zone Inter University Badminton tournament held at Madurai Kammer University, Madurai from 3rd to 7th October 2016.
- Ms. Lavanya B.P., Ms. Salma Belliappa A, and Ms. Madhuri K., IV Sem, MBA, represented VTU Basket Ball team and participated in South Zone Inter University Basket Ball women competitions conducted at SRM University, Chennai.

Table 5.14: Achievements of Sports and Games for the Year 2015-16

SL No	Discipline	No of students participated	Level of Competitions			Total Medals won		
			National/ South Zone	State/ VTU	District/ Zonal/ Division	Gold	Silver	Bronze
1	Basket Ball (W)	3	South Zone	-	-	Participation		
2	Cross Country (M&W)	3	National	-	-	Participation		
3	Badminton (M)	5	-	-	Zonal	Participation		
4	WL, PL(M)	17	-	VTU – Champion	-	7	5	4
5	Weight Lifting (M)	2	National	-	-	Participation		
6	Power Lifting (M)	2	National	-	-	Participation		
7	Soft Ball (W)	2	National	-	-	Participation		
8	Volley Ball (W)	1	South Zone	-	-	Participation		
9	Kho Kho (M)	14	-	-	Zonal 4 th place	Participation		
10	Cross Country (M & W)	3	National	-	-	Participation		

11	Hand Ball (M)	12	-		Zonal Champion	-	-	-
12	Badminton (M)	5	-	-	Zonal Runner Up	-	-	-
13	Badminton (W)	5	-	II Runner up/VTU	Zonal - Champion	-	-	-
14	Chess (M)	5	-	-	Runner up/ Zonal	-	-	-
15	Table Tennis (W)	5	-	-	Zonal Champion	-	-	-
16	Yogasana (M)	8	-	Runner up/VTU	-	-	3	2
17	Judo(M)	6	-	II Runner up/VTU	-	-	2	2
18	Basket Ball (W)	10	-	-	Runner up/District	-	1	-
19	Basket Ball (M)	10	-	-	Champion/ District	1	-	-
20	Volley Ball (W)	12	-	VTU – Runner Up	Zonal – Runner Up	-	12	-
21	Volley Ball (M)	12	-	-	Runner up/ District	-	-	-
22	Cross Country (M)	9	-	Champion/VTU	-	9	-	-
23	Cross country (W)	6	-	II Runner up/VTU	-	-	-	-
24	Athletics (M & W)	15	-	Champion/VTU	-	5	4	2
25	Athletics (W)	9	-	II Runner up/VTU	-	3	4	1
Total Participants		181			Total Medals won	25	31	11

Table 5.15: Staff Achievements of Sports and Games for the Year 2015-16

SL No	Discipline	Number of students participated	Level of Competitions			Total Medals won		
			National	State/ VTU	District/ Zonal/ Division	Gold	Silver	Bronze
1	Table Tennis (M)	1	-	-	Nitte Kreedostava	1	-	-
2	Cricket (M)	16	-	-	District	16	-	-
Total		17	-	-		17	-	-

Sport achievements for the past 2 years is given in details in **Appendix E.13**

5.3.2 Provide details of the previous four years regarding the achievements of students in co-curricular, extracurricular activities and cultural activities at different levels: University / State / Zonal / National / International, etc.

- Students have won the First place in the “Sentia” Inter collegiate Cultural event conducted by MITE, Moodabidri. During 2013, one of our students got a First place in the VTU intercollegiate “Cartooning” event. MCA students won the First place in the Cultural and literary competitions held at St.Aloysius College Mangalore.
- Students participate in state level cultural and technical fests like Aakrithi of CEC, Bantwal, Sentia of MITE, Moodbidri, Varnotsava of SMVIT, Bantakal, Revels of MIT, Manipal, Chakrvyuha of AIET, Moodbidri etc. students have won many prizes in all the college fest. The college team won prizes as follows:

Table 5.16: Students participate in state level cultural and technical fests

Sl.	Year	Name of the event	Organisers	Position	Level
1.	2013-14	Sentia '14	MITE Moodubidri	Overall champions	State
		JCI Week		Winners	
		Infosys Vibe		Runners	Zonal
2.	2014-15	Sentia '15	MITE Moodubidri	Overall champions	
		Varnotsava '15	SMVITM Bantakal	Runners	Zonal
		Infosys GlamSlam		Winners	Zonal
3	2015-16	AAKRTHI	Canara Engineering College	Overall champions	Zonal
		SENTIA-16	MITE Moodubidri	Overall champions	State
		VARNOTSAVA	SMVITM Bantakal	Overall champions	Zonal

➤ **Achievement of students in VTU Fest:**

2014

- Shravana Umesh-4NM11ME180- I place in cartooning

2015:

- Prasad Krishna Pai-4NM12EE041- II place in classical Instrument
- Hanima Santhosh-4NM12EC053- II Place in Poster Making

➤ **Achievements in Co-curricular, Extra-Curricular and Cultural Events during 2016-17:**

Table 5.17: Students Achievements in state level cultural and technical fests

Fest / College / Position	Date	Event	Students	Position
AAKRITHI / Canara Engineering College Overall Champions	18 th and 19 th Feb 2016	Gamming FIFA	Roshan MK, Rakshith, Deepak Raj, Rahil	1 st place
		Gamming Counter Strike	Roshan MK, Rakshith, Deepak Raj, Rahil	1 st place
		Coding	Pradeep, Rameez	1 st place
		Debate	Vaibhav Dsouza, Moulya Gowda	1 st place
			Shwetha Rao, Shreshta Bhandary	2 nd place
		Duet Dance	Shwetha Rao, Shreshta Bhandary	2 nd place
SENTIA-	24 th and	Photography	Vindhya Kamath, Abhinandh	1 st place

16 Mangalore Institute of Technology <i>Overall Champions</i>	25 th March 2016	What's the good word	Ajay Pai, Habil Ahmed	1 st place
			Nabhan Moidheen, Sami	2 nd place
		Extempore	Vaibhav Dsouza	1 st place
		Debate Kannada	Vaibhav Dsouza, Punneeth VB	1 st place
		Debate English	Vaibhav Dsouza, Shwetha Rao	1 st place
		Air crash	Vaibhav Dsouza	1 st place
		Collage	Sundar Raj, Pooja Prasad, Reema Merlyn	1 st place
		General Knowledge quiz	Nabhan Moidheen, Karthik Rao, Habil Ahmed	1 st place
		Eastern Duet dance	Shwetha Rao, Shresta Bhandhary	2 nd place
		Mad ads	Yatish Shetty, Puneeth, VB Shriram Bhat, Pavan, Madhu B, Shreesha, Dhaval Kumar	2 nd place
		Fifa	Rakshith	1 st place
			Deepak Raj	2 nd place
		Circuit Debugging	Gautham, Karthik	1 st place
		EC Technical quiz	Avinash Rao, Sujith Shetty	1 st place
		On the spot painting	Sundar Raj	1 st place
		Mock press	Abhishek Kuchian	1 st place
		Spell B	Sami	1 st place
		Web Design	Akash Ballal, Vipin Dev	1 st place
		JAM	Suhrith DB	2 nd place
		Paper Presentation	Apoorva Shetty, Amoolya Shetty	1 st place
VARNOTS AVA SMVITM <i>Overall Champions</i>	11 th and 12 th March 2016	Western Dance	Deekshitha, Dsouza, Nidhi G Shetty, Shreepradha Rao, Nidhi Hegde, Rakshitha Shetty, Jostna Gowda, Viditha Vishwas, Annie Dsouza, Rajalaxmi	1 st place
			Roshan MK, Akash Roshan, Jovita Dsouza, Pratham Shettigar, Nidhi D Shetty, Nihal Shetty, Rakshith Barimar, Deeksha S Banger	2 nd place
		JAM	Sumanth	1 st place
			Suhrith DB	2 nd place
		Variety	Prasad, Abhishek R, Anoop Kumar, Vishal, Nikhil Salian, Prajwal, Muthu Praveen, Ajay, Vigneshwar, Lester, Sachindra, Sriprasad Acharya, Prasad pai, Dushyanth, Mubarak Abdulla	1 st place
		Code C	Vipin Dev, Rameez	1 st place
		Cad it	Anoop	1 st place
		Webbed	Vipin Dev	1 st place
		Treasure hunt	Aaron, Errol, Adesh	3 rd place

YENSPLA SH / Yenepoya Institute of Technology	16 th and 17 th March 2016	Group Dance	Roshan MK, Akash Roshan, Jovita Dsouza, Pratham Shettigar, Nidhi D Shetty, Nihal Shetty, Rakshith Barimar Deeksha S Bangera	1 st place
		Paper Presentation	Sagar Rao, Sheraz Mohammad	1 st Place
		Tech Boss	Adesh	1 st place
		Memory Mania	Vivian Catharine Dsouza	1 st place
		Quiz	Karthik Rao KS, Viraj Salian	1 st place
		Encoding	Adesh	1 st place

5.3.3 How often does the College collect feedback from students for improving the support services? How is the feedback used?

- As and when students give their feedback to HODs/Principal/Management on various issues whenever there are grievances on the support services, the matter is taken seriously and it is addressed at various levels.
- If the support services referred are connected with the Dept., it is solved at the departmental level.
- HOD to the best of his ability tries to find a solution to the concerned problem, if this does not satisfy the stakeholder, he/she may approach the Principal.
- Depending on the seriousness of the issue the Principal attends to redress by consulting the senior faculty and concerned staff. If it is beyond the purview of the Principal it is placed before the management.

5.3.4 Does the College have a mechanism to seek and use data and feedback from its graduates and employers, to improve the growth and development of the College?

YES

- As per the NBA requirements all the departments have made provision to take feedback from all the stakeholders (students, Alumni, Parents and employers) in the form of Program exit survey, Alumni survey and Employer survey which is analysed and further action is taken by the statutory bodies.

5.3.5 How does the College involve and encourage students to publish materials like catalogues, wall magazines, College magazine, and other material? List the major publications/ materials brought out by the students during the previous academic session.

The students are encouraged to publish articles in yearly college magazine, departmental association magazines by HODs and faculty in charges.

Table 5.18: News Letters / Magazines

Sl No.	Departments	Newsletter / Magazines (yearly)
1.	Institute	NIDARSHAN
2.	CSE	ACE MAGAZINE
3.	ISE	VISTA MAIL
4.	E&CE	ELECTRONIC MAIL
5.	E&EE	E CORE
6.	Mech	GYRO, MECHASTROKE
7.	Civil	ZENITH
8.	R&D	RESEARCH BULLETIN

9.	Project	SOUVENIR
10.	MCA	WINDOWS
11.	MBA	THE WALL

5.3.6 Does the College have a Student Council or any similar body? Give details on its constitution, major activities and funding.

- Each department has students' association for which office bearers are elected among the student representatives. There are President, Secretary, treasurer, sports secretary, cultural secretary, magazine secretary as office bearers.
- It is the responsibility of these office bearers to arrange various programs, academic or cultural and sports activities.
- To carry out students activities in the institution, the management allocates funding in the budget.

5.3.7 Give details of various academic and administrative bodies that have student representatives on them. Provide details of their activities.

The following are the academic and administrative bodies that have student representatives in them.

Table 5.19: Academic and Administrative Bodies with Student Representations

Academic and Administrative bodies with student representatives	Details of activities
College Governing Council	Student inputs are given to improve the college governance
Internal Quality Assurance Cell (IQAC)	Suggestions and opinions are given regarding quality improvement.
Anti-ragging committee	Suggestions are given for remedial measures in case of incidents and help the college authorities to educate the students about the consequences of ragging
Class committees	Give inputs to the Head of the Departments as and when necessary, about the students perception about the portions covered, teachers' teaching quality and other infrastructural issues about their class rooms
Cultural technical core committee	Suggestions and opinions are given regarding conducting various cultural and technical activities in the college
Placement committee	Suggestions and opinions are given to the placement department in organizing Mock tests, group discussions and other technical inputs to the non-placed students.
Prevention of sexual Harassment	Suggestions are given for remedial measures in case of incidents.
Library Committee	Suggestions are given to the librarian regarding requirement of library facilities in the college
Sports Committee	Suggestions are given to the sports director about the requirement of sports facilities in the college

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 State the Vision and Mission of the college

Vision: Pursuing Excellence, Empowering people, Partnering in Community Development

Mission: To develop N.M.A.M. Institute of Technology, Nitte as a Center of Excellence by imparting Quality Education to generate Competent, Skilled and Humane Manpower to face emerging Scientific, Technological, Managerial and Social Challenges with Credibility, Integrity, Ethics and Social Concern.

Quality Policy: We, the members of NMAMIT recognize our students, their parents as well as their prospective employers as our esteemed customers. We commit ourselves to provide education to our students as per stipulated syllabus using the best practices in order to achieve customer delight. Our target is to reach the position of the best technical Institute in India and we aim at sustaining this position.

Core Values: Ethics, Team work, Honesty, Loyalty, Professional & Personal integrity.

6.1.2 Does the mission statement define the College's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, College's traditions and value orientations, vision for the future, etc.?

YES.

- N.M.A.M. Institute of Technology has been started in a rural environment, a village called Nitte for providing quality and cost effective technical education to the students of Nitte and other adjoining areas.
- The Institution is imparting quality technical education relevant to the changing requirements of industries and organizations, which are the employers and the society in general.
- The students are trained to have essential skills and Graduate Attributes (GA) specified by NBA, through additional training programs and courses to make them competent to face the new and emerging scientific, technological and managerial challenges.
- The students are provided necessary value education through regular training programs, seminars, workshops, spirituality programs and camps. They are oriented towards developing a holistic individual with credibility, integrity, ethics, social and environmental concern. These efforts have helped moulding the students to fulfil the core values of the Institution and producing socially upright and morally responsible citizens of the country.
- SC/ST/OBC students are eligible for fee concession and scholarships as per the Gov. norms and need based remedial classes are conducted.
- The management of the institute runs a community health care and Psychiatric Centre which provides free and regular health check-up to the villagers as well as the student community.
- The Trust has a community welfare development program called "Nere-Kere Kshema" (meaning neighbourhood welfare) which helps the villagers of Nitte through various program and schemes for their financial upliftment and overall development.
- The Institute has a Biofuel Information and Demonstration Center (BIDC) which educates and trains villagers regarding growing biofuel plants in waste lands and

its use in producing biofuels and its application in blending with the conventional fuels to reduce greenhouse gas emission and pollution.

- The Institution through the department of Biotechnology is helping local farmers in effective cultivation of fruits and vegetables and improving their yield under the Rural development schemes of DBT, Ministry of Science and Technology, Government of India
- The Institution through its **EDC regularly conducts training programmes** for the rural unemployed youths in different trades and skills to improve their employability. **17 programmes are conducted during last two years and about 1050 participants are benefitted.**

Table 6.1: EDC Programs Details

Sl. No.	Date	Name of the workshop/ Seminar	Beneficiary
1	6 th May to 6 th June, 2014.	One month training programme Entrepreneurship Development Programme Special Advanced Computer Application & 2D Animation.	Rural unemployed youth & women. Total 25 students participated.
2	16 th June, 2104 to 5 th July, 2014.	One month training programme -Entrepreneurship Development Programme Mobile Repairs & Services	Rural unemployed youth & women. Total 20 students participated.
3	16 th & 17 th October, 2014	Entrepreneurship Awareness Camp	Final year students of M. R Punja ITI, Tapovana, Thokur. Total 85 students participated.
4	21 st November to 20 th December, 2014.	Entrepreneurship Development Programme CNC Lathe & Milling Machine Operation, Programming & Maintenance	Total 34 students participated. Rural unemployed youth
5	9 th to 15 th December, 2014.	Entrepreneurship Development Programme Advanced Electrical equipment	Rural unemployed youth & women. Total 22 students participated
6	9 th to 24 th December, 2014.	One month training programme - Entrepreneurship Development Programme CNC Lathe & Milling Machine Operation, Programming & Maintenance	Total 31 students participated.
7	6 th & 7 th February, 2015.	Entrepreneurship Awareness Camp	Final year students of Vijaya College, Mulki. Total 139 students participated.
8	24 th February, 2105.	Entrepreneurship Awareness Camp	Final year students of Dr. N. S. A. M. First Grade College, Nitte. Total 81 students participated.
9	20 th April to 16 th May, 2105	One month training programme -Entrepreneurship Development Programme Special Advanced Computer Application	Rural unemployed youth & women. Total 15 students participated.

10	20 th April to 30 th April, 2015.	Two weeks training programme - Entrepreneurship Development Programme Computer Hardware Assistant	Rural unemployed youth & women. A Total 43 student participated.
11	18 th May to 18 th August, 2015.	Three months training programme - Entrepreneurship Development Programme Hospitality- Reception Assistant and Information Assistant	Rural unemployed youth and women. A Total 30 student participated. This programme is conducted in association with Deen Dayal Upadhyaya Grameena Kaushalya Yojane, ITCOT Consultancy and Services Ltd, Bangalore.
12	26 th November to 26 th December, 2015.	One month training programme - Entrepreneurship Development Programme CNC Lathe & Milling Machine Operation, Programming & Maintenance	Rural unemployed youth. Total 31 students participated.
13	8 th to 15 th December, 2015.	One week training programme- Entrepreneurship Development Programme Advanced Electronic Equipment	Rural unemployed youth and women. A total of 33 students participated. This programme is conducted in association with Community Development through Polytechnic, NRAM Polytechnic, Nitte
14	8 th to 15 th December, 2015.	One week training programme- Entrepreneurship Development Programme Computer Hardware and Networking	Rural unemployed youth and women. A total of 23 students participated.
15	2 nd & 3 rd March, 2016.	Entrepreneurship Awareness Camp for held on	Final year students of Vijaya College, Mulki. A total of 175 students participated.
16	22 nd March, 2016.	Entrepreneurship Awareness Camp	Final year students of Dr. N. S.A. M First Grade College, Nitte. A total of 86 students participated.
17	22 nd March, 2016.	Entrepreneurship Awareness Camp	Final year students of M. R. Punja I.T.I, Tapovana, Thoker. A total of 84 students participated.

- The Institution is contributing for the success of “Skill India” scheme by running the “**Deen Dayal Upadhyaya (DDU) Skill Development Training**” for improving the skills of students and unemployed youths.
- All these programs offered, establishes the concerns of the institution in using its resources for improving the well-being of Nitte and nearby villages, fulfilling its social responsibility and accordingly the students are made aware of this fact.

6.1.3 How is the leadership involved in:

- **Ensuring the organization's management system development, implementation and continuous improvement**
- **Interaction with stakeholders**
- **Reinforcing culture of excellence**
- **Identifying needs and championing organizational development (OD)?**
- **Ensuring the Organization's Management system development, implementation and continuous improvement.**
 - The highest governing body of the institution is Governing Council (GC). The president of the Trust who is the chairperson of the GC along with members from the Trust, Eminent educationist, industries, alumni, UGC and State Government members, Principal and Faculty members of the institution meet as per the norms and make decisions to give guidelines and suggestions to implement policies successfully. It also promotes a culture of participative management.
 - The principal of the institution who is the Member Secretary of the GC takes steps for an effective implementation of the decisions taken at the GC through Heads of the Departments and members of several committees.
 - The Principal interacts regularly with the senior administrators, Heads of the Departments, Faculty members, Students and members from the other various committees at regular interval to enlighten the stakeholder and also to give suitable feedback about many policies, programs and such other issues.
 - The other senior administrators of the institution also meet and interact with the various stake holders to discuss the problems and grievances on a regular basis. Many times, the authorities summon the Principal and solutions were found on the spot.
 - The Academic Council with the Principal as the chairman and other members as per the guidelines of the statutory bodies will meet regularly and ensure quality in academic activities such as designing and framing curriculum, proper evaluation systems, regulations regarding admission and extra-curricular activities.
 - The Board of Studies with the Head of the Department as the Chairman and other members as per the guidelines of the statutory bodies will meet regularly and prepare syllabus for various courses, methodology for innovative teaching and evaluation techniques and other activities of the department.
 - The Head of the Departments provide leadership at the department level in managing affairs of the department on a day-to-day basis.
 - The faculty members provide leadership in managing affairs of the courses assigned to them.
 - The students take up leadership in managing and organizing various activities in the departments as well as the institution.
- **Interaction with Stakeholders**
 - The institution has regular interaction with all the stakeholders namely parents, faculty, students, alumni, employees and society in general through BOS, BOG, DUGC, AC, IQAC and Governing Council meeting.
 - Meeting with parents are organized by the Dean (Academics) once in a year to review the progress of the students.
 - The Principal interacts with the faculty every semester to announce the changes made in the policies of the institution and gets feedback from them for overall growth, improvement and development of the institution.

- The Principal, Vice Principal, HODs and faculty regularly interact with students in different forums; address them on different issues for the overall growth, improvement and development.
- The industry institute interaction and placement cell regularly interacts with industry to understand their needs and expectation.
- Alumni cell of the institution organizes alumni meetings every year in the institution and at locations outside (within or outside the country) to know their accomplishments and their contribution for the society.
- Employees visit and interact with institution and offer placements, internships and also engage courses/electives.
- **Reinforcing culture of excellence**
 - Strive for excellence has been the motto of the institution and all stakeholders aim towards achieving the same in academics, administration and overall management of the institution.
 - The Institution has ISO 9001:2008 certification, NBA Accreditation and NAAC accreditation to promote excellence at the institutional, departments and program level.
 - The faculty are encouraged to adopt better pedagogy, use of ICT in teaching-learning process, apply for research funds, conduct high quality research, publish technical papers in reputed journals and conferences, apply for patents, and develop entrepreneurship.
 - The students are encouraged and trained to excel in academics, sports extracurricular activities and placements. They are provided with excellent conducive environment, necessary support and facilities.
- **Identifying needs and championing organizational development (OD)**
 - The Principal of the college regularly identifies the needs to organize programmes, activities, seminars, conferences, workshops etc., at different levels of the organization for the overall development of the institution.
 - The Principal in consultation with HODs and other officials do the training need analysis (TNA) at the beginning of every academic year to conduct programs for fulfilling their training needs.
 - The programs are organized at the institutional or departmental level for the strategic needs of the institution and to train/orient the Principal, Vice Principal, HODs and teaching faculty. The need based programs are also organized for administrative/clerical and supporting staff as well as the students of the institution.

6.1.4 Were any of the senior leadership positions of the College vacant for more than a year? If so, indicate the reasons.

No.

6.1.5 Does the College ensure that all positions in its various statutory bodies are filled and conduct of meetings at the stipulated intervals?

Yes.

- The college ensures that, all positions are filled as per the requirements of various statutory bodies like AICTE/UGC/University etc. and the meetings are organized at regular intervals and recorded minutes of the meeting are circulated.

6.1.6 Does the College promote a culture of participative management? If yes, indicate the levels of participative management.

Yes.

The levels of participative management are Institutional level, Department level Purchase & procurement, Planning & Development, Construction, Interaction with the organization and Enhancement of discipline

- The College promotes a culture of participative management, where the major decisions are taken by the Principal in consultation with the Vice Principals and Heads of the departments which are minuted.
- The day-to-day decisions to run the departments are taken by the respective HODs in consultation with the Principal.
- The Governing Council and Academic Council are two statutory bodies which have representation from the various departments through their heads, senior faculty, students' representatives etc. They ratify and approve any major changes to be brought about in the managing of the institution.
- The Board of Studies and Board of Examination are two bodies which has representatives from the faculty who suggest necessary changes to be made in the curriculum, curricular upgradation, introduction of new courses on need based basis and also in scrutinizing / approval of Question papers for the conduct of the examinations.
- The College involves faculty in various committees formed for effective management of the institution at all levels comprising, Departments, R&D, Finance, Purchase & Stores, Planning & Development, Sports and other activities.
- At the departmental level, Class committee has student representatives to give suggestions for effective management of the affairs of the department.

6.1.7 Give details of the academic and administrative leadership provided by the University to the College?

- The Visvesvaraya Technological University, Belagavi has given guidelines for undertaking academic activities as an autonomous college.
- The evaluation, declaration of results and issuance of grade cards is done at the institutional level. The degree certificates are awarded by the university based on having fulfilled the stipulated requirements by the students.
- The Governing Council, Academic Council, Board of Studies and Board of Examiners have University nominees.
- The University supports faculty development programmes, workshops, seminars and projects.

6.1.8 How does the College groom the leadership at various levels?

- The HODs, faculty members, and students are members of various committees of the college
- Participation in these committees enable them to acquire the required leadership skills
- Leadership training is also provided at different levels
- The Institution organizes training for the faculty, students and supporting staff at different levels. Faculty members have been deputed to Institutes of Higher learning like IITs, IIMs, and NITs to undergo weeklong training program on respective domains of technical interest, Interpersonal and Managerial skills.

- The senior faculty including the HODs, Vice-Principals and other officials are provided leadership training for strategic planning and development.
- The newly joined faculty are trained through orientation and induction programs.
- Faculty are assigned various responsibilities to involve themselves in all the activities organized at the departmental and institutional level.
- Students are trained in organizing regular workshops and programs at the institution level, department level and by the placement department pertaining to curricular, co-curricular and extracurricular activities.
- Faculty and students are involved in organizing, technical association activities of the departments, activities of the technical societies like IEEE, WIE, CSI, ACM, CMSI, and SESI, NSS programs and various hobby clubs like dance, music, and photography for the benefit of students.
- The placement department identifies students with leadership qualities and are given responsibilities to conduct workshops and tests to peers to face the interviews/ competitive exams.
- Senior staff members are given additional responsibility such as Hostel Wardens, Cultural coordinator, NSS program officer, Faculty in-charge of interdisciplinary research, MSE Coordinator, Staff coordinators of various Professional chapters etc. This helps in grooming the leadership at different levels.

6.1.9 Has the college evolved any strategy for knowledge management? If yes, give details.

Yes.

- Knowledge management is the core aspect of any technical institute as it involves knowledge generation, dissemination and archival. Knowledge generation at the college happens in the following ways.
 - Encourage the faculty to take up research activities.
 - Support for research publications, patents and projects.
 - MoUs with many reputed organisations/industries
- Knowledge management effort is effectively channelized through college intranet “Moodle” which is an E-learning platform for the faculty members to create a repository of their teaching material, which can be accessed by the students through their credentials. This provides a platform for students and faculty to share their knowledge and resources.
- Knowledge dissemination and archival happens through library both centrally and at the departmental level. College library containing hard copies of textbooks, notes, project reports, standards and reference material. Digital library includes, lecture notes, videos from standard repositories such as NPTEL, VTU Edusat, technical papers from IEEE, Science Direct, ASME, ASCE, Taylor & Francis and other E-resources useful for the students and faculty. The video lectures of faculty members of NMAMIT are captured at Studio of Nitte Institute of Mass communication and uploaded to the Moodle and also made available in the college e-repository.
- Knowledge management is being effectively implemented at the administrative level for both students and faculty covering areas like academics, finance, Hostel, Purchase & Stores through use of customized / procured software.

6.1.10 How are the following values reflected in various functions of the College?

- **Contributing to National development:**

- The institution is started in a rural environment, helping the youth of the village, nearby villages of taluks and the districts in providing quality & cost competitive technical education.
- In last 30 years of existence, the college has contributed many distinguished alumni, serving in top echelons of industries/companies, Institutions and Government firms.
- The Institution has been contributing to the pool of technical power of the state and country by becoming a most sought institution. The students from foreign countries including Middle East and Nepal seek admission under PIO and NRI quota.
- The Institution has sincerely made an effort to implement various useful and beneficial schemes of the state and central government in skill development, training for rural unemployed youth.
- Institution has Centers such as MSME, NAIN and EDC to implement schemes to help rural youth in improving their skills through R & D activities contributing to the agricultural growth and development. Training is imparted to be environmentally conscious and adapt schemes towards mitigation of pollution.
- The Institution organizes cultural events, SPICMACAY, cultural fests, technical fests, youth fests to foster a sense of unity in diversity and bring in a feeling of oneness among the youth of our nation. All these measures have contributed towards National Integration.

- **Fostering global competencies among students**

- Students are exposed to latest developments in science and technology through regular activities conducted such as workshops, seminars, conferences, guest lectures at the departmental and institutional level.
- The Institution has signed MoU with various National and International Universities and also with industries. Faculty and students are deputed to attend training programs/conferences/workshops in these Universities/Industries. Student exchange programs are conducted by arranging visits to these universities for a fixed duration to make them aware of the developments in their respective domains and also to understand the culture and tradition of the host country.
- Faculty/resource persons from foreign Universities/Institutions /Industries address the students on latest trends in technology.
- Students also participate in webinar/expert lectures through video conferencing with external experts.

- **Inculcating a value system among students**

- Students at the first year are offered courses on ‘Constitution of India & Professional Ethics’ to create awareness about our constitution, professional ethics and ‘Environmental Studies’ about the environmental issues.
- Students of the first year undergo once in a week training program called “Mission Prerana for change” conducted by the Placement & Training Department to make the students socially conscious, ethically upright, morally good and training them to become “Global citizens”.
- NSS Unit of the college organizes Blood donation camps, camps on cleanliness to create awareness among the students about these important issues.
- Regular programs/workshops on value education and spirituality is organized in the college offered by well-known social organizations of the country.

- Hobby clubs like ‘Taaleem’ conducts programs to bring awareness about drug abuse.
- Institution organizes common and popular festivals and national days to inculcate the feeling of national integration and belonging among the student community.
- **Promoting use of Technology**
The Institution encourages the students, faculty and supporting staff to use technology in all the academic activities.
 - Students use in-house developed software to register for courses and to keep them informed about their attendance status, marks of examinations through intranet based “Smart campus”. Faculty members use “Smart Campus” system for assigning Courses, Student attendance entries and student marks.
 - Notices about various activities both academic and non-academic are uploaded in college website and Moodle.
 - Students download lecture notes, power point presentations, videos and e-resources like NPTEL and E-vidya through intranet.
 - Digital library facilities are available in the central library.
 - Faculty members make use of ICT facility for conducting lectures.
 - Faculty members mark their attendance through biometric systems.
- **Quest for excellence**
 - The Institution motto is “Strive for Excellence”. It provides all necessary infrastructural facilities and resources for helping students, faculty and supporting staff to strive for excellence. Excellence in academics, sports, extra and co-curricular activities, research & development and administration are recognized and suitably rewarded.
 - Innovative efforts of faculty, students and supporting staff in various domains of Institutional management are considered and recognized.
 - Tech-Nidarshan, Project exhibitions, Paper presentation competitions, hobby clubs such as Aero-club & Robotics club gives excellent opportunities to the students to learn beyond the curriculum.
 - The students are felicitated for their excellence in different domains during Annual Day, Cultural and Technical fests.

6.1.11 Give details of the UGC autonomous review committee’s recommendations and its compliance.

The Autonomous status is granted by UGC during 2007. The grant of extension of Autonomous status by UGC for a period of 6 years with effect from 2016-17 to 2021-2022 is received recently. The UGC approval letter is attached in **Appendix E.14**.

6.2 Strategy Development and Deployment

6.2.1 Does the College have a Perspective Plan for development? If so, give the aspects considered in development of policy and strategy.

Yes

- The college has prepared the “**Strategic Development Plan**” for the years up to 2020. This document was prepared based on an extensive three level rigorous workshops conducted for the faculty members. Departmental and Institutional level SWOC analysis was carried out.
- Institute level strategic plan - 2020 has been prepared based on the feedback collected from all cadres of the faculty including Professors, HODs, Associate

Professors and Assistant Professors. It covers Short, Medium and Long term goals of every department.

- The document developed based on the plans evolved, were finally approved by the Governing Council after brainstorming.

➤ **Teaching and Learning**

- Keeping in mind the new “Outcome Based Education”, efforts are channelized to improve the teaching and learning process.
- Teachers are being trained to use ICT and adopting newer pedagogy to improve their teaching efficiency.
- Students are encouraged to use internet to improve their learning process by accessing E-resources.
- Adequate class rooms and labs with ICT are provided.
- Regular efforts are made to improve the curriculum by upgradation of the curricula, newer electives are offered considering industrial requirements and new developments in technology to improve the employability of the students.
- Better methods of teaching learning, evaluation are being adopted by using Bloom’s Taxonomy levels to improve the learning experience of the students.
- Library facilities and infrastructure are being improved to help the students and faculty.
- The grant of academic autonomy has provided a lot of flexibility in making the curriculum up-to-date, progressive, industrially oriented and socially meaningful, making the students better employable.

➤ **Research and Development**

- Research and development is highly encouraged and is monitored by Dean (R&D).
- Director (R&D) focuses on getting Project funding from external agencies, establishing Centers of Excellence, guiding Faculty researchers in carrying out their research work and motivating students to involve in research activities.
- Teachers are encouraged and motivated to pursue Ph. D in the institution’s research centers or in other research centers of reputed institutions.
- All engineering departments are offering M.Tech programs and students are encouraged to publish their work in refereed journals/ conference proceedings.
- Faculty members are encouraged to write research proposals for getting financial grants from Government and Private funding agencies.
- Teachers are given incentives for their efforts in R&D, for obtaining research grants, publishing papers in reputed journal and conferences, reviewing papers, applying and obtaining patents.
- Necessary technical and financial assistance is provided to faculty who wish to file patents for their research work.
- Teachers are provided short periods of leave to focus on their research and by reduced teaching loads.
- Necessary help is also being provided through funding from government and management to the faculty for the efforts to commercialize their research which will benefit the community or society in general.

➤ **Community engagement**

- The institution gives lot of importance to community development as it is in a rural setup.
- The Institution has a scheme called “Nere-Kere-Kshema” which provides financial and technical assistance to the villagers of Nitte village for their

livelihood, agriculture, occupational development and skill development.

- The institution has an EDC cell supported by financial assistance from the management and government agencies to conduct various skill development programs for the benefit of rural and unemployed youth.
 - It has executed the DDU Skill development scheme of the Government of India to enhance the skill sets of the rural youth.
 - It has incubation centres with funding from Government of Karnataka to commercialize research outputs, project ideas and concepts of the undergraduate & post graduate students.
 - It has started a unit of MSME scheme of Government of Karnataka to help entrepreneurs and operate from the campus with initial capital investment and other technical assistance.
- The faculty of the various departments provides necessary technical assistance and consultancy to solve local problems of nearby villages.
- Few research activities are taken to the level of community engagement/development like planting of saplings of biofuel plants during rainy season.
- The Institute has a “Biodiesel Fuel Demonstration Unit” with funding from Government of Karnataka, to educate farmers to grow different types of biofuel plants. The seeds of the plants are used to extract oil to produce biofuels. The biofuel is blended with diesel. It also conducts regular training and awareness programs for the local farmers.

➤ **Human resource planning and development**

- The Institution strictly follows the mandatory requirements of faculty, non-teaching staff and the cadre ratio as specified by the statutory bodies.
- The existing and newly joined faculties are trained by conducting pedagogy, orientation & faculty development programmes on various aspects of teaching-learning process.
- Faculties are encouraged to pursue their Ph.D. degree in reputed institutions by extending the necessary facilities and through sponsorship.
- The department conducts regular FDPs for skill and knowledge up-gradation.
- Technical supporting staffs are encouraged to undergo skills up gradation.
- The non-teaching staffs are also trained in-house by training directorate, Nitti University.

➤ **Industry interaction**

- Industry-Institute Interaction (I-I-I) is an important requirement in today’s world in order to align the curriculum as per the requirements of industry and to expose students to best practices of industry. This happens at different levels in the institution.
- Industry Institute collaboration (IIC) activities are channelized by the Director IIC.
- He is ably supported by a team consisting of faculty from various departments. They suggest contacts of Industries and liaise with them in organizing various activities such as technical talks/lectures, industrial visits, demonstrations, efforts towards working out linkages signing of MoU etc., and considering the expertise available in the institution.
- A database of the Research and Development capabilities and technical expertise and credentials of faculty, the infrastructure facilities available. This is being mapped with the industries to establish interactions.

- The Institution has signed MoU with many leading industries/Govt. organizations. This initiative has helped in getting internships & projects to students and faculty, arranging industrial visits, technical talks, offering specialized electives, obtaining consultancy assignments and facility to carry out experiments at other organizations etc.
- The Institution being autonomous, the feedback obtained from the industries is effectively used in modifying the curriculum regularly to make it more relevant and up-to-date.

➤ **Internationalisation**

- The Institution has signed MoU/MoA with some of the leading foreign universities for faculty and student exchange, short term training programmes and visits. NMAMIT has active MoUs are with Ritsumeikan University Japan, Penn State University, Harrisburg USA.

6.2.2 Enunciate the internal organizational structure of the College for decision making processes and their effectiveness.

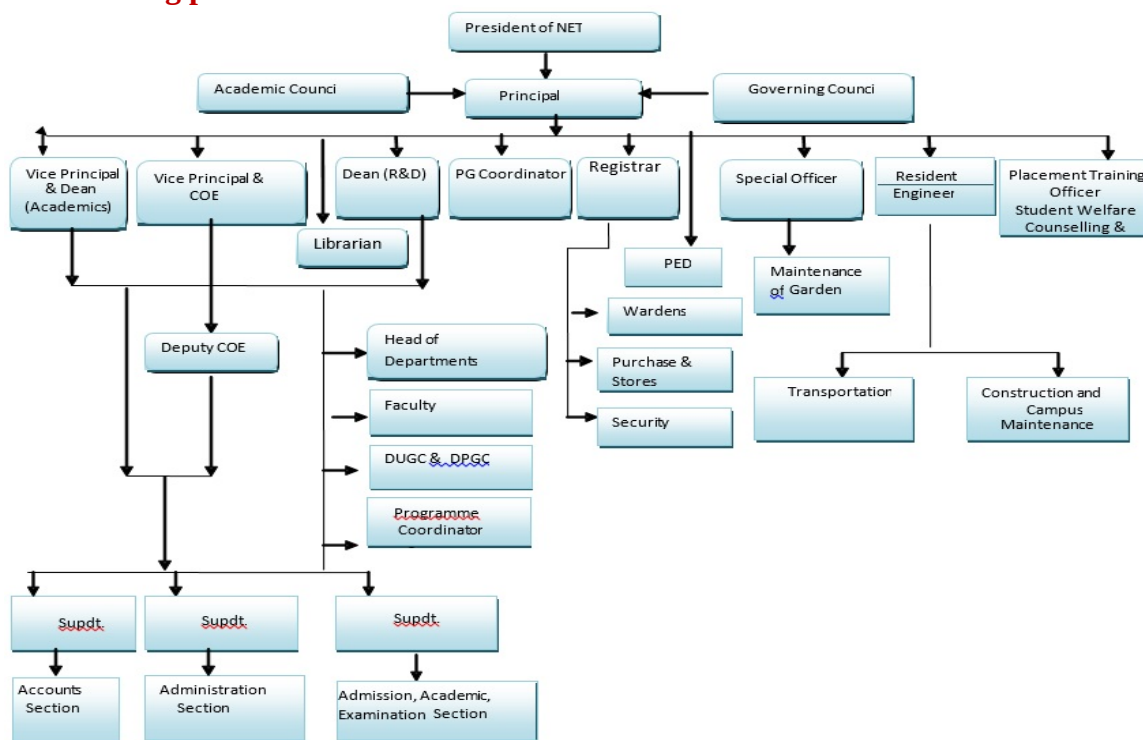


Fig 6.1: Organizational Structure

Director (R&D) and Director (IIC) are parallel reporting to President of Nite Education Trust. The structure is effective and decisions are taken fast and put in place.

6.2.3 Specify how many planned proposals were initiated / implemented, during the last four years. Give details.

- Construction of new academic block
- ICT enabled class rooms
- Sports grounds containing separate football, Hockey and cricket grounds with 400mtr track for athletics
- Gymnasium, fitness centre, wooden flooring for the indoor stadium to play Basket ball and shuttle Badminton
- Construction of EDC center

- Open air auditorium of 4000 seating capacity
- Men's and ladies PG hostel of 250 capacity each
- Wireless internet connectivity to the Hostels
- 2 Sewage Treatment Plants of 2.5 lakh liter capacity
- Independent building for Biofuel Information and Demonstration Centre
- Separate Research and Innovation Centre
- Purchase of new 500KV Genset and a Transformer
- Purchase of more than 500 computers
- Central Air conditioning of the class rooms in the main college block
- Construction of additional staff quarters

6.2.4 Does the College have a formally stated quality policy? How is it designed, driven, deployed and reviewed?

Yes.

- **Quality Policy:** We, the members of NMAMIT recognize our students, their parents as well as their prospective employers as our esteemed customers. We commit ourselves to provide education to our students as per stipulated syllabus using the best practices in order to achieve customer delight. Our target is to reach the position of the best technical Institute in India and we aim at sustaining this position.
- The quality policy is in force and the institution meets the requirements of ISO 9000 standards. The Institution is ISO 9001:2008 certified and the certificate is reviewed regularly once in three years. Regular internal audits and one external audit are carried out every year to ascertain whether the requirements of the quality policy are met and if not necessary corrective measures are initiated.
- The focus is to strive for excellence and to achieve the status of one of the best technical institution in the country. Accordingly, measures are taken at the academic and administrative levels to fulfill this goal. The quality policy is reviewed regularly with feedback obtained from various stakeholders through various systems in place which support the academic, administration, financial and all the other managerial aspects of the institution.
- Following committees, system and the procedures are in place to ensure the stated quality policy is rightly driven, deployed and reviewed from time to time.
 - o Consistent efforts in up gradation of syllabus content as per industry requirement
 - o BOS Involving external members from renowned industry and institutions.
 - o Departmental course Registration advisory committee
 - o Proctor System for every 10 or 15 students in the department
 - o Class advisors and class committees
 - o Mid Semester Examination, Tasks, Continuous Internal Evaluation and Semester End Examinations
 - o BOE Involving external examiners for question paper setting and evaluation of answer scripts.
 - o Departmental UG Committee and PG Committee
 - o Departmental Academic Appeal Board.
 - o Makeup examinations.
 - o Supplementary semester for students who have failed or detained due to attendance shortage.
 - o Students and parents feed back.

6.2.5 How does the college ensure that grievances/complaints are promptly attended to and resolved effectively? Is there a mechanism to analyse the nature of grievances for promoting better stakeholder-relationship?

- There is a grievance redressal mechanism at different levels. Students have different forum for expressing their grievances in the college.
- The First year Coordinator, takes care of grievances of first year students. He is the one point contact to guide and counsel students regarding academics, hostel, liaising with teachers and all other issues.
- Faculty member in the class room address student grievances to some extent. Class advisors take care of the need of the students of entire class.
- The HOD takes care of grievance redressal at the departmental level.
- Grievances regarding:
 - o Academic related matters are addressed by the Dean (Academics).
 - o Examination related matters are addressed by the COE.
 - o Hostel related matters are addressed by the Chief Warden.
 - o All maintenance related /infrastructure related issues are addressed by the Registrar and resident Engineer
 - o The psychological and other related issues are advised separately by the Counsellor.
- Grievance of the faculty are addressed at the departmental level by the HOD, and if need be, by the Vice Principal, Dean (Academics), COE and finally by the Principal.
- As per the guidelines of the Supreme Court/ AICTE/ affiliating university, Anti ragging committee is constituted. The committee comprises faculty, senior students, Wardens, Chief Warden, Principal, Vice Principals and local Police to addresses all ragging related issues in the college.
- Prevention of Sexual Harassment Committee (PrOSH) has been constituted as per the guidelines of the Supreme Court to take care of all grievances related to sexual harassment for both students and faculty.

Mechanism: The open door policy of the college administration provides students and alumni easy access to Department Heads and Deans. Such a policy resulted in the Principal, Registrar and other senior functionaries to address the grievances of students and staff.

6.2.6 Does the College have mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

Yes

- The following efforts are taken to consistently improve the institutional performance through better results, placements and programme outcomes.
- Class Committee meetings are held at the departmental level and feedback is taken regarding all academic related matters.
- Student feedback on program outcomes is collected through Program Exit Survey.
- Course feedback is collected at the middle of the semester and at the end through course exit survey. The analysis is done and corrective measures are taken in view of achieving better course outcomes.
- The Dean (Academics) collects feedback from the students on teaching-learning and analyses for gross anomalies.
- The students' performance is sent to parents twice in a semester. Feedback

received from parents regarding students' performance and course delivery is analysed.

- If any gross anomalies are found, HOD and Dean (Academics) discusses the matter with the concerned teacher and brings it to the notice of Principal if necessary.
- The feedback results are also taken into consideration during the annual performance appraisal of faculty members and suitably rewarded.

6.2.7 In what way the affiliating University helped the College to identify the developmental needs of the College?

- The suggestions by way of report by the Local Inquiry Committee constituted by the affiliating University helps in identifying the developmental needs and implementation of suggestions for overall improvement in the functioning of the college.
- The affiliating university provides funding for R&D work, organizing FDPs for the benefit of the faculty and students.
- The affiliating University provides all necessary information regarding workshops/conference/FDPs carried out under the university in various affiliated colleges and is regularly communicated to all faculties to encourage participation to give exposure to latest trends to strengthen teaching learning process.
- Most of the faculties of the institution have registered for their Ph.D. in the affiliating university. This has helped in improving the number of faculty with Ph.D. qualification.

6.2.8 Does the affiliating university have a functional College Development Council (CDC) or Board of College and University Development (BCUD)? If yes, in what Way College is benefited.

No. However, the college has

- VTU nominee in the Governing Council and board of Studies.
- It is only through **Local Inquiry Committees** appointed by the affiliating University; the college is evaluated for its potential to start the new course or for starting the postgraduate course or Ph.D. programme.

6.2.9 How does the College get feedback from non-teaching, teaching, parents and alumni on its functioning and how it is utilized?

- Feedback is taken from the non-teaching staff through open meetings addressed by the Principal once in every semester regarding all issues related to academics, administration, finance, salary etc.
- Feedback is taken from the faculty in various forums including departmental and institutional meetings to improve the functioning of college.
- Performance of the students in terms of attendance and marks are sent twice in a semester to their parents.
- Emails or SMS alerts are sent to parents regularly to give information about major events in the academic calendar to keep them updated.
- The feedback is taken in parent- teachers meeting by the Dean (Academics) once in each semester. The grievances if any are addressed.
- The college website is also made use of effectively for communication and getting feedback.
- The interaction with Alumni is strengthened by having a separate alumni cell

(Wenamitaa) which provides a forum for the alumni all over the world to give their inputs. Alumni share their experiences, expertise and give their feedback for the improvement of teaching learning process.

- Feedback from the employers is taken by the placement and individual departments about the capabilities and work culture of the graduates working in various organizations.
- Feedbacks are used for review of program educational objectives/ program outcomes to improve the curriculum to give outcome based education which is the primary focus of NBA.

6.2.10 Does the college encourage autonomy to its academic departments and how does it ensure accountability?

Yes.

- The departments are given complete autonomy in framing the syllabus within the guidelines of University. The revised curriculum is placed before the Board of Studies (BOS) meeting held every year for deliberations and approval.
- The BOS includes faculty, alumni, and experts from academia and industry who contribute towards revision of curriculum.
- The departments are motivated to offer any new courses, labs, programmes, electives, new scheme for continuous internal evaluation (CIE).
- The Board of Examiners (BOE) is concerned with scrutinizing question papers (QP) obtained from internal and external examiners. The members include both internal and external experts. They ensure that the quality of the QP is maintained by incorporating Blooms Taxonomy Levels.
- The valuation of answer scripts in the semester end/makeup/supplementary examinations is also partly undertaken by external examiners to maintain quality and transparency.
- The departments have complete freedom in monitoring and managing all the academic and other activities. Based on the timetable/schedule/calendar for a particular semester, the department is encouraged to organize various activities for the benefit of the faculty and students.
- For the accountability, the departments shall submit necessary proofs and documents to the respective office for having organized the activities successfully.
- Academic audit of the department is undertaken every semester by two staff members (other than the department staff members) appointed by ISO committee.

6.2.11 Does the College conduct performance auditing of its various departments?

Yes.

- The institution performs administrative audit, assets audit and financial audit using Internal auditors
- From last two years, external academic audit is being conducted to get a feedback about the improvements that can be brought into the academic activities.
- The college has adopted ISO 9001-2008 certification. Performance auditing is carried out by internal auditors of ISO committee for both the semesters of academic year and once in a year by the external ISO auditors.

6.3 Faculty Empowerment Strategies

6.3.1 What efforts are made by the College to enhance the professional development of teaching and non-teaching staff?

- The faculty members are deputed in due consultation with the department for the faculty development programs, conferences, workshops, seminars etc., with benefits such as registration fee and TA/DA.
- The programs are being organized at the institutional level which is mainly concerned with general issues of education, Outcome Based Education and Accreditation, pedagogical tools and techniques for quality improvement, recent technological developments in the field of specialization.
- Workshops and lectures are organized for teachers through agencies such as Wipro Mission 10X- High Impact Teaching Skills, I-Point Staff empowerment with teaching methods.
- Training programmes related to soft skills development by I-Point to improve interpersonal and leadership skills.
- The Teaching staffs are encouraged to pursue research leading to Ph.D. degree through sponsorship on full time basis.
- Induction/orientation programmes are conducted for newly joined faculty to orient them towards academic and other functions of the institution. It also provides them a fundamental overview of the teaching-learning process.
- Teaching staff are encouraged and motivated to obtain research grants from government and private funding agencies. Based on the requirements, supportive matching grants are provided by the institution. They are also encouraged to publish research outcomes in peer reviewed journals and conference proceedings.
- Teaching staff are encouraged to organize workshop/FDPs/Conferences sponsored by external funding or through internal resources.
- Incentives are given to faculty for fetching research grants and publishing research papers in peer reviewed journals.
- The non-teaching staffs are provided additional inputs in communication, soft skills, computer skills etc., through in-house programmes, through external agencies and Faculty Development Institute of Nitte University. They are also deputed for subject specific and general trainings at Bangalore and other places.

6.3.2 What is the outcome of the review of the Performance Appraisal Reports? List the major decisions.

The performance appraisal review is exercised for faculty and nonteaching staff.

- Faculty self-appraisal reports are perused during academic audits and annual performance appraisal meeting.
- Faculty and non-teaching staff are given feedback for the improvement in the areas where they can focus and contribute. Major issues observed if any, are sorted at the department level, otherwise intervention is sought either from the Vice Principals or Principal for initiating remedial measures.
- From last two years, Institute level performance interviews are being conducted involving external experts and performance grades are awarded to faculty.
- Based on the grades obtained, incentives are awarded to faculty members. If the performance is not satisfactory, the concerned faculty are counselled, motivated and given an opportunity to improve. If the improvement is not observed, necessary steps are taken as per the service rules.

- The effective implementation of performance appraisal system has resulted in a healthy competitive environment to strive for betterment. The participation of faculty in academic related activities, offering audit courses, organizing workshops and involvement in research activities and registering for Ph.D. has improved.

6.3.3 What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?

- All teaching and non-teaching staff are the members of Employees Insurance (EI) Scheme of Government of Karnataka/India.
- All teaching and nonteaching staffs are eligible for Employees Provident Fund (EPF) of Government of India with contributions from faculty and the Management.
- All the employees have Gratuity benefits.
- Medical/Dental/Psychiatric counseling facilities to all employees is provided free of cost.
 - o Medical facilities for tests/treatments are provided at reasonable charges at hospitals managed by NET at Karkala and Deralakatte, Mangalore
- Free transportation facilities to all the employees.
- Accommodation in flats/staff quarters in the campus at reasonable rates to the teaching staff.
- Fee concession for pursuing education from KG to PG in institutions which are part of the NET for the children of the employees, which include professional education namely engineering, medical and dental.
- Regular medical check-up camps are organized for the benefit of the employees in collaboration with sister concerns (medical) and other reputed medical institutions.
- Nitte Employers Credit Cooperative Society provides soft loans for various purposes at reasonable interest rates. It also encourages savings by paying good returns through various schemes.

Table 6.2: Percentage of Teaching and Non-teaching staff benefitted

Welfare Schemes	% of Teaching and Non-teaching staff benefitted during the years							
	2013		2014		2015		2016	
	T	NT	T	NT	T	NT	T	NT
EPF	99.12	99.73	99.21	99.23	98.84	98.82	98.54	98.87
Gratuity	43.75	25	46.15	33.33	50	30	37.5	66.66
Medical	57	96	45	74	28	64	23	59
Dental	0.66	2.62	1.51	1.0	0.78	1.16	0.35	1.89
Psychiatric counseling	--	--	--	--	--	--	1.01	2.17
Accommodation in staff quarters	10	0.51	6.83	0.49	7.06	0.45	11.14	0.43
Fee concession for children of employees	1.58	2.05	2.15	3.43	1.76	2.50	1.01	2.83
Cooperative society loans	6.20	23.68	7.36	23.15	6.43	27.65	3.74	18.09

T=Teaching NT=Non-Teaching

6.3.4 What are the measures taken by the College for attracting and retaining eminent faculty?

- AICTE pay scales.
- Good infrastructural and laboratory facilities.
- On-campus accommodation on requirements.
- Seed money for faculty to pursue research
- Teaching staff are encouraged and motivated to obtain research grants from government and private funding agencies. Based on the requirements, supportive matching grants are provided by the institution.
- Financial assistance is provided to attend and organize conference/seminars/workshops.
- Support for of the faculty to apply for patents, commercialization of ideas and prototypes through incubation center.
- Reduced workload for devoting time for funded research.
- Financial assistance for faculty to start new hobby clubs, technical society chapters, organizing innovative programs for the benefit of students.
- Encouragement to faculty for bringing in innovative changes in teaching-learning process, pedagogy and use of ICT in teaching.
- An excellent and conducive working atmosphere which encourages innovation, nurturing and supporting talents, promoting excellence without any interference.

6.3.5 Has the College conducted a gender audit during the last four years? If yes, mention a few salient findings.

Yes.

Table 6.3: Gender Audit

Description	Year							
	2013-14		2014-15		2015-16		2016-17	
	M	F	M	F	M	F	M	F
Teaching staff	167	86	185	93	188	95	200	96
Non-Teaching Staff	245	144	258	149	289	150	289	170
Students B.E	2462	1095	2691	1113	2711	1218	2664	1297
Students M.Tech	189	84	171	109	142	140	117	115
Students MCA	194	130	190	126	185	127	136	148
Students MBA	170	169	188	139	206	144	182	151

M=Male, F=Female

Gender Audit has been analyzed and some of the observations are:

- In engineering branches like, computer science, electronics and communication, information science engineering and biotechnology engineering, female faculty outnumber the male faculty. Similarly, female students outnumber male students
- In engineering branches like civil, electrical engineering and mechanical, male faculty outnumber the female faculty and similarly, male students outnumber female students
- Sizable numbers of female students take admissions in the college every year.

6.3.6 Does the College conduct any gender sensitization programs for its staff?

Yes

- During the Womens' day celebration every year, issues pertaining to gender parity are being discussed.
- Awareness about the gender related sensitive issues and the consequences of

wrongful behavior inside and outside the campus is brought to the attention of all staff members.

- Grievances regarding sexual harassment and discrimination against female are brought to the notice of ProSH committee for proper redressal. Discrimination of any form towards the fairer sex is not tolerated and all issues related to the same are dealt with seriously.
- Faculty and non-teaching staff are expected to follow the rules and regulations of the institution, dignity of labour, respect for all and a feeling of equality among all.

6.3.7 What is the impact of the University's UGC-Academic Staff College Programmes in enhancing competencies of the College faculty?

- The faculty members are made aware of the University's UGC-Academic staff colleges programmes. The details are regularly advertised as and when the circulars are received.
- The faculty members are encouraged to attend these programs regularly, which help in enhancing their competencies.
- They are made aware of the benefits of attending such programmes. The faculty and staff members are provided TA/DA and official leave during the participation.
- Staff members are advised to share the information with their colleagues after returning from the programme.
- The faculty members are vastly benefited by attending such courses.

6.4 Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism to monitor effective and efficient use of financial resources?

The following procedures ensures the efficient use of financial resources

- The budget for the new financial year is centrally prepared well in advance by getting the recurring and non-recurring estimates required for the departments with approximate financial implications and prioritized items that are required.
- The budget is allocated after the detailed review by the finance committee and the Governing Council (GC)
- Finance Committee constitutes representatives from the college and sponsoring trust which meets twice in a year and give recommendations to GC.
- The Institution has a Finance department which is administered through the Accounts superintendent under the Principal. It manages the financial resources of the institution on a day-to-day basis.
- There is a Purchase Committee, which meets periodically to take the decision regarding purchases and the departments are informed about the amount available for that financial year for purchases.
- On approval of budget by the finance committee, the purchase committee invites 3 quotations and the indent is submitted to the Purchase (Stores) department to place the orders.
- Departments maintain stock registers and maintenance log books for the instruments.

6.4.2 Does the College have a mechanism for internal and external audit? Give details.

Yes

- Both internal and external audit system exists in the college. The audit happens

for all the primary functions of the college namely academic, administration and finance.

- There is also internal and external audit of quality through the ISO 9001:2008 QMS is in place.
- There is internal audit of various activities of the college which include purchase, stores, examination, academic activities of the faculty like attending conferences/workshops/seminars etc., leave management and financial implications for day-to-day activities of the college etc.
- The external auditor audits the accounts at the end of the financial year and gives the audited report.

6.4.3 Provide audited income and expenditure statement of academic and administrative activities of the previous four years.

- An audited statement of previous four years is enclosed in **Appendix E.15** and also published in the college website.

6.4.4 Have the accounts been audited regularly? What are the major audit objections and how are they complied with?

Yes. There are no major audit objections.

6.4.5 Narrate the efforts taken by the College for resource mobilization.

- Resources are mobilized by the college at different levels.
- The college generates all its financial resources through the fees of the students admitted to various UG and PG programmes through CET conducted by KEA, COMEDK, NRI, PIO Quota and Management quota, similarly for PG programs through PG CET conducted by KEA, MAT/CAT/KMAT etc. for MBA students.
- The college gets funding from different central and state government bodies for establishing EDC, IIPC, New Age Incubation center, startup through MSME etc.
- The college has been a part of TEQIP Phase I and II which is a MHRD, Government of India initiative and has also applied for funding under various other schemes of Government of Karnataka and India.
- Faculty receive funding
 - o For their research activities through funding agencies, to organize conferences/seminars/workshops/FDPs.
 - o By offering consultancy services, organizing training programmes and workshops for training personnel from Government departments and private organizations on need basis.

6.4.6 Is there any provision for the College to maintain the 'corpus fund'? If yes, give details.

Yes. The corpus fund is maintained at A/C. No. 220/35560, Syndicate Bank, Nitte.

6.5 Internal Quality Assurance System

6.5.1 Does the College conduct an academic audit of its departments? If yes, give details.

Yes

- The college conducts an academic audit of all its departments involving External experts. The team conducts the academic audit of departments, wherein documents related to academic activities are verified at the departments. This

exercise is in place from last 2 years.

- Since the College is ISO 9001:2008 certified, there is regular audit of all the processes followed in various academic and supporting departments. There are internal audits held twice every semester and a yearly external audit.
- Based on a prepared and approved manual, the ISO audit is carried out. This verifies the authenticity of the claims made regarding carrying out various processes in the department. The academics, accounts/finance and administration processes are verified. In academic process, lesson plans, attendance records, results in the examinations, student feedback, parents/employer feedback, and departmental meetings/BOS/BOE meeting records, induction checklist for new faculty and assignment matrix for faculty are verified.
- The internal and external audits lead to generation of Nonconformity Report (NCR) which identifies the deficiencies in different processes. Accordingly, remedial measures are taken before the next audit.

6.5.2 Based on the recommendations of academic audit what specific measures have been taken by the College to improve teaching, learning and evaluation?

- Academic audit reviews all the academic processes of the departments.
 - This includes teaching-learning, student attendance and performance, student participation and performance in curricular and other curricular activities, student support & counselling, academic & non-academic performance, performance in R&D and community development
- Based on the feedback provided,
 - Measures are taken to improve the teaching-learning and evaluation process.
 - The HODs and faculty are counselled and encouraged to follow well defined rules, regulation and procedures.
 - They are motivated and encouraged to perform well in various aspects of academics and other activities.
 - The best practices of various departments are shared so that processes can be improvised in various departments to improve their performance and enhance their potential.
 - The audit process includes the department, students and teaching & non-teaching staff.
 - Nonconformance of well established procedures in different aspects of the academic process is taken in to consideration seriously. Concerned people are called and advised suitably, so that such a nonconformance will not show up next.

6.5.3 Is there a central body within the College to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

Yes.

- The central body consists of Principal, Vice Principal, Dean (Academics) and HODs continuously review the teaching learning process.
- The teaching-learning process is continuously monitored by the Vice Principal and Dean (Academics) under the guidance of the Principal. He is ably supported by all the Heads of the department and the faculty. The Vice Principal & COE assists in all issues affecting the examination and evaluation process.
- The Dean(Academics) manages the following

- o He is entrusted with the responsibility of preparation of Academic Calendar, schedule in consultation with the Principal, COE, HODs, concerned committees and the university guidelines.
- o He is responsible for strict adherence to this academic calendar/ schedule
- o As part of routine classroom management, manages all aspects related to regular teaching, allotment of classrooms, and management of daily classes.
- o The registration of Open elective courses, audit courses offered by various departments. happen under his guidance
- o Course registration by students at the beginning of every semester happens under his purview.
- o All faculty and student issues related to academics are handled by him.
- o He is responsible to conduct and organize induction/orientation programmes for the newly recruited faculty.
- o FDPs for upgradation of knowledge, for the faculty are organized either centrally or through various departments under his supervision.
- o He regularly takes feedback from students regarding the faculty on all important issues including teaching learning process, class management, and students' discipline, evaluation at the beginning, middle and end of the semester.
- o Regular feedback regarding the same is given to the faculty through the respective HODs are accordingly advised on the necessary improvements to ensure steady improvement in program outcomes.

6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?

- The IQAC headed by Dr. Subramanya Bhat, Professor, Mechanical Engineering, arranges the external academic audit. The team comprises of two senior Professors from outside the college perform annual academic performance audit and give their findings.
- IQAC plays an important advisory role in achieving and sustaining quality in the institution management and administration.
- It holds meetings regularly on various important issues and advice the Principal regarding those issues.
- It supports the regular audit process carried out in the institution and suggests various audit parameters to be considered.
- The issues arising out of various audits are discussed and deliberated at the IQAC meetings and necessary suggestions are given to the Principal for its effective implementation.
- Annual Quality Assessment Report is prepared and uploaded on to the college website.

6.5.5 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

Yes.

- IQAC has two external members. Currently Dr. Mohith Tahiliani, Asst. Professor, Computer Science Department of NITK and Mr. Ashok Adyanthaya, Industrialist are the external members.
- Dr. Mohit normally gives his perspective of teaching learning and evaluation practices as followed in NITs. Taking his inputs, the Institute has now moved to

weekly assessment practice for the PG students. This practice will make the students to be up-to-date with their studies throughout the semester and the semester end stress on studies will be lessened. At the PG level, the semester end examinations scripts are evaluated by two internal examiners in every course (if available within the Institution). This will make our examiners more accountable and responsible.

- Mr. Ashok Adyanthaya, a community leader, always stresses on taking up community oriented projects. This has been in turn communicated to the HoDs and increased trend in taking up the community oriented projects by students is witnessed.

6.5.6 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?

- IQAC had given suggestions to the HODs to make special arrangements for providing additional coaching to the slow learners.
- IQAC has conducted study on the academic growth of the students especially with the slow learners and it is observed that, they could comfortably clear the semester end examinations (SEE) because of remedial classes.
- These measures have also helped in better performance and outputs of disadvantaged sections of society.

6.5.7 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centres, etc.?

There is periodic review of administration and academic department, subject areas, research centres etc.

- At the Institutional level there is AC and GC meeting which are held once in a year. Principal, Vice Principals, Management representatives, and Government nominees etc., are members of GC to review the working of the whole institution and ratify and approve new measures and policies to be adopted.
- There are annual summit meetings held by the management with all HODs, Principal, Vice Principals, Deans, Registrar etc., participating along with the President of the Trust, Finance Officer and other trust members. These meetings discuss the strategic plans of the institution, which includes infrastructural, financial and administration matters of the institution.
- The HODs conduct departmental meetings with their faculty at least twice in a semester to review the developments in the respective departments.
- The Principal conducts meeting with all the administrative departments to review issues related to finance, accounts, purchase, stores and administration of the college.

CRITERION VII: INNOVATION AND BEST PRACTICES

7.1 Environment Consciousness

N.M.A.M. Institute of Technology is very conscious and committed to the environmental issues with regard to the protection, conservation and sustenance of natural resources. The faculty and the students are being sensitized towards environmental issues through mandatory course in environmental science and through continuous orientation programmes. The different sectors of the institution promote conservation of natural resources by implementing different strategies with reference to utilization of water and energy. The essence of conservation is based on the three R principles – Reduce, Reuse and Recycle.



Three R Principle



Green Campus



Litter Free Campus



Waste Management



Segregation of waste



Care Of Nature Group



Rainwater harvesting



Solar Energy

Fig 7.1: Environment Consciousness Practices of NMAMIT

Several awareness programs and Swatch Bharath Abhiyan have been organized through Green cell, NSS and Care Of Nature (C.O.N) group. This has provided a platform to interact and create awareness among students and staff. Continuous efforts are being made to keep the campus and surroundings eco-friendly.

7.1.1 Does the College conduct a Green Audit of its campus?

Yes. The Institution has constituted a committee including external experts to conduct green audit. As per the directions of the committee, new green initiatives/practices are implemented in the campus.

- The college has given utmost importance to eco-friendly environment in the campus and funds are allocated in the annual budget for proper maintenance and beautification of campus.
- The college is located in a village which is surrounded by ever green forest and green habitat. The college campus contains large number of trees and plants to give a pleasant feeling to the staff and students. The green area is about 35% of the total area of campus.
- The college maintains eco-friendly environment and energy conservation in an efficient manner
- The Institution has appointed gardeners to maintain the greenery in the campus.
- Every year in the month of July at least 300 to 400 saplings of different varieties of plants are planted in and around the campus.
- To treat the sewage water, a treatment plants has been installed near boys' hostel premises and treated sewage water is used for flushing the toilets and gardening.

➤ STUDENT AND FACULTY FORUMS

- A Green Cell is constituted in the College in 2014 where the students serve as active volunteers.
- A group called **Care of Nature (C.O.N.)** of students and staff member has been in operation.
- The objective is to spread awareness about our environment and make our campus green and has carried out many eco-friendly tasks in the college relating to Energy, Climate and Air. Social Outreach, Going Green, Conservation of Food, Management of Waste, Saving Water, and Collaborating with the media about spreading the green message is taken up
- Cleaning of the campus '**Shramdaan**' is organized periodically, where in the students of NSS, MBA and Green Cell involving faculty & staff to pick up all the waste around the campus to maintain the cleanliness

➤ CLIMATE AND AIR:

- Awareness was created about the harmful effects of the "open burning of waste".

➤ SOCIAL OUTREACH:

- A quiz is conducted having an 'Environment Theme' for students.
- A debate is organized in which the topic chosen was 'Should there be new nuclear plants in India'.
- A 'Clean Drive' is regularly organized in the campus in collaboration with the NSS and Aura club members.

➤ GREEN:

- A short video highlighting the requirement of green initiatives major issue affecting our planet was made by students.
- Biodiesel saplings are planted in the campus.

➤ WASTE MANAGEMENT

- Posters have been put up in hostel messes and canteen regarding the wastage of food.
- A plan to make our campus zero waste was made. This included suggestions such as the compulsory use of paper bags in place of plastic bags, providing dustbins everywhere and recycling the metals used in the workshop.

- Posters were put up around college and in hostels regarding saving of water.
- Solid waste such as paper and plastic generated in the college campus is segregated and on monthly basis given to a collector.
- Organic waste (food and vegetables) generated in the hostels and canteen is collected by a piggery owner on daily basis.

➤ **SOCIAL MEDIA AND COLLABORATION:**

- A blog of Project C.O.N was started describing the various activities that were taken up.
- The college has taken initiative of social responsibility in using renewable energy like solar energy and Biofuel (Biodiesel)

7.1.2 What are the initiatives taken by the College to make the campus eco-friendly?

- **Energy conservation**
- **Use of renewable energy**
- **Water harvesting**
- **Check dam construction**
- **Efforts for Carbon neutrality**
- **Plantation**
- **Hazardous waste management**
- **e-waste management**
- **Awareness programmes**

The college has taken many initiatives to make the campus eco-friendly

• **Energy conservation**

The following steps are taken for optimum use of electricity and energy conservation:

- Monitoring and switching off of unnecessary A/C, fan and other electrical appliances used in the class-rooms, when the class-rooms or staff-rooms are unoccupied.
- Steam cooking system is used in hostels to reduce cooking time and to conserve energy. This system operates at a pressure of 2kgf and uses LPG gas at a rate of 3 kg per hour. The steam cooking system caters 1200 inmates in the hostel and conserves 36MW hour of electricity.
- To create awareness among the students and effective use of energy an event called 'Wealth of Waste' has been conducted during Tech-Nidarshan (Technical Event) and Anandotsava (Cultural event).
- Incandescent light bulbs are being replaced with CFL bulbs at majority of places 'No Lights Hour' modeled along the lines of 'Earth Hour' was conducted at the Hostels.
- Green Classroom – Bahiranga.
- Natural cross ventilation and lighting systems are implemented in new buildings so that use of electricity can be minimized.
- Lifts consuming less electricity (having lesser power loss in transmission) are fitted in new buildings
- Common Laundry facility
- Use of Solar water heaters in hostel
- Solar lights are used at certain places in the campus.

- **Use of renewable energy**

- (i) **Solar Energy:**

- An Energy Park was established with the help of funding obtained from MNRE- New Delhi.
 - The following Instruments are installed in the Energy Park for demonstration purpose.
 - o Improved chulhas 1 Fixed type Portable
 - o SPV Street lights 74 watts
 - o SPV domestic light 74 watts
 - o SPV lantern 10 watt
 - o Solar water heating system (300 LPD)
 - o Solar Cooker Box type
 - o Solar color TV 150 wp
 - Five Solar Panels, Solar lamps (Street Lights) are present at various location of the campus. Two Solar Lanterns are being used by the maintenance department.
 - Students learn and conduct experiments on solar water heater, solar photo voltaic and wind power plants. Several projects have been accomplished by post graduate students which is directed towards the use of renewable energy
 - Students have done a project on force convective solar flat plate water collector with PSM storage which can store water at high temperature for very long duration
 - The new 3-storey Research and Innovation Center (RIC) of 8000 sq.ft area has a 35-kW rooftop-mounted solar PV panels that power highly efficient DC appliances including fans, lights and air conditioners. This unique net-zero energy solar DC Microgrid is being used as a test-bed for validating novel grid integration strategies of advanced distributed energy sources and storage technologies. Focused research on developing next generation of power electronics interfaces for smart grids, power converters for electric vehicles and renewable energy utilization, and solid-state transformers is being carried out at RIC.

- (ii) **Biofuel**

- Karnataka State Biofuel Development Board (KSBDB) Bengaluru sponsored Biofuel Information and Demonstration Centre (BIDC) has been established at NMAMMIT, Nitte. About 100 litres of Biodiesel produced from this centre is used in few college vehicles, generators, and private crusher owner and also for student's project activities. The seed cake produced during biodiesel production is sold to college staff, garden department and local farmers. From 2015 onward, used cooking oil collected from different hotels of Mangalore area is used for the production of biodiesel.
 - Every year at least three to four UG research projects on biofuel production from various underutilized sources is undertaken by the department of biotechnology. Following are the UG biofuel projects that received KSCST funding.

Table 7.1: Research Projects on Biofuel Production

Faculty	Title of the project	Year
Dr. C. Vaman Rao	Bioethanol production from agricultural lignocellulosic residues using <i>Pichia</i> spp.	2012
Dr. C. Vaman Rao	Ethanol from oil cakes of non-edible oil seeds used in biodiesel production	2012
Dr. C. Vaman Rao	Production of bioethanol from pressed oil seed cakes using <i>Pichia</i> sp.	2013
Dr. Shayama Prasad Sajankila	Synthesis of silver nanoparticles using microbes	2014
Mr. Bharath B. R	Metabolically engineered <i>E. Coli</i> K12 for the production of biofuel: An in silico approach	2014
Mr. Vianayaka B. Shet Dr. C. Vaman Rao	Microwave assisted optimization for releasing fermentable sugars and production of bioethanol from cocoa pod shell	2015
Ms. Sneha Nayak Dr. C. Vaman Rao	Biosynthesis of nanoparticles and their application as catalyst in Biodiesel production	2015
Mr. Sandesh, K Dr. C. Vaman Rao	Production of biobutanol from <i>Saccharum spontaneum</i>	2015

- **Water harvesting**

- The Institution has a network of 'Water Harvesting System' consisting of:
 - * **Percolation pits:** There are ten Percolation pits in and around the campus into which rain water is harvested to charge underground aquifers.
 - * **Percolation ponds:** Two percolation ponds have been constructed in the campus to hold large quantity of rain water.
 - * **Rain Water harvesting:** Roof water from academic buildings is passed through the filter tank to the sump, which is used for domestic purpose.
 - * **Waste Water recycling unit:** The institution has two recycling plants with an installed capacity of 2.5 lakh litres per day. It is designed to treat effluent water from hostel.
 - * Treated and recycled water is used for gardening and flushing of toilets.

- **Check dam construction**

- A bund has been developed to store water during rainy season in order to recharge a huge well.
- Pond created by the bund is able to hold about 10,000 m³ of water. Surface water/ over flows from the percolation ponds are allowed to flow into this pond.
- Construction of this bund has improved the water table around the location.

- **Efforts for Carbon neutrality**

- At NMAMIT, certain steps are followed to reduce carbon emission. They are basically the improvements undertaken to reduce the usage of papers. They are:
 - o Biometric attendance system.
 - o Circulars, notices, student marks reports attendance reports are sent through emails.
 - o Nitte news, magazine of the college is mailed and also put in the website.
 - o Preparation of the question papers through soft copies.
 - o Smart card system for students.
 - o Results of students sent through message to parents.

- Promoting utilization of Biodiesel produced at BIDC by college vehicle and private buses to reduce the environmental pollution.
- College is providing bus facilities to all the students and staff members thereby encouraging them not to use their private vehicles.
- Students are not allowed to use powered vehicles in the college campus and in hostels to reduce noise and air pollution inside and campus.
- **Plantation**
 - To create awareness about the Biodiversity and greenery, large areas of the college are covered with plantations and around 20 acres of land is left as forest.
 - More than 300 saplings such as Wild Jack fruit, Honge, Guava, Mahagani, Kokum, and Teak etc. are planted every year.
 - Annual planting of 300 biofuel saplings in the college campus is a regular practice. Biofuel plantlets such as Simarouba, Honne, Hippe and Amoor are planted by Biotechnology Engineering Department with the help of Biofuel I & D Centre Nitte.
- **Hazardous waste management**
 - Institute does not generate any hazardous waste in the campus.
 - The ladies hostel has been provided with incinerator to dispose of waste generated in the hostel.
 - Students create awareness among their peers through seminars and group activities
- **e-waste management**
 - Electronic goods are put to optimum use. E-waste generated from Non-working computers, monitors and printers are discarded through proper channel by contacting a recycling agent.
 - Management has been donating old working computers and other usable electronic equipment to various schools that are run by the management.
 - Students create awareness among their peers through seminars and group activities.
- **Awareness programmes, project works and research publications:**
 - **Awareness programmes conducted**

Table 7.2: Awareness programmes conducted

Sl No.	Programme Conducted	Date	Participants
1	Training-cum-workshop on “Water Security and Sustainability Issues” Water sustainability and Rainwater harvesting	24-08-2016	60 PDOs & engineers
2	Swachh Bharat Abhiyan Programme was organized on the occasion of Mahatma Gandhiji and Lal Bahaddur Shastri Jayanthi.	01-10- 2016	NSS Students
3	Vanya-Jeevi Saptaha Celebration	08-10-2016	NSS Students
4	A lecture and Training on energy and water conservation, waste water management	18 th May to 18 th August, 2015	30 rural unemployed youth and women under Deen Dayal Upadaya Grameena Kaushalya Yojane

5	Various initiatives of the government for waste segregation and disposal	05-12-2014	Mr. Rayappa, Karkala Municipality Chief Officer and green cell staff and student members

➤ **Projects works carried out by students**

Table 7.3: Projects works carried out by students:

Sl No.	Programme Conducted	Year	Programme
1	E ³ (Energy efficient, Economical and ecofriendly) Shelter	2017	UG
2	Rejuvenation and Replenishment Of 15th Century Ramasamudra Lake For Sustainable Development And Heritage Restoration	2017	UG
3	Conservation of Energy and water in Green Building from Solar Energy and Atmospheric air	2016	UG
4	Coconut Shell Building Blocks Represented in state level Project seminar & Exhibition	2016	UG
5	E ³ (Energy efficient, Economical and ecofriendly) WOBO Shelter	2016	UG
6	“Blue- and grey-water Footprint in Nitte Community, India, Post-Doctoral Fellowship (Dr. S.O. Ojoawo)	2015	PDF
7	Integrated Saline Water Ingression Studies along Padubidri-Surathkal Coast using Geospatial Tools	2014	UG
8	Environmental Audit of Nitte Campus	2014	UG
9	Water conservation techniques for Nitte campus	2013	UG
10	Targeting and Evaluating Groundwater Reserves in Hard rock terrains using Integrated Geospatial Mapping for sustainable Development	2013	UG
11	Sustainable Watershed Development studies for effective Management of micro watersheds and traditional rain water harvesting structures in rural areas of Coastal Dakshina Kannada Districts, Karnataka	2012	UG

➤ **Environment related research publications:**

1. Thangamani R. and Radhakrishnan K. (2016) “Water Quality Index of Karkala Municipality, Karnataka” International Journal of Innovative Research in Science, Engineering and Technology, v.05, Spl. Issue 9, pp.155-160.

2. Mr. Kumarswamy T (B.E) secured 3rd place for paper presentation entitled “Conservation of Energy and water in Green Building from Solar Energy and Atmospheric air” at International conference on Sustainable Energy Technologies for Smart & Clean Cities, held on July 27 – 29, 2016, IIT-Thirupathi, Andhra Pradesh, India.
3. Dr. Udayakumar G, Energy performance of a building in Nitte Campus. International Journal of Technical Research and Applications(IJTRA) Volume 4/May-June 2016
4. Udayakumar, G, Pushparaj Naik. “Phytoremediation of phosphorus and nitrogen with Canna x generalis reeds in domestic wastewater through NMAMIT constructed wetland.Elsvier Aquatic Procedia 4 (2015) 349 – 356
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6. S.O. Ojoawo and G. Udayakumar, Susceptibility of Some Selected Nitte Municipal Wastewater Sources to Trace Metals Pollution Journal of Computational Water, Energy, and Environmental Engineering (CWEEE) Vol 3, No 3, July 2014.
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7.2 Innovations

7.2.1 Provide details of innovations introduced during the last four years which have created a positive impact on the functioning of the College.

➤ Innovation –I: Renewable Energy Concept:

- Since 2009, the department of Biotechnology Engineering under the “**Renewable Energy Concept**” has focused its attention on research and development in Biofuels of both types, i.e. bioethanol and biodiesel.
- Undergraduate students have been given research projects on production of bioethanol from underutilized lignocellulosic residues.
 - Most of these undergraduate projects because of novelty were recognized by Karnataka State Council for Science and Technology (KSCST) and were funded under Student Project Proposals (SPP) scheme.
 - The Biofuel projects because of novelty were recognized by **Federation of Karnataka Chamber of Commerce and Industry (FKCCI)** and were awarded cash prize of **Rs. 50,000** each in the year 2009 and 2010.
- **Karnataka State Biofuel Development Board** has sanctioned **Biofuel Information Demonstration Center** for Udupi district with an annual funding of **Rs. 7.5 lakhs** for sustenance of the center and **Rs. 10.5 lakhs** worth biodiesel production plant of 50 liters capacity/day in the year 2011.
- For the innovative research work carried out on biofuel by the department of Biotechnology Engineering, **VGST (Vision Group of Science and Technology, Govt. of Karnataka)** under the scheme of **Centre for Innovation in Science and**

Engineering Education funded **Rs. 14.78 lakhs** for Biofuels Research for the period of three years (2013-2016).

- The department also received a grant of **Rs. 40,000 from VGST** (Vision Group of Science and Technology, Govt. of Karnataka) for Minor research project under the scheme of **TECHNOLOGY RELATED INNOVATIVE PROJECTS (TRIP – 2012 -13)** titled **“Production of bioethanol and pigments from glycerol-A byproduct of biodiesel by Rodotorula glutinis”** for the undergraduate students.

➤ **Innovation-II: Micromachining, condition monitoring and vibration Analysis**

- Under the Department of Mechanical Engineering, a “Micromachining” research centre actively engaged in several funded research projects from external agencies.
- A separate lab for “Condition Monitoring and vibration analysis” provides the facility for research.
- The research project posters covering these areas were showcased in the prestigious “IMTEX” exhibition held at Bangalore.
- Amongst several National level R&D Institutes and organizations including IITs, our Institute was recognized as one among promising R&D project centre.

➤ **Innovation III: Karnataka New Age Incubation Network (NAIN) NMAMIT**

- Karnataka New Age Incubation Centre is the umbrella body of ICTSDS, Dept. Of IT, BT and S&T, Government Of Karnataka for nurturing and overseeing innovation and entrepreneurship in NMAM Institute of Technology
- It is a platform for nurturing, encouraging and developing innovation and entrepreneurial skills among students, research scholars and alumni.
- The center provides and facilitates budding entrepreneurs to start a business venture into viable business propositions with minimum risks.
- The institution has received funding of Rs 3,00,000 each for 10 business proposal/projects for batch-1 during 2014-15. The projects have been successfully completed.

➤ **Innovation IV: ELIXIR**

- Elixir – A forum of hobby projects department of E&E encourages students to implement the theoretical concepts by making prototype in the lab under the guidance of faculty members.
- These projects are exhibited once in a year for the benefit of all the students of the college in the college premises.

➤ **Innovation V: MicroLABLet**

- MicroLABLet: The E&E Engineering department has developed a microcontroller study aid kit (MicroLABLet) as an Innovative product.
- All laboratory experiments can be conducted by interfacing the unit to laptop via USB.

➤ **Innovation VI: Aero Modeling Lab and Robotics Lab**

- Aero Modeling Lab and Robotics Lab, the interdisciplinary laboratory is set up by the Department of Mechanical engineering.

- Robotics Lab focuses on the development of autonomous Robots especially in the field of Agriculture and other applications.
- The students have built Coconut climber and plucker robot and Rubber tapping robot.
- Aero modelling lab conducts workshops on building Glider models and models of Remote control Aircrafts are carried out every year with more than 100 students participating in them.

➤ **Innovation VII : Learning Management System, Management In action and Professional Growth and Individual Development**

The department of MBA has developed and implemented the following

- Learning Management System (LMS): Introduced Sakai based LMS to ease course delivery and accessibility to students on course material.
- Management In action (MIA): MIA was introduced over a phase of 2 semesters – second and third, where the students would study about the working of one company keeping the production, R & D, marketing , and all other management functions.
- Professional Growth and Individual Development (PGID): One credit course is introduced in each semester to evaluate students’ participation and contribution in extra and co-curricular activities.

➤ **Innovation VIII: Active learning Laboratory**

- Department of Mechanical engineering has initiated an active leaning laboratory to enhance the students’ leaning.
- This laboratory enhances learning based on understanding among students’ which consists of leaner activity and faculty connecting activity to abstract concept.

7.3 Best Practices

7.3.1 Give details of any two best practices which have contributed to better academic and administrative functioning of the College.

➤ **Best Practice-I**

- **Title:** Bloom’s Taxonomy Levels incorporated for Students Learning Evaluation.
- **Objective:**
To allow educators to evaluate learning of students systematically.
- **Context :**
The goal of every faculty is to guide students to learn fundamental concepts and also improve thinking skills. Curriculum questionnaires must be framed, which would facilitate students to improve their thinking skills. Improving thinking skill is a difficult task and one of the ways to achieve this is to frame questionnaires using Bloom’s Taxonomy. Bloom’s Taxonomy helps the faculty to assess the students in a systematic approach which involves students performing successfully at each level in a systematic manner.
- **Practice:**
The Revised Bloom’s Taxonomy is adopted to frame questions for Mid Semester Examination (MSE) and Semester End Examination (SEE). Based on the taxonomy for assessment, questions are mapped with the taxonomy table which shows the various Bloom’s Taxonomy Levels (BTL). All faculty members are

trained at department levels to practice setting Question papers as per various BTL.

- **Evidence of Success:**

The implementation of classifying questions based upon BTLs has resulted in improvement in students learning. The students have clearly understood the concept and have taken up academics seriously as they have to improve upon their higher order thinking skills to get good grades in the examinations.

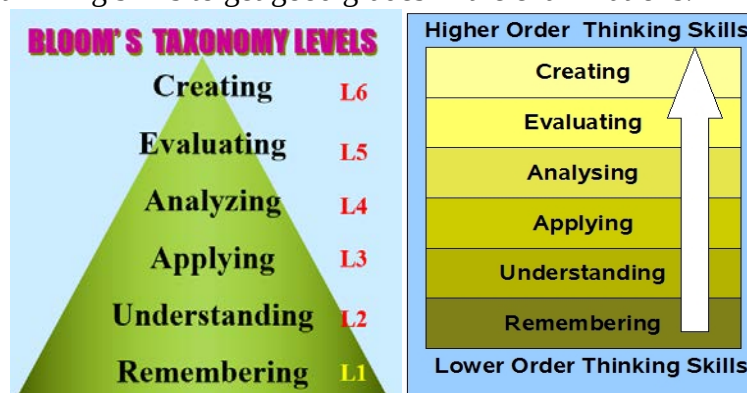


Fig 7.2: Bloom's Taxonomy Levels

- **Problems Encountered and Resources Required**

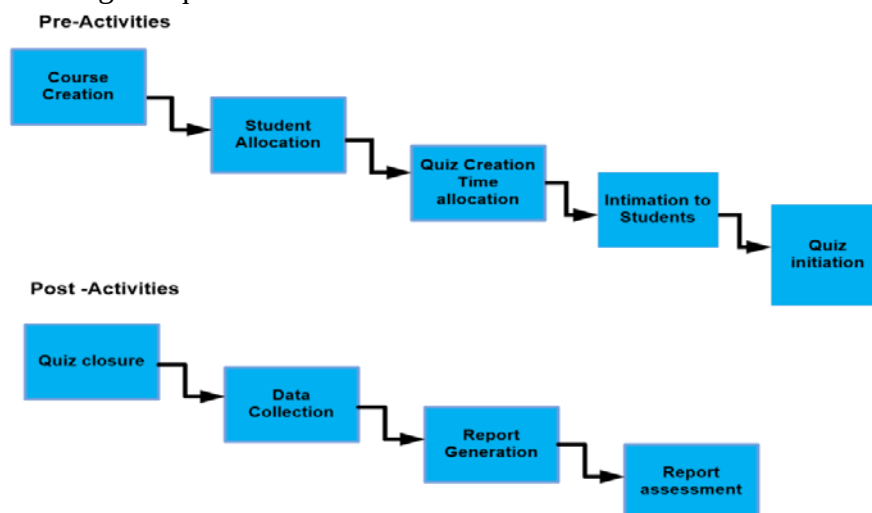
- o Adjusting to new practice (Faculty and students) – Initially both students and faculty had difficulty in adapting to new practice. With constant persuasion, training and by understanding the importance, all are well versed with the system.

➤ **Best Practice-II**

- **Title:** Introduction of Employability Skill Development a mandatory non-credited course.
- **Objective:** To achieve enhancement in success rate of campus placements.
- **Context:** In the present scenario it is extremely important for any individual to have a good communication skill which is important in placement. In addition to the regular course projects, dissertations and extended essays the training in soft skills give a strong plus point when students perform in Job interviews.
- **Practice:** Employability Skills Development (ESD) is introduced for all UG students during 5th and 6th semester and they are trained in soft skills for enhancing success rate of campus placements. The students are given training in attending online tests and practice tests are conducted online for testing the students' capabilities. The students are trained and allowed to take up practice tests. The capability of students has really improved over a period of time during two semesters. Placed final year students train the third year students under the supervision of placement department in a program called "CRACK THE CAMPUS". The course quiz is uploaded on regular basis to the Moodle. The students are allotted a deadline to attempt to the quiz. **The students have attended SEE online and passing in ESD is mandatory in view of registering for campus placement.**
- **Evidence of Success:** All the Efforts in implementing ESD as mandatory non-credited course have resulted enhancing the skill set of students and quickness in attempting the questions in placement tests. The enhancement of Success rate of campus placements is required to be witnessed in the academic year 2016-17.

- **Problems Encountered and Resources Required**

- o Exploring the features of Moodle/LMS is time consuming. More learning curve needed to faculty members.
- o Challenges in managing user id/password.
- o Educating user to get acquainted with Moodle.



The following **best practices** inculcated at NMAMIT are worth mentioning.

➤ **Best Practice III: Environmental Consciousness initiatives**

The college has Environmental Consciousness policy and hence carries out steps to make the campus green. College has a green cell.

Activities include:

- Rain Water harvesting,
- Planting saplings,
- Waste management,
- Effluent treatment and Use of treated water for gardening.
- Use of Biofuels
- Maintaining garden and lawns green.

➤ **Best Practice IV: Creating a sense of volunteering among the students.**

Right from the day of orientation program, students are encouraged to take up volunteering in various college level programs. Identified ones are made to take up some community related work. This helps the students to develop their overall personality and develop concern about the societal problems.

➤ **Best Practices V: Computer based Student Facilitation System**

Salient Features are

- Online student information system & information KIOSKs in the campus
- Web enabled attendance details
- Web enabled result announcement
- Instant messaging service to the parents
- Online library accession / reservation
- Access to e-learning resources
- Digital notice board
- Creating video repositories of our own faculty members handling the classes has started 2 years back.

➤ **Best Practice VI: News Letters**

The following News Letters are being published regularly to make the entire system very transparent.

- Quarterly NMAMIT News Letter
- TEQIP News Letter
- Quarterly NET News Letter
- Annual College Magazine
- Annual college report
- Financial Report
- Mandatory disclosures on college website

➤ **Best Practice VII: Focused Industry Institute Interactions**

- Industry institute collaboration across department on identified parameters has been studied.
- An initiative “Mission 360 Degree-Collaboration through synergy” among inters & intra departments and the stake holders have been introduced.
- Format for collaborative documents are streamlined with more focus on standardisation.
- The industries are being approached in a structured way to improve interactions across the departments’ viz. industrial visits, industrial projects, curriculum design special lectures, joint laboratory etc.

➤ **Best Practice VIII: Standardization of PowerPoint Template for the official presentations**

- Power point presentation is a powerful tool in creating clear, well-structured presentations that have a strong visual impact on the viewers.
- A guide book on the standard power point template for the official presentations by the head of the Institution and head of the departments with various features have been prepared, circulated and the same is being used.

➤ **Best Practice IX: Condensed Version of NAAC – Assessment and Accreditation**

- Accreditation is a phenomenon which ensures quality assurance involving all the stakeholders.
- It becomes necessary that all the constituents of the Institution should not only be kept fully informed but also be as closely involved.
- In view of the above, a condensed version of NAAC – Assessment and Accreditation – “What You Need to Know” has been prepared and circulated among the faculty members and staff members of the Institution.

➤ **Best Practice X: Event Management System**

- It is important to have a centralized system and process to enhance the effective usage of general facilities available in the institution for various activities conducted by the departments.
- In view of the above, software on “Event Management System” has been developed by the Dept. of Computer Applications and the same is being used.

SECTION D

EVALUATIVE REPORT OF THE DEPARTMENT

SECTION D
EVALUATIVE REPORT OF THE DEPARTMENT
DEPARTMENT OF BIOTECHNOLOGY

1. Name of the Department & its year of establishment

Biotechnology Engineering, 2002

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

- UG: B.E (Biotechnology Engineering (BTE)).
- Ph.D. in Biotechnology under VTU Belagavi: Currently 8 research scholars have registered.
- M.Sc. Engineering by Research:
- M. Tech in Industrial Biotechnology started from 2015-16.

3. Interdisciplinary courses and departments involved.

Nil

4. Annual/ semester/choice based credit system.

Choice Based Credit System.

5. Participation of the department in the courses offered by other departments

- **Participation of other department Students in the courses offered by the department of BTE:**
 - o **Biology for Engineers**-compulsory, non-credit course offered for all First year B.E students.
- **Following are the open electives offered by our department to students of other departments.**

Sl. No	Open Elective Course	Course Code
1.	Nanotechnology	BT8X05

- **Following are the open electives offered by other departments to students of BTE. The classes are handled by respective department faculty.**

Sl. No	Open Elective Course	Course Code
1.	Corrosion Science	CH8X31
2.	Programming with C++	CS8X14
3.	Essentials of Information Technology	CS8X15
4.	Consumer Electronics	EC8X18
5.	Non-Conventional Energy Systems	EE8X10
6.	Intellectual Property Rights	HU8X03
7.	Professional & Cognitive Communicative	HU8X24
8.	Operating Systems	IS8X27
9.	Graph Theory	MA8X01
10.	Linear Algebra	MA8X02
11.	Industrial Pollution Control	ME8X08
12.	Management operations and Entrepreneurship	ME8X28
13.	Environmental Impact Assessment	CV8X07
14.	Information to Geoinformatics	CV8X30

- o Final year B. E students have carried out major project in collaborative with department of civil engineering for 'assessment of water quality and strengthening of cement concrete using microbes or cellulose fibres'.
- o The faculty of the department also engage the lectures of 'Environmental Impact Assessment' open elective offered by Dept. of Civil Engineering.

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professors	2	3
Associate Professors	4	3
Asst. Professors	7	8

7. Faculty profile with name, qualification, designation, specialisation (D.Sc./D.Litt./ Ph.D. /M.Phil. etc.)

Sr. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students Guided for the last 4 years
1	Dr. C. Vaman Rao	M.Sc., Ph.D.	Professor & Head	Biochemistry	36	Presently guiding 4 students
2	Dr. Ujwal P.	M.Sc., Ph.D.	Professor	Plant tissue culture, phytoremediation	14	Presently guiding 3 students
3	Dr. Vidya S. M.	M.Sc., Ph.D.	Professor	Biotechnology	13	Presently Guiding 3 students
4	Dr. Chetan D. M	M.Sc., Ph.D.	Associate Professor	Microbiology	14	
5	Dr. Shyama Prasad Sajankila	M.Sc., Ph.D.	Associate Professor	Nanotechnology, Cell & Mol. Biol	14	Presently guiding 2 students
6	Mr. Venkatesh Kamath H.	M.Tech. I, (Ph.D.)	Asst. Prof.	Biotechnology, Chemical Plant Design	9	
7	Dr. Anil Kumar H. S.	M.Sc., Ph.D.	Associate Professor	Biochemistry	13	
8	Mr. Vinayaka B. Shet	B.E.,M.Tech (Ph.D.)	Asst. Prof.	Industrial Biotechnology	9	
9	Dr. Bharath B.R.	M.Sc., Ph.D.	Asst. Prof.	Bioinformatics and systems biology	7	
10	Mr. Sandesh K.	B.E.M.Tech. (Ph.D.)	Asst. Prof.	Chemical Engineering	7	
11	Ms. Sneha Nayak	B.E.M.Tech. (Ph.D.)	Asst. Prof.	Environmental Engineering	3	

12	Ms. Louella C. Goveas	B.E., M.Tech. (Ph.D.)	Asst. Prof.	Industrial Biotechnology	3	
13	Ms. Harshitha M.J.	B.E., M.Tech. (Ph.D.)	Asst. Prof.	Industrial Biotechnology	3	
14	Ullal Harshini Devi	M.Sc.	Asst. Prof.	Biotechnology	3	

8. Percentage of classes taken by temporary faculty – programme-wise information
Nil

9. Programme-wise Student Teacher Ratio: 15 : 1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Technical and Administrative Staff Sanctioned	Filled
8	8

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Name of the PI & Co-PI	Granting agency	Title of the Project	Grant amount in Rs.	Duration	Status
Dr. Vidya S. M	Board of Research in Nuclear Science, Dept. of Atomic Energy	Investigation on the role of probiotic exopolysaccharides in the prevention of radiation induced injury	22,13,750	2014-2017	Ongoing
Dr. C. Vaman Rao	Karnataka State Biofuel Development Board, Govt. of Karnataka	Biofuel Information and Demonstration, Training and publicity (sustenance grant)	7,50,000/yr	2011-	Ongoing
Dr. C. Vaman Rao	Karnataka State Biofuel Development Board, Govt. of Karnataka	Biofuel Information and Demonstration Center (Instruments for biodiesel production)	10,50,000	2011-	Ongoing
Dr. C. Vaman Rao & Dr. Ramya	Dept. of Biotechnology, Ministry of Science and Technology, New Delhi	Attenuation of Pseudomonas aeruginosa virulence by dietary phytochemicals from vegetables as quorum sensing inhibitors. (In collaboration with Nitte University)	18,41,000	2014-2017	Ongoing

Dr. C. Vaman Rao & Dr. Chetan D. M	Govt. of Karnataka, New Age Incubation Project under IT-BT	Development of Biofertilizers using Rhizobium and Micorhiza	3,00,000/-	2014-17	Ongoing
Dr. C. Vaman Rao & Dr. Anilkumar	Govt. of Karnataka, New Age Incubation Project under IT-BT	Development of Bioadsorbents for the treatment of effluents	3,00,000/-	2014-17	Ongoing

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

Name of the PI & Co-PI	Granting agency	Title of the Project	Grant amount in Rs.	Duration	Status
Dr. Vidya S.M & Dr. C. Vaman Rao	Board of Research in Nuclear Science, Dept. of Atomic Energy	“In vivo studies on comparative and synergistic radio protective effect of stem bark extracts of Ficus racemosa, Madhuca indica and Pterocarpus marsupium based on ethnomedicinal knowledge to cancer treatment	16,29,788	2010-2013	Completed
Dr. C. Vaman Rao	Vision Group of Science & Technology, Govt. of Karnataka	Production of bioethanol from underutilized lignocellulosic residues	30,00,000	2013-2016	Completed
Dr. Vidya S.M & Dr. C. Vaman Rao	Dept. of Biotechnology, Ministry of Science and Technology	Production and distribution of tissue culture plantlets of Banana var. “Grand Naine” for the economic empowerment of rural marginal SC/ST farmers and weaker sections of Udupi Dist.	24,00,000	2012-2015	Completed
Dr. C. Vaman Rao	Karnataka State Biofuel Development Board, Govt. of Karnataka	Biofuel Information and Demonstration, Training and publicity (sustenance grant)	7,50,000 /yr	2011-date	Ongoing
Dr. C. Vaman Rao	Karnataka State Biofuel Development Board, Govt. of Karnataka	Biofuel Information and Demonstration Center (Instruments for biodiesel production)	10,50,000	2011 - date	Ongoing

Dr. C. Vaman Rao	KSCST-grant for Student Research Project	Production of bioethanol from pressed oil cake using <i>Pichia stipitis</i>	8000	2012	Completed
Dr. Chetan D. M	KSCST-grant for Student Research Project	Production of hyaluronic acid from solid waste microbe	5000	2012	Completed
Dr. C. Vaman Rao	KSCST-grant for Student Research Project	Ethanol from oil seed cakes of non-edible seeds used in Biodiesel production	8500	2012	Completed
Dr. C. Vaman Rao	KSCST-grant for Student Research Project	Bioethanol production from agricultural lignocellulosic residues using <i>Pichi Sp.</i>	10000	2012	Completed
Dr. C. Vaman Rao & Mr. Venkatesh Kamath	KSCST-grant for Student Research Project	Production of Biodiesel from unconventional feed atock of Udupi dist.	9000	2012	Completed
Dr. C. Vaman Rao	Vision Group of Science & Technology, Govt. of Karnataka under the scheme of Technology Related Innovative Project (TRIP-2013)	Production of bioethanol and pigments from glycerol_A byproduct of biodiesel by <i>Rhodotorula glutinis</i> .	40,000	2013	Completed
Dr. Shyam Prasad Sajnakila	KSCST-grant for Student Research Project	Synthesis of silver nanoparticles using microbes	3500	2013	Completed
Dr. Bharath B. R	KSCST-grant for Student Research Project	Metabolically Engineered <i>E. coli</i> K12 for the production of biofuel: An in-silico approach	5000	2013	Completed
Dr. C. Vaman Rao	Vision Group of Science & Technology, Govt. of Karnataka under the scheme of Technology Related Innovative Project (TRIP-2014)	Biosynthesis of silver and gold nanoparticles using <i>Santalum album</i>	40,000	2014	Completed
Dr. C. Vaman Rao	CSIR Fellowship for Research Scholar	A study of antivenom property of root extract of <i>Coix lacrymajobi</i> on Indian snake venoms	2,36,000/-	2013-14	Completed

Dr. Vidya S. M	Board of Research in Nuclear Science, Dept. of Atomic Energy	Investigation on the role of probiotic exopolysaccharides in the prevention of radiation induced injury	22,13,750	2014-2017	Ongoing
Dr. C. Vaman Rao & Dr. Ramya	Dept. of Biotechnology, Ministry of Science and Technology, New Delhi	Attenuation of <i>Pseudomonas aeruginosa</i> virulence by dietary phytochemicals from vegetables as quorum sensing inhibitors. (In collaboration with Nitte University)	18,41,000	2014-2017	Ongoing
Dr. C. Vaman Rao & Dr. Chetan D. M	Govt. of Karnataka, New Age Incubation Project under IT-BT	Development of Biofertilizers using <i>Rhizobium</i> and <i>Micorhiza</i>	3,00,000/-	2014-17	Ongoing
Dr. C. Vaman Rao & Dr. Anilkumar	Govt. of Karnataka, New Age Incubation Project under IT-BT	Development of Bioadsorbents for the treatment of effluents	3,00,000/-	2014-17	Ongoing
Mr. Sandesh K	Vision Group of Science & Technology, Govt. of Karnataka under the scheme of Technology Related Innovative Project (TRIP-2015)	Development of immobilized reactor for cellulose production	30,000/-	2015	Completed
Mr. Venkatesh kamath	KSCST-grant for Student Research Project	Ethanol Production from pure glycerol using <i>Bacillus cereus</i>	15,000	2015	Completed
Ms. Harshitha J	KSCST-grant for Student Research Project	Biooil production from non-edible oil seed cake using oleaginous yeast- <i>Rhodotorula glutinis</i>	9,000	2015	Completed
Dr. C. Vaman Rao	KSCST-grant for Student Research Project	Microbial Bioremediation of Effluents	5000	2015	Completed
Mr. Vianayaka B. Shet Dr. C. Vaman Rao	KSCST-grant for Student Research Project	Microwave assisted optimization for releasing fermentable sugars and production of bioethanol from cocoa pod shell	6000	2016	Completed

Ms. Sneha Nayak Dr. C. Vaman Rao	KSCST-grant for Student Research Project	Biosynthesis of nanoparticles and their application as catalyst in Biodiesel production	7500	2016	Completed
Mr. Sandesh, K Dr. C. Vaman Rao	KSCST-grant for Student Research Project	Production of biobutanol from Saccharum spontaneum	11,000	2016	Completed
Dr. Anilkumar H. S	Govt. of Karnataka, New Age Incubation Project under IT-BT	Conversion of waste paper into useful bioproducts	3,00,000	2016-2019	Ongoing
Dr. C. Vaman Rao	Govt. of Karnataka, New Age Incubation Project under IT-BT	Development of value-added products from Areca nut(Areca catechu)	3,00,000	2016-2019	Ongoing
Total Grants Received till date:			158 lakhs		

13. Research facility / centre with

State recognition:

- VTU, Belagavi (Govt. Of Karnataka) for Ph. D programme.
- Center of Innovative Science and Engineering Education (CISEE)
- VGST (Vision Group of Science and Technology, Govt. of Karnataka) under the scheme of Centre of Excellence for Innovation in Science and Engineering Education, funded the department for Biofuels Research.
- Karnataka State Biofuel Development Board Bengaluru (Govt. of Karnataka) has recognized the department as Centre for Biofuel Information and Demonstration Centre for Udupi district.

14. Publications:

- **Number of papers published in peer reviewed journals (national / international) by faculty and students.**

Year	Journal Publications
	National/ International
2011	8
2012	7
2013	14
2014	8
2015	7
2016	13
Total	57

- **Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.)**

Total Number of Publications: **63** (25 national and 38 international since 2011)

- **Monographs:** Nil

- **Chapters in books edited/Chapters in Books**

Dr. C. Vaman Rao: Three times in Encyclopaedia of Toxicology, **2013**
Elsevier's USA

- **Books Edited:** Nil
- **Books with ISBN/ ISSN numbers with details of publishers:** 13

Name	Name of the book with publisher detail
Dr. C. Vaman Rao	1. Immunology-3rd Ed. (In Press) (2016). (ISBN-978-81-8487-564-5) Narosa Publishing House, New Delhi 2. Immunology-Alpha Science, UK (ISBN 1-84265-253-2) 3. Immunology-A Text Book- 2nd Ed. 4. (ISBN: 978-81-7319-662-1) Narosa Publishing House, New Delhi. In press
Dr. Chetan D. M	1. Health and Pharmaceutical Biotechnology (ISBN-978-81-7008-990-2) Laxmi Publications – New Delhi 2. Molecular Biology (ISBN: 978-81-8986-635-8)IK International, New Delhi 3. Key words based: Biology: Multiple Choice Questions (MCQs) For NEET and Other Medical Entrance Examinations. New Delhi Publisher 2017, ISBN: 978-93-85503-70-2 4. Chapter wise Biology: Multiple Choice Questions (MCQs) For NEET and Other Medical Entrance Examinations Blue Rose Publisher 2017, ISBN:978-93-86126-66-5 5. Chapter wie Chemistry: Multiple Choice Questions (MCQs) For NEET and Other Medical Entrance Examination Blue Rose Publisher 2017, ISBN:978-93-86126-85-6 6. A TO Z Biology, General Multiple Choice Questions (MCQs) for Staff Selection Commission, Exams like IAS,IPS,IFS,IRS,NDA, and for Joint entrance examinations (JEE) Blue Rose Publisher 2017, ISBN: 978-93-86126-32-2 7. A TO Z Chemistry, General Multiple Choice Questions (MCQs) for Staff Selection Commission, Exams like IAS,IPS,IFS,IRS,NDA, and for Joint entrance examinations (JEE) Blue Rose Publisher 2017, ISBN: 978-93-86126-67-2
Dr. Shyama Prasad Sajankila,	Manipal Laboratory Manual for Biotechnologists (Manipal University Press), ISBN:978-93-82460-02-2
Dr. Anil Kumar H.S. and Ramakrishna B	Fundamentals of Intellectual Property Rights (ISBN 978-1-946556-31-8) Notion press, Chennai, 2017

Citation Index; SNIP /SJR/ Impact factor and H Index

Name	Citation Index (Cumulative)	Impact factor	H Index
Dr. C. Vaman Rao	602 (All), 262 since 2010	22 (All), 08 since 2010	14 (All), 09 since 2010
Dr. Ujwal P.	02	5.12	01
Dr. Vidya S. M.	524	0.1-2.78	12
Dr. Chetan D. M	21	00	03
Dr. Shyama Prasad Sajankila	202	05	06
Mr. Venkatesh Kamath H.	46	3.35	02
Mr. Anil Kumar H. S.	22	1.27-2.0	02
Mr. Vinayaka B. Shet	Nil	Nil	Nil
Mr. Bharath B.R.	92	3	04

Mr. Sandesh K.	33	1	02
Ms. Sneha Nayak	10	0	01
Ms. Louella C. Goveas	11	0	02
Ms. Harshitha M.J.	10	0	01

15. Details of patents and income generated

Sl. No.	Name of the Patentee	Type of a Patent	Title of the Patent	Year of Application	Status-Secured/Filed
1	Dr. C. Vaman Rao	Process patent	Bioethanol production from waste biomass	30/9/2009	2373/CHE/2009 (Patent filed)
	Dr. C. Vaman Rao	Process patent	Bioethanol production from waste biomass	30/9/2012	8976/RQ-CHE/2012 (Patent Examination)
2	Mr. Vinayaka B. Shet	Process Product patent	Wine Fermentation	18/12/2012	5285/CHE/2012 Patent filed
3	Dr. Ujwal P	Product Patent	Biomass Estimation	Oct 2014	4435/CHE/2014 Patent filed
4	Mr. Vinayaka B. Shet, Ms. Sneha Nayak Dr. C. Vaman Rao	Product Patent	Biosynthesis of Nanoparticles	Oct 2014	4383/CHE/2014 Patent filed
5	Dr. Vidya S. M	Process Patent filed in USA	Super sensitive stable gold nanoparticles	3 rd Apr 2015	14/544,897 (International patent filed)
6	Dr. C. Vaman Rao, Mr. Rajesh Dr. Bharath, Dr. Ishwar Bhat	Process and Product patent	Ethanollic root extract of Coix lacryma-jobi as an antidote to snake venom-Molecular docking studies prove inhibition of activity of three finger toxin and pectinase A2	13 th June 2016	E-101/38057/2016-CHE
7	Dr. C. Vaman Rao, Mr. Rajesh Dr. Ishwar Bhat	Process and Product Patent	Aqueous and ethanollic root extract of Coix lacryma-jobi as an antidote to snake venom	13 th June 2016	E-101/38058/2016-CHE

16. Areas of consultancy and income generated

Research oriented Testing works are conducted in Instrumentation Lab. Tests are being conducted for samples from K. S. Hegde Medical College & Pharmacy College of the same trust and hence no generation of revenue.

17. Faculty recharging strategies.

- 2012- Seminar cum Workshop on Therapeutic counselling for engineering teachers.
- 2013- Workshop cum seminar on Effective leadership for excellence to Professors, Assoc. Profs and Asst. Profs GIL.
- 2013- Seminar cum Workshop on Therapeutic counselling for engineering teachers.
- 2013- Workshop cum seminar on Strategic leadership for excellence to Professors and Assoc. Profs.
- 2013- Global Leadership for Excellence document preparation for Principal, Vice Principals, Professors, Deans.
- 2015 – Research methodologies and latex, organized by VTU e-Learning Centre, Mysore at NMAMIT , Nitte, 2nd to 4th Sept , 2015
- 2016 – IQAC workshop organized by NMAMIT, Nitte on 29th and 30th July

18. Student projects**a) Percentage of students who have done in-house projects including inter departmental / programme.**

100% every year

b) Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories / Industry/ other agencies.**PG students**

Anthem Bioscience, Bengaluru	- 1 student
SABMiller Breweries-Hyderabad	- 1 student
Theramyte- Bengaluru	- 1 student

19. Awards / recognitions received at the national and international level by**• Faculty:**

Faculty	Conference Name	Organized by	Date	Award
Mr. Venkatesh Kamath	State level competition of UG projects organized by KSCST	KSCST-Bengaluru	2011	Best project of the year award
Mr. Venkatesh Kamath & Dr. C. Vaman Rao	State level competition of UG projects organized by KSCST	KSCST-Bengaluru	2012	III Prize
Ms. Louella Concepta Goveas	7 th International Food Convention (IFCON-2013) on NSURE – Healthy Foods organized by the Association of Food Scientists and Technologists	CSIR CFTRI, Mysore	18 – 21 st December, 2013	Best Poster (Oral)
Ms. Sneha Nayak	National Convention of Metallurgical and Materials Engineering & National Seminar on Multifunctional and Adaptive Materials	Bangalore	6-7 th February 2014	Best Poster Award
Dr. C. Vaman Rao and Ms. Louella Concepta	International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE-2015)	National Institute of Technology, Warangal	20-21 March, 2015	First prize

Goveas				
Dr. C. Vaman Rao and Ms. Louella Concepta Goveas	National level competition organized by “Joy of Engineering Design and Innovation (JED-I)-2015”	Indian Institute of Science, Bengaluru	22 nd June 2015	First Prize
Mr. Venkatesh Kamath	State level competition of UG projects organized by KSCST	KSCST-Bengaluru	2015	Best project of the year award

• **Doctoral / post-doctoral fellows:** Nil

• **Students:**

• **UG-Students presentation in National and International Conferences**

Year	No. of Papers	Awards
2016-17	12	I, II, III Prize
2015-16	15	II Prize
2014-15	08	I and II Prize
2013-14	03	I and II Prize
2012-13	Nil	Nil
2011-12	20	I, II, III Prize
Total	58	

- i) **First Prize** was awarded to a paper on “**Value Added Byproducts from Waste Paper**” presented by Ms. Madhushree, Ms. Maneesha Shetty, Ms. Sravya B. V. and Ms. Shruthi N. Mallya of V semester at **National Conference and Technical Fest (NCETERM – 2016) organized by GM Institute of Technology, Davangere** on 23rd and 24th Sept. 2016. The research project was carried out under the guidance of Dr. Anilkumar. H. S.
- ii) Secured **Second Prize** for the paper on “**Bioethanol Production by Co-fermentation of Non Edible Oil Seed Cake and Glycerol Using Rhizobium leguminosarum and Saccharomyces cerevisiae**” presented by Chandrika Tantry, Sowjanya K Poojary, Shreedhanya,” of VII semester at **National level Students symposium CHEMEXCEL-2016 organized by Department of Chemical Engineering, Bapuji Institute of Engineering and Technology, Davangere** held on 21st Oct 2016. The project was guided by Dr. C. Vaman Rao, Professor.
- iii) Secured **Third Prize** for the paper on “**Value added products from crude glycerol obtained as a byproduct of biodiesel**” presented by Varun S, Mahesh A, Savinay, Vjayananda Jedar of VII semester at **National level Students symposium CHEMEXCEL-2016 organized by Department of Chemical Engineering, Bapuji Institute of Engineering and Technology, Davangere** held on 21st Oct 2016. The project was guided by Dr. Ujwal P, Professor.
- iv) Secured **First Prize** for the paper on “**Isolation, Purification and Biofilm forming activity of Lactobacillus rhamnosus exopolysaccharides**” presented by Pranitha D’ Souza and Shubhashree Rao of VII semester at **National level symposium CHEMIGNITE-2K16 New Frontiers in Chemical Engineering organized by Department of Chemical Engineering, Manipal Institute of Technology, Manipal** held on 21st – 22nd Oct 2016. The project was guided by Dr. Vidya S. M. Professor.

- v) **Ms. Shiny Martis Ms. Sanjana Chiplunkar, Ms. Sandhya Kamath, and Ms. Aparna Mohan** of VIII semester won **Third prize** for poster presentation on **“Bioremediation of lead by Brevibacterium sp. (MTCC10313)”** at an **“International Conference on Water: From Pollution to Purification”** held from **Jan 23rd – 26th 2015** at School of Environmental Sciences, Mahatma Gandhi University, Kottayam. The research project was carried out under the guidance of **Dr. C. Vaman Rao, Professor & Head** and **Ms. Louella Concepta Goveas, Assistant Professor**.
- vi) **Ms. Sanjana Chiplunkar, Ms. Sandhya Kamath, Ms. Aparna Mohan and Ms. Shiny Martis** of VIII semester won **First prize** for poster presentation on **“Comparison of Growth Kinetics of Brevibacterium sp. (MTCC10313) used for Heavy Metal Remediation of Effluents”** at a National Conference on **“Advances in Environmental Biotechnology for Sustainability”** in association with Karnataka State Pollution Control Board, held on **6-7th Feb 2015** organized by Dept. of Biotechnology, Alva’s College, Moodbidri. The research project was carried out under the guidance of **Dr. C. Vaman Rao, Professor & Head** and **Ms. Louella Concepta Goveas, Assistant Professor**.
- vii) **Ms. Shiny Martis, Ms. Sanjana Chiplunkar, Ms. Sandhya Kamath, Ms. Aparna Mohan** of VIII semester won **First prize** in Biotechnology Session of paper presentation on **“Biochemical characterization of surfactants produced by Brevibacterium sp. (MTCC 10313) under stress conditions”** at **International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE-2015)**, held on **20-21 March, 2015** organized by **National Institute of Technology, Warangal – 506 004, Telangana, India.** The project was carried out under the guidance of **Dr. C. Vaman Rao, Professor & Head** and **Ms. Louella Concepta Goveas, Asst. Professor**.
- viii) **Ms. Shiny Martis, Ms. Sanjana Chiplunkar, Ms. Aparna Mohan and Ms. Sandhya Kamath** of VIII semester won **First prize** in paper presentation on **“Interaction of Brevibacterium sp (MTCC10313) with heavy metals and MIC studies”** at **“SYMBIOT 15”** a National level Symposium organized by **Dept. of Biotechnology, Manipal Institute of Technology in collaboration with Institute of Engineers-Biotechnology Chapter** on **April 2nd 2015**. The project was guided by **Dr. C. Vaman Rao, Prof.& Head** **Ms. Louella Concepta Goveas, Asst. Professor**.
- ix) **Sumedha Bhat, Arpita G Shetty, Shwetha** of VIII semester won **First prize** in poster presentation on **“A Novel Bioremediation Approach from Diplococcus Sp. Isolated from Ginger”** at **“SYMBIOT 15”** a National level Symposium organized by **Dept. of Biotechnology, Manipal Institute of Technology in collaboration with Institute of engineers-Biotechnology Chapter** on **April 2nd 2015**. The project was guided by **Dr. Ujwal P, Professor** and **Dr. C. Vaman Rao, Prof. & Head**.
- x) **Sumedha Bhat, Arpita G Shetty & Shwetha – First Prize** in Paper Presentation on the Topic **“A Novel Strategy for Bioremediation of Pharmaceuticals Effluents”**, with a cash prize of **Rs.3000** organized by **SRISHTI-2015** organized by **Akhil Bharatiya Vidyarthi Parishad (ABVP) Karnataka**, held at **New Horizon College of Engineering, Bengaluru**, on **May 1st, 2nd and 3rd, 2015**. The project was carried out under the guidance of **Dr. Ujwal P, Professor** and **Dr. C. Vaman Rao, Prof. & Head**.

- xi) **Shiny Martis B, Sandhya Kamath, Aparna K Mohan & Sanjana Chiplunkar** –third place in Project Exhibition with the project title **“Microbial Bioremediation of Effluents”**, with a cash prize of **Rs.6000**. organized by **SRISHTI-2015** organized by Akhil Bharatiya Vidyarthi Parishad (ABVP) Karnataka, held at New Horizon College of Engineering, Bengaluru, on May 1st, 2nd and 3rd, 2015. The project was guided by **Dr. C. Vaman Rao**, Prof. & Head **Ms. Louella Concepta Goveas**, Asst. Professor.
- xii) **Ms. Sanjana Chiplunkar, Ms. Aparna Mohan Ms. Shiny Martis and Ms. Sandhya Kamath**, of Final year have won **First prize (among 19 contestants), cash award of Rs. 50,000 and a Shield** for their project presentation on **“MICROBIAL BIOREMEDIATION OF EFFLUENTS”** at a **National level** competition organized by **“Joy of Engineering Design and Innovation (JED-I)”** in association with **Indian Institute of Science**, Bengaluru held on **22nd June 2015** at Bengaluru. The research project was carried out under the guidance of **Dr. C. Vaman Rao, Professor & Head** and **Ms. Louella Concepta Goveas, Assistant Professor**.
- xiii) Best project of the year 2015 at 38th series SPP sponsored by KSCST Bengaluru, was awarded to a project titled **“Bioethanol production from pure glycerol using Bacillus cereus”** carried out by Samiya Banui, Deepak G. M, , under the guidance of **Mr. Venkatesh Kamath H.**
- xiv) Best project of the year 2011 at 34th series SPP sponsored by KSCST Bengaluru, was awarded to a project titled **“Reduction of FFA from oil using solid catalysts under microwave irradiation”** carried out by Rashmi, Gauthami, Jane, Nagashree, under the guidance of **Mr. Venkatesh Kamath H.**
- xv) Project titled **“Biodiesel Production from Unconventional Feed stocks of Udupi District”** sponsored by KSCST, Bengauru (SPP-35th series) by Mr. Santhosh Poojary won 3rd prize worth Rs. 50,000 at 35th Series SPP – KSCST State Level Seminar and Exhibition, SDM Ujire in July 2012.
- xvi) A poster on **Metabolically engineered E.coli for the production of biofuel an insilico approach** was presented by Mr. Karthik Hegde, Ms. Jyotsna Pais and Ms. Akshaya Poonja of VII semester under the guidance of **Mr. Bharath B. R.**, at **ISTE sponsored Tathva-13**, a State level Tech festival organized by PA College Engineering, Mangalore on 29th Oct 2013 and at **IIT Madras** on 9th Jan 10th Jan **Shastra 2014** secured **Second Place**.

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

- Dec 18th -19th 2011: TEQIP sponsored “International seminar and workshop on Current Trends in Biofuel Research and Developments”.
- 27th to 29th December 2012: International Conference on Recent Advances and Challenges in Biotechnology.
- 23rd to 28th June 2014: TEQIP phase II sponsored, One week Hands on Training and Workshop on “Analytical Techniques”.
- 3rd to 4th July 2014: TEQIP phase II sponsored, Two day workshop on “Applied Nanotechnology”, In collaboration with Electronics and Communication Engineering.
- Jan. 23rd – 25th 2017: 3 day national level workshop on Optimization Techniques, funded by TEQIP – Phase II (staff only).
- 18th Feb. 2017 – 1 day national level symposium on Challenges in Biotechnology from the future perspective of make in India (students level), funded by Alumni, Korefabrik, Atrimed Biotech.

21. Student profile course-wise:

B. E Biotechnology Engineering	Selected		Pass Percentage	
	Male	Female	Male	Female
2011-12	12	31	96	100
2012-13	9	28	96	100
2013-14	10	17	80	100
2014-15	11	28	98	100
2015-16	3	21	98	100
2016-17	17	38	NA	NA

22. Diversity of students

Year	% of students from the State	% of students from other States	% of students from other countries
2011-12	94.4	5.6	Nil
2012-13	93.0	7.0	Nil
2013-14	94	6	Nil
2014-15	45	3	Nil
2015-16	99	1	Nil
2016-17	90	10	Nil

23. How many students have cleared Civil Services, Defence Services, NET, SLET, GATE and any other competitive examinations?

Year of graduation	No. of students qualified with GATE
2011-12	5
2012-13	3
2013-14	1
2014-15	3
2015-16	3

24. Student progression (2011 on ward)

Student progression	Percentage against enrolled
UG to PG	40
PG to M.Phil.	Nil
PG to Ph.D.	07
Ph.D. to Post-Doctoral	Nil
Employed	
• Campus selection	10
• Other than campus recruitment	43
Entrepreneurs	Nil

Placements:

Company Name	2011-12	2012-13	2013-14	2014-15	2015-16
Biocon India Pvt. Ltd.	-	4	-	-	-
Wipro Healthcare	4	2	-	-	-
XL Health Corporation India Private Limited		3	3	2	-
Camson Biotechnologies	-	1	-	-	-

Sony Software	2	-	-	-	-
Wockhardt Pharmaceuticals	-	2	-	-	-
Aissel solutions	-	-	3	-	-
Analytics Quotient	-	-	-	1	-
Infosys Technologies	5	-	5	12	5
Molecular connections	-	-	-	2	-
Anthem Bioscience	-	-	-	-	2
Total	11	12	11	15	07

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	25
from other universities within the State	75
from other universities from other States	Nil

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period. : Three

27. Present details about infrastructural facilities

a) Library

- **Text/Reference Books:** 280
- **Journal References:** Nil
- **Data hand Books:** IS 2825, IS 4503, Perry's H/B
- **Chemical & Glassware Catalogues:** 25
- **Question Bank:** All subjects + All years
- **Conference compendium/souvenirs:** 4
- **Bound Project Reports:** Student project reports

Year of graduation	Project Reports
2011-12	07
2012-13	09
2013-14	09
2014-15	11
2015-16	08

- **Books issued for one week period:**

Year of graduation	Books issued per year
2011-12	186
2012-13	122
2013-14	134
2014-15	282
2015-16	290

- **Instrument working manuals:** 15

b) Internet facilities for Staff and Students:

Internet facility: LAN and Wi-Fi – 310Mbps Leased Line from BSNL for the college

c) Total number of class rooms: Four

d) Class rooms with ICT facility

All four class rooms are equipped with LCD projector and Wi-Fi facility.

e) Laboratories

- Biochemistry lab/microbiology lab (1529 sq. ft.)
- Heat and Mass Transfer lab (879 sq. ft.)
- Bioprocess control & automation lab (717 sq. ft.)
- Bioinformatics lab (718 sq. ft.)
- Downstream bioprocessing lab (717 sq. ft.)
- Unit operations lab (588 sq. ft.)
- Biokinetics lab/analytical techniques lab (1050 sq. ft.)
- Upstream bioprocessing lab (975 sq. ft.)
- Immunology lab (200 sq. ft.)
- Instrumentation lab/research lab (690 sq. ft.)
 - Total lab space 7863 sq. ft.

f) Research laboratories

- Instrumentation cum research lab (690 sq. ft.)

28. Number of students of the department getting financial assistance from College.

Large numbers of students are given scholarships and freeships under govt. Scheme.

Year	Number of Students
2013-14	11
2014-15	05
2015-16	14
2016-17	09

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Feedback from alumni who are pursuing higher studies and alumni working in industry, strongly felt that there is a necessity of starting M. Tech in Industrial Biotechnology PG programme in the department, because at the parent university level (VTU) this programme is not offered and it is available only in neighbouring deemed universities and NITs with limited seats. Other need felt was, many of our own students are deprived of the opportunity of pursuing M. Tech. Alumni also felt that, starting a PG programme in the department will boost the department's image and more students may opt for the undergraduate programme.

Alumni working in core biotechnology companies gave periodic feedback on changes that are required in the undergraduate syllabus with respect to industrial requirements. This feedback was taken into consideration and necessary changes in theory and practical were implemented.

30. Does the department obtain feedback from

- **Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses

s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.

- Soft skill training program and Employability Skill Development are introduced.
- The suggestions for revision of curriculum if any, are deliberated in the departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.
- The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
- **Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.
 - Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.
 - A common questionnaire containing questions related to teaching, learning, and evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.
 - Course Exit Survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.
 - BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
 - The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops.
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this,

alumni keep visiting the institution and interact with faculty members and HODs.

- The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.
- Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.
- Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
- During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
- Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.

31. List the distinguished alumni of the department (maximum 10)

1. Nisha (2015) Ireland
2. Aparna Mohan (2015) (IIT Guwahati)
3. Rashmi Rao (2013) University of Stuttgart, (TU9 University) for Masters in Air quality control, solid waste and waste water process engineering.
4. Guruprasad (2013) (IIT Kharagpur)
5. Madhuri Sumeda (2010) (Kent State University)
6. Dr. Megha Desai (2009) (Virginia Commonwealth University-Ph.D. Human Genetics)
7. Anjali Pai (2009) (University College London-Ph. D, Cancer Biology)
8. Lakshmeesha Upadhyaya (2009) (EM3E Doctoral Fellow at Montpellier2, France Ph.D. Membrane technology)
9. Vikas R.K. (2009) (University of Nottingham- Mres. Food Production Management)

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

- A guest lecture was organized by Phoenix, Students' Association of Biotechnology on 27th August 2011. The lecture on **Microbial Polysaccharides and Applications** was delivered by Dr. K.R. Sridhar, Professor, Mangalore University Mangalore. This programme was sponsored by KSCST Guest Lecture Series 2011.
- A lecture on **"Technological Aspects of Brewing Industry"** was delivered by **P. K. Sinha, Head Brewer, United Breweries Mangalore** on **12th March 2013**.
- A lecture on Problems and Problem solving in Brewing industry was delivered by **Mr. Ritesh Chiplunakr, Section Head, and United Breweries Mangalore** on **12th March 2013**.
- A Lecture on: **Stem Cells and its applications** on the **28th September, 2013**, a lecture was organized by Phoenix – Students' Association of Biotechnology Department. Dr. NS Raviraja, Senior Principal Scientist – Business Development at Stempeutics Research Pvt. Ltd., Manipal delivered a lecture on one of the recent field in Biomedicine – Stem cells.
- A technical talk on the Success stories of drug designing using Computational Biology tools was organized by Phoenix, Students' Association of Biotechnology and

IE (I) Biotechnology Students' Chapter of NMAMIT on **29th December 2014**. The talk was delivered by Mr. Raghu, Vice President, Schrodinger Inc., USA. He presented various aspects of computational biology which helps in designing of novel drugs in lesser time with minimal investment. Students of Biotechnology department interacted with him with regard to application of computational biology in biotechnology and drug discovery.

- A lecture on **"Nrf-2: its role in radio-protection, radio-resistance and inflammation"** was delivered by **Dr. S. Santosh Kumar**, Head, Free Radical Biology Section Radiation Biology & Health Sciences Division, BARC, Trombay, Mumbai on **25th March 2015** at 11.00AM in Shambhavi. The lecture was organized by Institute of Engineers, Biotechnology Engineering Chapter.
- A technical talk on **Membrane Engineering** was organized by IE (I) Students' Chapter of Biotechnology in association with Wenamitaa, Alumni association of NMAMIT on **5th August 2015**. Mr. Lakshmeesha Upadhyaya (Alumnus BTE – 2009 batch), Erasmus Mundus Doctoral Fellow, University of Montpellier2, France delivered the lecture. He gave an insight into the fundamentals of membrane engineering, its world wide application and present advances including its application in Project River Ganga.
- A lecture on **"Diabetes: Complications and Challenges of Treatments"** by **Dr. Ananda**, Asst. Professor, Dept of Biological Sciences, Poornaprajna Institute of Scientific Research, Bangalore was arranged on **18th Jan 2016 at 12.00PM-1.00PM** in **Phalguni auditorium**.
- A lecture on **"Medicinal and alternative uses of Areca nut-Entrepreneurial Possibilities"** by **Mr. Shankar Bhat**, an entrepreneur, was arranged on **25th Jan 2016 at 2.00PM-3.30PM** in **Shambhavi auditorium**.
- Lecture series on **Effective Life Management** organized by Ramakrishna Mission on **13th Jan 2016**, which was an exclusive programme for engineering students was attended by all students of Biotechnology Engineering. The lecture topics were, **"The art of working and attaining success in life"** was delivered by Swami Shiddhidananda; **"Background of success"** was delivered by Dr. Vivek Modi; **"Creativity and Innovation"** was delivered by Prof. K. Ragotham Rao.

33. List the teaching methods adopted by the faculty for different programmes.

Chalk & Talk, Assignments, Seminars, Group discussion, Quiz, Problem solving, teaching aides, Videos.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (Pos) are formulated as per NBA graduate attributes. To ensure attainment of Program Outcomes (Pos) and PEOs, the students' learning outcomes are monitored by evaluating Course Outcomes (Cos). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of PEO and monitoring of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).

- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analyzing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.
- The suggestion includes solving of additional numerical problems from exercise and GATE question papers, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students' learning capability.
- Technical Skill Building: Students are encouraged to do mini projects and showcase them in students' projects exhibitions.
- Participation of students in departmental research projects (if any) is highly encouraged.
- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.
- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.
- Summer research internships are offered to students.
- **Course Exit Survey** is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year
- **Programme Exit Survey** is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- Both the above survey is being done using **Moodle (Intranet) facility** for the collection of survey and inputs from students.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of Cos and Pos. The analysis of attainment of Cos and Pos is carried out.
- Based on the attainment of Cos and Pos, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of Cos and Pos.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities.

- Blood donation camp
- NSS
- Biofuel awareness camps for Middle school and High school students
- Plantation of biofuel saplings

36. Give details of “beyond syllabus scholarly activities” of the department.

- Audit course in summer vacation in the form of lectures and mini projects has been introduced since 2015.
- Through Student Department Association “Phoenix” Journal club is organized once in fortnight to discuss new discoveries and other issues that appear in newspapers.
- Expert and scholarly lectures from industry personnel.
- Lectures from alumni pursuing higher studies
- Mini Research projects in the summer vacation as audit course

Audit courses offered during even semester to VIII semester students (2015-16)

- o Nanobiotechnology (Lecture course) by Mr. Vinayaka B. Shet

Audit courses offered in summer vacation 2015-16

- o Engineering Science of Biofuels (Lecture course) by Dr. C. Vaman Rao

Research Project (Mini project): 2015-16

- o Application of Rhizobium sp. For the fermentation of non-edible oil cake to produce bioethanol. (Research guide: Dr. C. Vaman Rao).
- o Isolation of microbes from oil sludge biodiesel waste their application in production of citric acid. (Research guide: Dr. C. Vaman Rao).
- o Production of fermented concoctions (Research guide: Mr. Vinayaka B. Shet).
- o Conversion of waste papers into fermentable sugars using biotechnological tools (Research guide: Dr. Anilkumar H. S).

Research Project (Mini project): 2016-17

- o MATLAB – lecture cum practical inputs (Research guide: Mr. Venkatesh Kamath).
- o Production of ecofriendly gum from underutilized starch (Research guide: Mr. Vinayaka B. Shet).
- o Microbial Production of Bio oil from De-oiled seed cake (Research Guide: Ms. Harshitha J).
- o Pullulan production from de-oiled seed cake (Research Guide: Ms. Harshitha J).
- o Production of value added Products from Waste paper, Waste water treatment using bioadsorbents (Research guide: Dr. Anilkumar H. S).

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.: Accredited by NBA for 5 years (2012 -17)**38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department****➤ Strength**

- Centre of Excellence in Biofuel Research
- Research grants from external funding agencies
- Good number of faculty with Ph. D (50%) and pursuing Ph. D (50%)
- Faculty with diversified background
- Good infrastructure for UG/PG studies
- Faculty participation in Conferences/seminars/workshops is good
- Research publications from UG projects
- Introduction of research project work at 3rd year
- Well-equipped plant tissue culture lab
- A new M. Tech program in Industrial Biotechnology

➤ Weaknesses

- Lack of sufficient number of core industries for placement due to which student

- enrolment for the course is less than the assigned quota
- Location of the institution and the distance from the metropolis
- Lack of proper animal cell culture lab facility
- Scanty reading habit amongst students
- Complete reliance on class notes by students
- **Opportunities**
 - More innovative research work of societal importance
 - Applying for at least 2 research funding per academic year by faculty with Ph. D
 - Tie up with industry for R & D work
 - BT finishing school for students in summer vacations
 - All faculties with Ph. D qualification
 - Getting Govt. approval and accreditation to labs for analysis
 - Enhancement in research facility and infrastructure through funding
 - Lack of sufficient placement opportunities
- **Challenges**
 - Students with first preference as BT are very few
 - Non-availability of independent lab space and a cubicles for Ph. D students
 - Confidence among students for entrepreneurship
 - Deficiency of independent (Out of the box) thinking amongst students
 - Equipment repair outage time is longer than expected

39. Future plans of the department.

- Apply for research funding on yearly basis.
- Encourage participation of staff/students in conferences/seminars/workshops (at least 1 per semester).
- Permanent tie up with industry for R & D inputs.
- Industrial research worthy lab training (hands on training)-BT finishing school for students.
- Impetus to UG projects to improve placement and encourage higher studies.
- Encourage publications from UG projects.
- Enhancing the interaction/networking with alumni of the department.
- Procurement of important software for teaching/ research work.
- Industry institute collaboration for talks and R & D work.
- Interdisciplinary collaborative research work.
- Enhance infrastructure for high end research.
- Product development and marketing.
- Offer instrument facility on hire to other institutions/industry.
- Independent cubicles for research scholars.
- Independent Ph. D research lab.
- Establish research lab and facility for Nanotechnology research.
- R & D hub for research in different fields of Biotechnology and to establish centre of excellence in all.
- Consultancy service.
- Separate research lab for high end research.
- 100% Ph. D qualified staff with diversified research interest in Biotechnology.
- Entrepreneurship development.
- Encourage utilization of biofuel in the college facilities on day to day basis.

DEPARTMENT OF CIVIL ENGINEERING

1. Name of the Department & its year of establishment

Department of Civil Engineering; 1987

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

- U.G: B.E. (Civil Engineering)
- P.G: M.Tech, (Construction Technology)
- P.G: M.Tech, (Structural Engineering)
- Ph.D.: Civil Engineering
- Post-Doctoral Fellowship: Civil Engineering

3. Interdisciplinary courses and departments involved

Nil

4. Annual/ semester/choice based credit system

Choice Based Credit System

5. Participation of the department in the courses offered by other departments

- **Participation of other department Students in the courses offered by the department of Civil:**
 - o Elements of Civil Engg & Engineering Mechanics (CV103) (4 credit), Environmental Studies (CV113) (1 Credit) for all first year students.
- **Following are the open electives offered by our department to other departments. The classes are handled by civil faculty to students of other departments.**

Sl.No	Open Elective Course	Course Code
1.	Environmental Impact Assessment	CV8X07
2.	Information to Geoinformatics	CV8X30

- **Following are the open electives offered by other departments to students of Civil. The classes are handled by respective department faculty.**

Sl.No	Open Elective Course	Course Code
1.	Nano Technology	BT8X05
2.	Corrosion Science	CH8X31
3.	Programming with C++	CS8X14
4.	Essentials of Information Technology	CS8X15
5.	Consumer Electronics	EC8X18
6.	Non-Conventional Energy Systems	EE8X10
7.	Intellectual Property Rights	HU8X03
8.	Professional & Cognitive Communicative	HU8X24
9.	Operating Systems	IS8X27
10.	Graph Theory	MA8X01
11.	Linear Algebra	MA8X02
12.	Industrial Pollution Control	ME8X08
13.	Management operations and Entrepreneurship	ME8X28

6. Number of Teaching posts sanctioned and filled (Professors/Associate Professors/Assistant Professors)

Designation	Sanctioned	Filled
Professor	4	7
Associate Professor	7	1
Assistant Professor	21	22

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./Ph.D./M.Phil./M.Tech, etc.)

SI No	Name	Qualification	Designation	Specialization	No. of years of Experience	No. of Ph.D. students guided for the last 4 years
1	Dr. I. Ramesh Mithanthaya	Ph.D.	Professor/ Vice Principal/Dean (Academic)	Transportation Engineering	32	05
2	Dr. Udayakumar. G	Ph.D.	Professor & Head	Hydraulics and Water Resources Engineering	29	02
3	Dr. Bhavani Shankar Rao	Ph.D.	Professor	Geotechnical Engineering	43	Nil
4	Dr. A. N. Parameswaran	Ph. D.	Professor	Civil Engineering Education	23	Nil
5	Dr. Srinath Shetty K	Ph. D.	Professor	Geotechnical Engineering	29	01
6	Dr. Radhakrishnan.K	Ph. D.	Professor	Geohydrology & Geomatics	28	03
7	Dr. S. K. Mahadeve Gowda	Ph. D.	Professor	Hydraulics and Water Resources Engineering	29	Nil
8	Y. R. Suresh	M.Tech. M.E.	Associate Professor	Hydraulics Structures	19	-
9	Lokesh J. K.	M.Tech.	Asst. Prof.	Industrial Structures	28	-
10	Y. Umashankar Shetty	M.Tech.	Asst. Prof.	Marine Structures	28	-
11	Pushparaj M.	M.Tech.	Asst.Prof	Construction Technology	10	-
12	Dr. Akshatha Shetty	Ph.D.	Asst. Prof.	Structural Engineering	2	-
13	Sundip Shenoy	M.Tech.	Asst. Prof.	Construction Technology	7	-
14	Gururaj Acharya	M.Tech.	Asst. Prof.	Construction Technology	3	-

15	Prashanth Kumar K.	M.Tech.	Asst. Prof.	Remote Sensing & G.I.S.	3	-
16	Akshay N. K.	M.Tech.	Asst. Prof.	CAD of Structures	3	-
17	Rakshith Shetty	M.Tech.	Asst. Prof.	Structural Engineering	3	-
18	Manjunath M	M.Tech	Asst. Prof.	CAD of Structures	3	-
19	Roshan Rai	M.Tech	Asst. Prof.	Transportation Engineering	3	-
20	Anil Kumar	M.Tech	Asst. Prof.	Geotechnical Engg	4	-
21	Mrs. Thangamani R	M.Sc	Asst. Prof.	Engg Geology	4	-
22	Shriram Marathe	M.Tech	Asst. Prof.	Transportation Engineering	2	-
23	Pruthviraj H K	M.Tech	Asst. Prof.	Environmental Engineering	2	-
24	Shaik Kabeer Ahmed	M.Tech	Asst. Prof.	Structural Engineering	1	-
25	Pradeep Karanth	M.Tech	Asst. Prof.	Structural Engineering	6 month	-
26	Thushar S Shetty	M.Tech	Asst. Prof.	Structural Engineering	6 month	-
27	Sabyath P Shetty	M.Tech	Asst. Prof.	Structural Engineering	6 month	-
28	Shanmukha Shetty	M.Tech	Asst. Prof.	Structural Engineering	6 month	-
29	Mithun B. M.	M.Tech	Asst. Prof.	Construction Technology and Management	6 month	-
30	Janakaraj M	M.Tech	Asst. Prof.	Construction Technology	6 month	-

8. Percentage of classes taken by temporary faculty–programme-wise information;
Nil

9. Programme-wise Student Teacher Ratio

U.G -16.36:1

P.G -12:1

10. Number of academic support staff (Technical) and administrative staff: sanctioned and filled

Designation	Sanctioned	Filled
Technical Staff	4	4
Supporting Staff	2	2

11. Number of faculty with ongoing projects from a) National b) International funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

KSCST –Funded projects

Sl. No.	Year	Grant in Rs.
1	2012-13	7000.00
2	2013-14	17,500.00
3	2014-15	13,000.00
4	2015-16	4,000.00

KBITS –Funded projects

SL.No.	Year	Grant in Rs.
1	2014-15	3,00,000.00

TEQIP – Grants

Sl. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Lab Equipment	57,000	-	-	-	-
2	In House Assistanceship (M.Tech)	96,000	1,92,000	7,20,000	4,80,000	-
3	In House Conference	-	32,858	69,351	38,669	33,614
4	Journal Papers	-	-	-	13,156	-
Total Grant		1,53,000	2,24,858	7,89,351	5,31,825	33,614

13. Research facility / center:

- **State Recognition**
 - o Concrete and Highway laboratory
 - o Remote Sensing & Geographic Information System lab;
 - o Centre for research on masonry & Paver block
 - o Department has recognized as research centre and it is approved by VTU.
- **National recognition**
Nil
- **International recognition**
Nil

14. Publications:

- **Number of papers published in peer reviewed journals (national/international):**
57 numbers.

Year	Journals		Total
	National	International	
2016	1	22	23
2015	9	8	17
2014	11	5	16
2013	-	1	01
Total	21	36	57

- **Monographs:** Nil
- **Chapter(s) in books** Nil
- **Editing books** Nil
- **Books with ISBN numbers with details of publishers:** Nil
- **Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database- International Social Sciences Directory, EBSCO host, etc.)** Nil
- **Citation Index- range / Average:** 0.4
- **SNIP :** 0.696
- **SJR :** 0.56
- **Impact factor- range / Average :** 0.12
- **h-index:** 3

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated

- Concrete Technology
- Geotechnical Engineering
- Building Materials
- Quality Inspection of government works
- Analysis of various water parameters
- Surveying (Creation of Sports Ground with 400 m tracks in difficult terrain)
- Design, Drawing & Vetting (Passenger Jetty at Malpe)
- Cost Effective Housing (as was done in Gadag)

Income generated under major consultancy services: (2012-2016)

Sl. No.	Year	Agency	Total Amount (Rs.) Collected as Consultancy Fees
1	2015-2016 (August-July)	1.PRED	2,95,303.00
		2. KPWP & IWT	1,64,216.00
		3.T.M.C.	2,05,287.00
		4.Nirmithi Kendra	3,70,711.00
		5.KRIDL	77,994.00
		Lab Test	2,19,056.00
		Grand Total	13,32,567.00
2	2015 (January –July)	Nirmithi Kendra	18,79,609.00
3	2014 (January-December)	Nirmithi Kendra	17,50,843.00
4	2013 (January-December)	Nirmithi Kendra	1, 34, 303.00

Note:

P R E D : Panchayatraj Engineering Department, No. 3 Sub Div, Karkala.
 KPWP & IWT : Karnataka Public Works, Ports and Inland Water Transportation Department, Karkala.
 T.M.C. : Town Municipal Council, Karkala.
 Nirmithi Kendra : Nirmithi Kendra, Udupi.
 KRIDL : Karnataka Rural Infrastructure Development Limited, Udupi.

17. Faculty recharging strategies.

Faculty members are identified based on their training needs, competency requirements and are deputed for various programmes such as refresher courses, workshop, seminars, conferences, industrial visit, study tour etc.

Name of the Participant	Title of the Programme	Period	Place & Venue
Sundip Shenoy R.	Introduction to Therapeutic counseling for Engineering teachers	09 to 12 July 2012	Dept. of counseling welfare, training & placement, NMAMIT, Nitte
Dr. Radhakrishna K	Short term course on “Principles and Applications of satellite image processing”	25 to 29 March-2013	CSRE, IIT, Bombay
Shaik Kabeer Ahmed	National workshop on “Project Management in Construction sector”	01 to 2 March-2013	NIMHANS, Hosur Road, Bangalore
Prof. Y. R. Suresh	Two days workshop on “Steel con, National seminar on steel structures”	26 to 27 April-2013	SJCE, Mysore
Dr. Udayakumar G.	International conference on “Water, wastewater & isotype hydrology IC-WWISH-2013”	25 to 27 July-2013	Bangalore
Dr. Bhavani 246nalysi Rao	International Conference on “Energy, Environment and Eco-friendly buildings (ICEEB)”	19 to 21 Sept-2013	Jain University, Bangalore
Mr. Suresh Y. R.	One day workshop on “Structural Analysis and Design Software – CYPE”	13 Sept-2013	Alva’s Institute of Technology, Moodabidri
Mr. Leeladhar Pammar	Training on Total Station and DGPS	21 to 25 th Oct 2013	ESIC of India Hydrabad
Prof. Suresh Y. R.	Symposium on “Outstanding issues for Hydrological Research in India”	21 Oct-2013	Dept. of Applied Mechanics & Hydraulics, NITK, Surathkal
Manjunatha M.	Two days workshop on “Application of Finite Element Analysis in Structural Engineering”	23 to 25 Oct-2013	Alva’s Inst. Of Engg. And Technology

Rakshith Kumar Shetty	Two days workshop on “Application of Finite Element Analysis in Structural Engineering”	23 to 25 th October 2013	Alva’s Inst. Of Engg. And Technology
Prithviraj H K	Swatch Bharath Drive for Solid Waste Management	23 rd September 2016	SJBIT, Bangalore
Prithviraj H K	INDO-US Seminar on current and future trends in environmental management	22 nd and 23 rd of October 2016	Bangalore Institute of Technology, Bangalore
Janakaraj M	Faculty Development Program – Research Methodologies in Project Management	18 – 20 October 2016	NICMAR, Pune
Sabyath P Shetty, Pradeep Karanth, Thushar S Shetty	“Tall Building Design”	10 th – 11 th Feb 2017	MIT, Manipal.

18. Student projects

a) Percentage of students who have done in house projects including inter departmental / programme.

INHOUSE PROJECTS

UG-100% (1986-2015)

UG – 98.7% (2015-2016)

PG- 80% (2012-2015)

PG- 56% (2015-2016)

b) Percentage of students placed for projects in organizations outside the institution, i.e., in Research laboratories / Industry/ other agencies

PG- 20% (2012-2015)

PG- 44% (2015-2016)

19. Awards /recognitions received at the national and international level by

- Faculty: Nil
- Doctoral / post-doctoral fellows: 01
- Students: 01

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Details of the Workshops / Conferences/FDPs Organized under TEQIP/Institution funding

Sl. No	Details of the Program	Date	No. of Days	No. of Participants
1	3 Day Short Term Technical Training Programme for Engineers of Udupi Nirmithi Kendra, Endowment Department.	19 th - 21 st October 2015	3	29
2	Two Day Hands on Training & Workshop on ‘Higher Surveying Applications’	30 th & 31 st July, 2014	2	40
3	Three days workshop on “Advances in Hydrology and Water Resources Engineering”	1 st to 3 rd July, 2013	3	30

4	Three days workshop for PWP & IWTD Executives on “Design, Construction and maintenance of Flexible pavements”	21 st to 23 rd February 2013	3	15
5	Management and Construction Engineering Company SYCONE visited our campus to conduct a career Mapping Workshop. Yashavant A Kinhal, COO Incept	29 Sept 2012	2	80
6	Seminar on ‘ Research Methodology’ Presented by: Prof. Raghavendra Holla (Manipal Institute of Technology)	22 Sept 2012	01	60
7	Two days workshop on “Application of Optimization Techniques for Slope Stability Analysis and Recent Methods for Stabilisation of Slopes”	30 th to 31 th July, 2012	02	20
8	One day Workshop on “Internalize Intellectual Property & Strategic Management of IPR” by Entrepreneurship Development Cell, VTU, Belagavi and NMAMIT, Nitte	26 th March 2012	01	30
9	Talk on “Advances in Concrete Technology” by Dr. M. C. Narasimhan, Professor in Civil Engineering Department, NITK, Surathkal	13 th March 2012	01	60
10	Talk on “Career Prospects for Civil Engineering Students” by Sri N. Ramesh, Head of Department-Structural, Nauvata Engineering Private Limited, Bangalore	21 st March 2012	01	60
11	Talk on “Planning for the Better Future” by Sri Narayanaswamy, Circle Inspector, Anti Naxal Force, Karkala	8 th February 2012	01	30

21. Student profile course-wise:

Name of the Course	Year	Selected		Pass percentage	
		Male	Female	Male	Female
B.E. Civil Engineering	2016-2017	86	26	NA	NA
	2015-2016	88	32	85%	93%
	2014-2015	113	30	91%	97%
	2013-2014	90	33	91%	97%
	2012-2013	128	32	89%	93%
	2011-2012	72	18	92%	100%
M.Tech. Construction Technology	2016-2017	13	3	NA	NA
	2015-2016	11	06	100%	100%
	2014-2015	16	02	100%	100%
	2013-2014	14	04	93%	100%
	2012-2013	12	06	100%	83%
	2011-2012	04	01	50%	100%
M.Tech Structural Engineering	2016-2017	09	08	NA	NA

22. Diversity of students:

Name of the Course	Year	% of students from the college		% of students from the state		% of students from other state		% of students from other countries
		No.	%	No.	%	No.	%	
B.E. Civil Engineering	2016-17	NA		102	85	09	7.5	-
	2015-16			111	92	09	08	
	2014-15			95	85	17	15	-
	2013-14			87	71	36	29	-
	2012-13			105	73	38	27	-
	2011-12			55	72	21	28	-
	2010-11			49	72	19	28	-
M.Tech. Construction Technology	2016-17	1	5.90	17	100	-	-	-
	2015-16	2	11.8	17	100	-	-	-
	2014-15	1	5.60	18	100	-	-	-
	2013-14	4	22.0	18	100	-	-	-
	2012-13	1	5.60	18	100	-	-	-
	2011-12	02	11.1	18	100	-	-	-
	2010-11	02	40.0	05	100	-	-	-
M.Tech Structural Engineering	2016-17	02	11.76	14	82.35	03	17.67	-

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

CAT: 01

Defense Services: 03

GATE: 06

24. Student progression.

Student progression	Average Percentage
UG to PG	20
PG to M.Phil.	Nil
PG to Ph.D.	2
Ph.D. to Post-Doctoral	Nil
Employed	
• Campus selection	45%
• Other than campus recruitment	30%
Entrepreneurs	03

25. Diversity of staff

Percentage of faculty who are graduates	
Of the same parent university	26%
From other universities within the State	64%
From other universities from other States	10%

26. Number of faculty who were awarded Ph.D., during the assessment period.

- Ph.D. – 04 numbers

Faculty Name	Institution	Year
Dr. Srinath Shetty	N.I.T.K. Surathkal	Nov,2013
Dr. Radhakrishnan K	N.I.T.K. Surathkal	Nov,2013
Dr. Akshatha Shetty	N.I.T.K. Surathkal	Nov,2014
Dr. S. K. Mahadeve Gowda	N.I.T.K. Surathkal	June,2016

27. Present details about infrastructural facilities.

a) Library

- The Departmental Library Text/Reference Books: 220 Numbers
- Conference compendium/souvenirs: 10 Numbers
- Bound Project Reports : 212 Numbers

b) Internet facilities for Staff and Students:

Internet facility: LAN and Wi-Fi (310 Mbps Leased line)

c) Total number of class rooms

9 Class rooms

d) Class rooms with ICT facility

9 Class rooms

e) Laboratories; 09

Sl. No	Name of the laboratory
1	Remote Sensing and G.I.S. Laboratory
2	Fluid Mechanics and Hydraulics Laboratory
3	Geology Laboratory
4	Surveying Laboratory
5	Basic Materials Testing Laboratory
6	Environmental Engineering Laboratory
7	Geotechnical Laboratory
8	Computer Aided Design Laboratory
9	Concrete and Highway Laboratory

f) Research laboratories: 04

1. Highway and Concrete lab
2. Remote Sensing and G.I.S. Laboratory
3. Environmental Engineering (water quality)
4. Shake Table Apparatus for Earthquake Resistant Lab

28. Number of students of the department getting financial assistance from College.

Sl. No.	Year	No. of Students
1	2011-12	23
2	2012-13	34
3	2013-14	26
4	2014-15	21
5	2015-16	21

29. Was any need assessment exercise undertaken before the development of new Program (s)? If so, give the methodology.

Due to boom in construction industry and introduction of new construction materials necessitated introduction of 'construction technology' and 'structural engineering' post graduate programmes.

30. Does the department obtain feedback from?

- **Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.
 - Soft skill training program and Employability Skill Development are introduced.
 - The suggestions for revision of curriculum if any are deliberated in the departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.
 - The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
- **Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.
 - Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.
 - A common questionnaire containing questions related to teaching, learning, and evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.
 - Course Exit Survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.

- BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
- The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops etc.
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this, alumni keep visiting the institution and interact with faculty members and HODs.
 - The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.
 - Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.
 - Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
 - During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
 - Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.

31. List the distinguished alumni of the department (maximum 10)

Distinguished Alumni

1. Sahana, Project Engineer Indevor Services, Bramhavara-576213 (Multi National Company).
2. Akshay Kumar, Assistant Engineer (Civil), Water Resources Department, KBJNL NRBC Sub Div No 20, Chikkahonnakuni, Devadurga Tq, Raichur Dist.
3. Ashwini L Kudwa', Assistant Engineer, Pradhan Mantri Gram Sadak Yojana (PMGSY), PWD Mangalore
4. Ganesh Prasad, Assistant QS and Estimator, J and P Group Ltd, Doha , Qatar
5. Joel Santhosh, Senior Research and Development Engineer, Pre-Cast and Architectural Concrete Industries Dubai.
6. Harish Kumar, SK Engineering and Construction, Xepian Xenamnoy hydro Electric Power Project, Lao.
7. ImadFareed, Project Manager at BFG International, Bahrain
8. Ms. Shilaja, Assistant Engineer, Department of Irrigation, Government of Karnataka
9. Rakshitha R N, Assistant Engineer, Pradhan Mantri Gram Sadak Yojana (PMGSY), PWD Mangalore
10. Veena Bhat BE, Civil Estimator, Haroon Company (Interior Designing Company), Business Bay, Dubai United Arab Emirates.

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

- “One day Capacity Building Workshop for ISRO Bhuvan Panchayat Mapping” – online course by ISRO, IIRS conducted on July 28th 2016. More than 70 staff and students trained for mapping the panchayat resources using the Bhuvan panchayat App.
- Organised 16th, 17th and 18th Outreach programme of IIRS Dehradun on Geospatial technology. During 18th Outreach programme on ‘Introduction to Geospatial Technology’ of three months duration held from August to November 2016, 40 students and staff from various branch completed the course.
- As a part of the program of “ENGINEERS WEEK-2016”, technical talks were delivered by Er. Ujwal D’Souza on “PLANTS AND MACHINERIES IN CONSTRUCTION” and by Dr. Dwarakish G S (Prof. & Head of Applied Mechanics Dept., N.I.T.K., Suratkal) on the topic “GEOINFORMATICS IN CIVIL ENGINEERING” organized by ASSOCIATION OF CONSULTING CIVIL ENGINEERS (India), Mangalore Centre, was held on 30th March 2016 for Civil Engg. Dept, NMAMIT, Nitte.
- As part of the program of “TECHNO-WEEK-2015”, “Transportation Projects in India- Opportunities for Civil Engineers” by Dr. Suresh, NITK, Surathkal on the 25th of March, 2015 organized by the Association of Consulting Civil Engineers, Mangalore Centre for Engineers Week-2015
- Orientation programme for the Third Semester Civil Engineering students held on 12th August 2015
- ISCT (A division of Global InfoTech, Dharwad)-AUTODESK Authorized Training Centre presented a seminar on “AUTODESK TOOLS IN CIVIL INDUSTRY AND BIM” on 26th August, 2015
- As part of the program of “TECHNO-WEEK-2015”, organized by ASSOCIATION OF CONSULTING CIVIL ENGINEERS (India), Mangalore Centre in association with THE RAMCO CEMENT was held on 23rd September 2015.
- On the occasion of Engineer’s day, the CADD Centre Karkala organized a “Manual Drafting Competition” for students of all colleges. The event was conducted at their own CADD Centre in Karkala on the 26th of September, 2015.
- A workshop was organized by CIVIL SIMPLIFIED for students of civil engineering. The workshop taught students to use two software SAP2000 and ETABS on 29th, 30th October 2015.
- As a part of the program of “ENGINEERS WEEK-2016”, technical talks were delivered by Er. Ujwal D’Souza on “PLANTS AND MACHINERIES IN CONSTRUCTION” and by Dr. Dwarakish G S (Prof. & Head of Applied Mechanics Dept., N.I.T.K., Suratkal) on the topic “GEOINFORMATICS IN CIVIL ENGINEERING” organized by ASSOCIATION OF CONSULTING CIVIL ENGINEERS (India), Mangalore Centre, was held on 30th March 2016 for Civil Engg. Dept, NMAMIT, Nitte.
- Entrepreneurship Awareness Camp for final year students of Civil Engineering on 29th October 2014.
- A Technical Talk- Civil Engineering Theory and Practice by Er. Premananda Shenoy on 24th September 2014.
- A Presentation on Auto-Desk Software in Civil Engineering for 5th and 7th Semester students on 17th September 2014.

- A Technical Talks by Dr. Subhash Yaragal and Dr. K.N Lokesh, Professors NITK, Surathkal as a part of ENGINEERS Week-2014 organized by ACCE(India) Mangalore Centre on 19th March 2014.
- An expert lecture on Opportunities on Engineering and Management Students in Civil Services by Mr. Anamalai IPS on 25th January 2014.
- An expert lecture on Energy and Environment by Dr. Mohan Kumar (Prof. IISC, Bangalore) on 7th November 2013.
- Seminar on ‘ Research Methodology’ Presented by: Prof. Raghavendra Holla (Manipal Institute of Technology) Held on: 22-9-2012

33. List the teaching methods adopted by the faculty for different programmes.

Class room Teaching

- Theory Classes: LCD and Black board work,
- Laboratory Classes/ practical's, Field Visits, seminars,
- Technical Quiz, Mini-projects, Problem based learning etc.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (Pos) are formulated as per NBA graduate attributes. To ensure attainment of Program Outcomes (Pos) and PEOs, the students' learning outcomes are monitored by evaluating Course Outcomes (Cos). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of program objectives and monitor of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).
- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analysing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.
- The suggestion includes solving of additional numerical problems from exercise and GATE question papers, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students' learning capability.
- Technical Skill Building: Students are encouraged to do mini projects and showcase them in students' projects exhibitions.
- Participation of students in departmental research projects (if any) is highly encouraged.
- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.

- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.
- Summer research internships are offered to students.
- Course Exit Survey is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year
- Programme Exit Survey is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of Cos and Pos. The analysis of attainment of Cos and Pos is carried out.
- Based on the attainment of Cos and Pos, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of Cos and Pos.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities.

1. Faculty and Students have participated in National Service Scheme (NSS) conducted in NMAMIT Nitte for cleaning the Nitte Village and Clean Campus Drive since 2011-2015.
2. Faculty and Students Participated in Blood Donation Camp conducted in NMAMIT Nitte 2011-2015.
3. Dr. Udayakumar G, as resource person has given training on energy and water conservation, waste water management for rural unemployed youth during 2015-16
4. Organized 10 programmes per year on Entrepreneurship Awareness Camp (EAC) from 2012-2016 conducted in NMAMIT Nitte
5. Dr. Udayakumar G, Organized EDP programmes for science and Technological students conducted in NMAMIT Nitte.
6. Dr. I. R. Mithanthaya, was the president of social service club (Rotary Club) and Prashanth Kumar K (Interact Chairmen) and Gururaj Acharya (Director of Youth Service) participated in distribution of books (8 school-750 Members) through Nitte management and Uniforms (50No.) and Scholarship for (Polio Children).

36. Give details of “beyond syllabus scholarly activities” of the department.

Audit Classes:

- i. “Land Scaping” classes are offered in June 2016, handled by Dr. Srinath Shetty K.
- ii. “Detailing of RCC using practical approach” classes are offered in May 2015.
- iii. “Land Scaping” classes are offered in May 2015, handled by Dr. Srinath Shetty K.
- iv. “Advanced Surveying using Total Station” classes are offered in May 2015, handled by Mr. Y Umashankar Shetty.

Mini Projects:

- v. “Study on the behaviour of concrete using partial replacement of fine aggregate by copper Slag” (2016), under Dr. Akshatha Shetty, Assistant Professor, Civil Engineering, Department.
- vi. “Strength and durability characteristics of geopolymer concrete using Industrial Waste (2016)”, under Mr. Shriram Marathe, Assistant Professor, Civil Engineering Department.
- vii. “Determination of soil bearing capacity for cooperative Building NMAMIT Nitte” (2015), under Mr. Anil Kumar, Assistant Professor, Civil Engineering Department.
- viii. Fibre Reinforced Concrete using Waste Glass Wool Fibres” (2015), under Dr. Akshatha Shetty, Assistant Professor, Civil Engineering, Department.

Technical Paper Presentation:

- i. Organised “Technical paper presentation and project model exhibition “ieinitte-2016” on the topic of emerging and sustainable technology for successful accomplishment of national programme “make in India.” 5th March 2016, NMAMIT Nitte, under IEI Chapter.

Field Visit:

1. Technical Visit to Mysore, with 78 students & 2 faculty members on March 12 & 13 2016.
2. Site Visit to RMC Mangalore, with 40 students & 3 faculty members on 04.04.2015.

Quiz:

1. “The Times of Civil” Quiz was conducted on 6th April 2016 held at “Sahakari Soudha” auditorium, NMAMIT Nitte, 6th April 2016,
2. “The Times of Civil” Quiz was conducted on 13th March 2015 held at “Sambhram” auditorium, NMAMIT Nitte.

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

Yes.

NBA (UG) accreditation from AICTE

Under Graduate Course was Accredited for 3years w.e.f 01.04.2001,

Reaccredited for 3 years w.e.f 20.07.2005 and

Reaccredited for 3 years w.e.f 15.03.2012

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

➤ **Strength**

1. Qualified, Experienced and committed faculty (Average 15 years’ experience).
2. Good number of faculty with doctoral degree.
3. Well-equipped laboratories.
4. Actively involved in consultancy and research work.
5. Recognized Research Center.

➤ **Weaknesses**

1. Location disadvantage.
2. Ranking of students joining the programme being average.
3. Marginal placement opportunities in Core Company.
4. Less number of students joining for higher studies
5. Less number of students appearing for competitive examinations.

➤ **Opportunities**

1. To have a P.G. Programme in Hydraulics and Water Resources Engineering.
2. Vast scope in Transportation Engineering and Remote Sensing /Geographical Information System.
3. Applying for at least 2 research funding projects per academic year by Ph. D qualified staff
4. Enhancement in research facility and infrastructure through funding.
5. Training Students to take competitive exams.

➤ **Challenges**

1. More innovative research work of societal importance
2. Tie up with industry for R & D work.
3. Getting Govt. approval and accreditation to labs for analysis
4. Collaboration with Industries and Research Centers.
5. To establish Research laboratory.

39. Future plans of the department.

- To start new P.G. Programme in Hydraulics and Water Resources engineering, Transportation Engineering and Geotechnical Engineering from 2018-19, 2020-21 and 2021-22 respectively.
- Setting up of Earth Quake Laboratory.
- Training students for competitive exams like GATE, CAT, UPSC.
- To Create Centre of excellence in Remote Sensing & Geographic Information System field by 2018.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

1. Name of the Department & its year of establishment

B.E. (Computer Science and Engineering) 1986.

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

- UG: B.E. (Computer Science & Engineering)
- PG: M. Tech. (Computer Science & Engineering),
- M. Tech. (Software Engineering),
- M.Tech (CSE) Part time (QIP)
- Ph. D. (Computer Science & Engineering)

3. Interdisciplinary courses and departments involved:

Nil

4. Annual/ semester/choice based credit system:

Choice Based Credit System

5. Participation of the department in the courses offered by other departments:

- **Participation of other department Students in the courses offered by the department of CSE:**
 - o C++ Programming- an elective subject in ECE for 7th semester.
 - o Computer Concepts and C programming (CCP) (CS111) and CCP Lab (CS116) – offered to First Year- All branches.
 - o Data Structures – Audit was offered during vacation
 - o Placement related training on data structures and C programming to students of all branches.
 - o Internet of Things- one year audit course to ECE, CSE and ISE students (Sep 2015- Dec 2016).
 - o Concepts of Java Programming- Audit course to ECE students.
 - o Mobile Application Development – Audit course to ECE and CSE students.
- **Following are the open electives offered by our department to other departments. The classes are handled by CSE faculty to students of other departments except CSE.**

Sl.No	Subject	Subject Code	Dept. involved
1.	Essentials of Information Technology	CS8X15	Dept. with non-IT students who got placement in Infosys
2.	Object Oriented Programming with C++	CS8X14	All departments except CSE & ISE

- **Following are the open electives offered by other departments to students of CSE. The classes are handled by respective department faculty.**

Sl.No	Subject	Subject Code	Offered By (Department)
1.	Environmental Impact Assessment	CV8X07	Civil Engg.
2.	Consumer Electronics	EC8X18	E&C Engg.
3.	Robotics	EC8X13	E&C Engg.

4.	Non-Conventional Energy Systems	EE8X10	E&E Engg.
5.	Intellectual Property Rights	HU8X03	Dept. of Humanities
6.	Value Education	HU8X20	Dept. of Humanities
7.	Linear Algebra	MA8X02	Dept. of Mathematics
8.	Industrial Pollution Control	ME8X08	Mech. Engg.
9.	Management and Entrepreneurship	ME8X09	Mech. Engg.
10.	Optoelectronic devices	PH8X19 For EE, EC, CSE & ISE Branches	Physics
11.	Graph Theory	MA8X01	Mathematics
12.	Statistical design and analysis of experiments	MA8X03	Mathematics

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

Position	Sanctioned	Filled
Professor	5	4
Associate Professors	11	9
Asst. Professors	27	33

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./Ph.D./M.Phil., etc.)

Sl. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience		No. of Ph.D. students guided in the last 4 years
					Academics	Industry	
1.	Dr. Niranjan N. Chiplunkar	M.Tech, Ph.D.	Principal, Professor	CSE	30	-	3
2.	Dr. Udaya Kumar Reddy K.R.	M.E., Ph.D.	Professor & Head	CSE	18		
3.	Dr. Udaya Kumar K Shenoy	Ph.D.	Professor	CSE	14	6	
4.	Dr. D.K. Sreekantha	MCA, M.Phil., Ph.D.	Professor	CSE	16	6	
5.	Mrs. Jyothi Shetty	M.Tech, (Ph.D.)	Asso. Prof	CSE	18.9	-	
6.	Mrs. Sharada Udaya Shenoy	M.Tech, (Ph.D.)	Asso. Prof	CSE	18	-	
7.	Mr. Venugopala P S	M.Tech, (Ph.D.)	Asso. Prof	CSE	14.4	-	
8.	Mr. Roshan Fernandes	M.Tech, (Ph.D.)	Asso. Prof	CSE	15	-	
9.	Mr. Radhakrishna	M.Tech. (Ph.D.)	Asso. Prof	CSE	13	-	
10.	Mrs. Sarika Hegde	M.Tech, (Ph.D.)	Asso. Prof.	CSE	15.6	-	
11.	Mr. Raju K	M.Tech, (Ph.D.)	Asso. Prof	CSE	10	8	
12.	Mr. Sudeepa K B	M.E.(Ph.D.)	Asso. Prof.	CSE	14	-	
13.	Mr. Pradeep Kanchan	M.Tech.(Ph.D.)	Asst. Prof	CSE	15	1	
14.	Mr. Ravi B	M.Tech.(Ph.D.)	Asst. Prof	CSE	08	03	

Sl. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience		No. of Ph.D. students guided in the last 4 years
					Academics	Industry	
15.	Mr. Vijaya Murari T	M.Tech.(Ph.D.)	Asso. Prof	CSE	12		
16.	Mr. Chandra Naik	M.Tech.	Asst. Prof	CSE	10		
17.	Mrs. Pallavi K N	M.Tech.	Asst. Prof	CSE	9.4		
18.	Mr. Pradeep Nazareth	M.Tech.	Asst. Prof	CSE	8.6		
19.	Mr.Ranjan Kumar H S	M.Tech.	Asst. Prof	CSE	8		
20.	Mrs. Anisha P. Rodrigues	M.Tech.	Asst. Prof	CSE	7	1.3	
21.	Mr.Raghunandan K R	M.Tech.	Asst. Prof	CSE	7.3		
22.	Minu P Abraham	M.Tech.	Asst. Prof	CSE	7		
23.	Mr. Ramesha Shettigar	M.Tech.	Asst. Prof	CSE	6.9		
24.	Mr. Sampath Kini	M.Tech.	Asst. Prof	CSE	6	12	
25.	Mr. Mahesh Kini	M.Tech	Asst. Prof.	CSE	15		
26.	Mrs. Asmita Poojari	M.Tech.	Asst. Prof	CSE	6.7		
27.	Mr. Manjunath Prasad H R	M.Tech (Ph.D)	Asst. Prof	CSE	6		
28.	Mrs. Shruthi M	M.Tech.(Ph.D.)	Asst. Prof.	CSE	8.5		
29.	Ms. Savitha Shetty	M.Tech.	Asst. Prof	CSE	5.3		
30.	Mr. Sannidhan M S	M.Tech.	Asst. Prof	CSE	5.2		
31.	Mr. Sunil Kumar Aithal	M.Tech	Asst. Prof.	CSE	4		
32.	Ms. Keerthana B C	M.Tech.	Asst. Prof	CSE	4.10		
33.	Mr. Pawan Hegde	M.Tech.	Asst. Prof	CSE	3.6		
34.	Ms. Shabari Shedthi B	M.Tech.(Ph.D.)	Asst. Prof	CSE	4.2	0.9	
35.	Mr. Naveen D Chandavarkar	M.Tech.(Ph.D.)	Asst. Prof	CSE	6		
36.	Mr. Krishna Prasad N. Rao	M.Tech.	Asst. Prof	CSE	3.3		
37.	Mr. Shahsank Shetty	M.Tech	Asst. Prof.	CSE	2.5		
38.	Ms. Divya Jenniffer Dsouza	M.Tech.	Asst. Prof	CSE	3.6	3.5	
39.	Mr. Puneeth R P	M.Tech	Asst. Prof.	CSE	3.5		
40.	Ms. Shilpa M K	M.Tech	Asst. Prof.	CSE	1		
41.	Mrs. Rajalaxmi Prabhu	M.Tech	Asst. Prof.	CSE	4.9		
42.	Dr. Mohammed Javed	M.Tech, Ph.D.	Asst. Prof.	CSE	1.8		
43.	Mr. Sandeep Kumar Hegde	M.Tech	Asst. Prof.	CSE	5.2	2.8	
44.	Ms. Ankitha A Nayak	M.Tech	Asst. Prof.	CSE	2		
45.	Ms. Swathi Pai	M.Tech	Asst. Prof.	CSE	0.5		
46.	Ms. Rajashree	M.Tech	Asst. Prof.	CSE	1		

8. Percentage of classes taken by temporary faculty – programme-wise information:

UG: NIL PG: NIL

9. Programme-wise Student Teacher Ratio :

UG: 15:1; PG: 12:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Technical staff	08	08
Administrative staff	03	03

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

NIL

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received**Total grants = 29.17lakhs**

Sl. No	Title	Investigator(s)	Funding agency	Amount (Rs.)	Duration
1	Study and design of algorithms for VLSI CAD Tool Development towards applications involving mutually exclusive modules	Dr. Niranjan N. Chiplunkar (CO-PI)	AICTE-RPS	4.6 Lakhs	2008- 10
2	Software Infrastructure and Programming Model to Enhance the Performance of Applications on Multi-core Platform	Dr. Niranjan N. Chiplunkar, Principal(PI) Mrs. B. Neelima (CO-PI)	Department of Science and Technology (DST), Govt. of India. Ref No: DST/ TDD/03	Rs.15.98 Lakhs	2010-12
3	GPU Education Center	Mrs. B. Neelima (PI)	NVIDIA	Five GTX 470 cards worth Rs. 25000 each and financial grant of \$2500.	2011-12
4	AMD University Relations Program	Mrs. B. Neelima (PI)	AMD	Two AMD ATI GPU cards HD 5670 worth Rs. 8000 each	2011-12

5	Embedded Application Lab	Dr. Niranjana N Chiplunkar (PI) Dr. Udaya Kumar Shenoy (CO-PI)	Intel (through FICE)	Rs. 2 Lakhs and 10 ATOM boards worth Rs. 2 Lakhs	2011-12 Date of Receipt of first installment 22/8/2011
6	Intel Semiconducting (P) Ltd.,	Dr. Niranjana N. Chiplunkar	Extension of Intel Embedded Initiative	Rs. 1.5 lakhs and 40 Intel Galileo board	30/1/2014 - 2015
7	Wireless Aerial Sprayer of Pesticides	Dr. Sarojadevi H.	Dept. of IT & BT, KBITS through the new Age Incubation Network, NMAMIT	Rs. 3.00 Lakh	2014-2016
8	Raspberry Pi Intelligent Robot	Prof. Sharada U Shenoy	KSCST	Rs. 4000/-	2015-16
9	Interceptor-A Vehicle Surveillance System	Prof. Anisha P Rodrigues	WeNAMITAA - Alumni Association NMAMIT	Rs. 3500/-	2014-15
10	Smart Energy Meter using IOT	Prof. Raghunandan K R	WeNAMITAA - Alumni Association NMAMIT	Rs. 4200	2015-16

13. Research facility/centre with :

1. **State recognition** : Yes, state recognized research centre affiliated to VTU Belagavi.
2. **National recognition** : Nil
3. **International recognition** : Nil

One research lab-Centre for High Performance Computing (CHPC)- equipped with 6 GPU workstations.

Thrust Areas of CHPC are:

Parallel programming, Parallel algorithms, Compiler design and optimization, Parallel Computer Architecture, Multi-core programming and optimizations, GPU programming and optimizations.

CHPC has the following facilities:

- Five Intel RECEIVED Core™ i7-2600 CPU @ 3.40 GHz Computers with NVIDIA GTX470 cards.
- Three servers CISC Server: HP ML150 G6 Server HP.
- Power-RISC Model: IBM: Server 1:9110 Model 51A IBM power.
- X-86 CISC Quad core Processor: HP Z600 work station Base Unit.

14. Publications:

- **Number of papers published in peer reviewed journals (national / international):**
Journal Publications: 90.

Year	Journal Publications	Conference Publications
	National/ International	National/ International
2012	6	15
2013	7	30
2014	34	29
2015	24	23
2016	19	12
Total	90	109

- **Monographs** : Nil
- **Chapter(s) in Books** : One
- **Editing Books** : Nil
- **Books with ISBN numbers with details of publishers :**
 - o Dr. D.K. Sreekantha, "Credit Risk Evaluation of MSME using Soft Computing Techniques", ISBN 978-3-659-67369-6, Feb 2015.
 - o H. Sarojadevi, "Nanotechnology for Mobile Communication System", LAMBERT Academic Publishing, ISBN 978-3-659-48128-4, November 2013.
 - o H. Sarojadevi, "Processor Directed Cache Coherence Mechanism", LAMBERT Academic Publishing, ISBN 978-3-659-11944-6, April 2012.
 - o Dr. Niranjana N Chiplunkar and Manjunath Kotari, "VLSI CAD", PHI Learning, ISBN 878-81-203-4286-6, 2011.
- **Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.)** : SCOPUS 3, EBSCO 2, IEEE 8
- **Citation Index – range / average** : 0-8 , 3.75
- **SNIP** : 0.166-1.25
- **SJR** : 0.130-0.744
- **Impact factor – range / average** : 0-1.23
- **h-index** : 0-1

15. Details of patents and income generated**Dr. Niranjana N.Chiplunkar**

- o Application no. 1598/CHE/2014, Title: "SMITHA" Scalable Modular Interconnect for Three Dimensional High Performance Application – A new 3D topology for NoC based systems .
- o Application no. 1821 / CHE /2011, Title: Ring Connected Binary Tree.
- o Application no. 61/395, 480 US Provisional Patent 14/05/2010, Title: New Architecture for Network on chip (NoC) systems.
- o Application no. 428/CHE/2008 20/2/2008, Title: Rule based technology mapping method for Static RAM based Field Programmable Gate Arrays.

Venugopala P.S., Dr. Sarojadevi H., Dr. Niranjana N. Chiplunkar

- o Video watermarking for Mobile Device: Application no.1915/che/2015 CBR No. 7105

Income generated: Nil

16. Areas of consultancy and income generated

Areas: Computer Skills, Java and website design.

- Java program “Mulki Venkatramana Temple Ornaments Inventory Management System”, using Java. Started on 10-06-2015. This is a service towards temple and applying their skills for students. They will pay some amount to students as a token of appreciation which will be decided after project completion.
- Basic Skills in Computer: DDU GKY consultancy and training by Govt. of Karnataka.
- A NET Institutions Students Cooperative Stores Software has been developed software has been developed under the guidance of Dr. D.K.Sreekantha Dept. of CSE and being used in stores since April 2016.
- Consultancy and Conduction of online test

Year	Company	Income
May 2016	COMED –K Examination	Rs. 23,000
Feb 2017	MESCOM Junior Engineer Examination	Rs. 71,230

- Corporate training for bank officials

17. Faculty recharging strategies:

- Faculty members are sponsored to seminars/workshops/FDPs/ short term courses and conferences on regular basis. Following shows the number of events attended by faculty members.

Year	Number
2013	19
2014	13
2015	21
2016	13

- In-house workshops and FDPs are conducted by inviting external expertise to upgrade faculty in large numbers.
- Research incentives are given to faculties to encourage serious research activities.
- Faculty are promoted to carry out their higher studies under QIP program by providing full salary during this period. Four faculty are deputed for M.Tech programme and one for Ph.D. programme with full salary from year 2010 to 2016.

18. Student projects

- Percentage of students who have done in-house projects including inter-departmental :** BE: 66.38%, M.Tech: 92.3%
- Percentage of students doing projects in collaboration with industries / institutes:** BE: 33.62%, M.Tech: 7.7 %

19. Awards / recognitions received at the national and international level by

- Faculty:**

1. Dr. Niranjana N Chiplunkar

- Received the “Excellent Achievement Award” by Centre for International Cooperation on Computerization (CICC), Govt. of Japan in the year 2002.
- Received the “Outstanding Alumnus of MIT, Manipal”, recognition by Manipal University, Manipal, India in the year 2008.

- 3) Resume has been published in “Marquis Who’s Who in World” in January 2009.
- 4) Received the Bharatiya Vidya Bhavan National Award for the Best Principal of the Engineering colleges in the ISTE function held at Tiruvananthapuram in the year 2014.

2. Dr.Sarojadevi H.

- 1) Elected Executive committee member of the IISc Alumni Association, October 2015.
- 2) Resume selected in 2015 to be published in the Marquis Who’s Who in the World, 33rd edition, 2016.
- 3) Received Bharat Jyoti award certificate of excellence for meritorious service and achievement in the years 2012 and 2015.
- 4) Recognized for Distinguished Scientist Award in the year 2015 bestowed by Venus International Foundation.
- 5) Elected Management committee member of CSI Bangalore chapter in 2014 and Nomination committee member of CSI in 2015.

3. Dr. Neelima B.

- 1) “Women Who CUDA”: Dr. Neelima B. by CUDA in Action Team of NVIDIA, 2014.
- 2) Reviewer for proceeding of Concurrency and Computation: Practice and Experience, John Wiley Int.
- 3) Program committee member, 14th International Symposium on Parallel and Distributed Computing, held in Limassol, Cyprus, 29th June – 2nd July 2015
- 4) Organizing member for IEEE International Conference on HiPC since 2012
- 5) Reviewer for Cluster Computing, The Journal of Networks, Software Tools and Applications, Springer publications.
- 6) Received prestigious IEEE TCPP (technical committee on Parallel Processing) travel grant for presenting paper in 28th IEEE International Parallel and distributed Processing Symposium in Arizona, USA in May 2014
- 7) Received International Travel grant from the DST, Govt. of India for presenting a paper in 13th International Symposium on parallel and Distributed Computing held in France, June 2015
- 8) Best paper award for “Graphics Processing Unit (GPU) Implementation Methodology of AERMOD model”, 2nd International Conference on Recent Advances in Sciences and Engineering-ICRASE-2013. Organized by Association of Scholars and Professional-ASP at Hyderabad, India, 29th to 30th April, 2013.
- 9) Best paper award for “Analysis of Threaded Applications on Multi-core Platform”, National Conference on Ubiquitous and Pervasive Computing, NMAMIT, Nitte, 24th and 25th Jan. 2008

4. Mrs.Sharada U. Shenoy

- 1) CSI Student branch Counsellor, NMAMIT since 2007.
- 2) CSI Regional Student branch coordinator 2008-10 for Karnataka and Andhra Pradesh.
- 3) Won Best paper award for paper titled “A Review: On EDM based Energy Aware Routing Protocol for WSN”, International Conference on Emerging Trends in Engineering (ICETE -14), NMAMIT, Nitte; 15th – 17th May, 2014; ISBN: 978-93-83083-80-0, pp. 38-42.

5. Mr.Venugopala P S

- 1) Certificate of Recognition from Infosys Technologies Ltd for contribution to campus connect program in the year 2011.
- 2) Bronze recognition for the contribution to the Infosys Campus Connect program in the year 2013
- 3) Content Guru Award for the content delivery of Business Intelligence industry elective for the year 2013.
- 4) Silver recognition for the contribution to the Infosys Campus Connect program in the year 2014
- 5) Participation in Japan – Asia Youth Exchange Program in Science, administered by the Japan Science and Technology at the Ritsumeikan University Japan from 10th to 30th June 2015.

6. Mr. Ranjankumar H.S won Best paper award for “A New Visual Cryptographic Scheme Using Mixed Key Generation and Residue Number System based on Chinese Remainder Theorem” , ICETE,NMAMIT, Nitte, Page no.15-18, 2013

7. Mr.Raghunandan K. R. won Best paper award for “Secure audio encryption using hybrid transposition and multiplicative non binary system”, National Conference on FAIST-2013 , Organised by RRCE, Bangalore, 2013.

8. Mrs. Reeja S. R. won Best paper award for “Real Time video de-noising”, IEEE sponsored Annual International Conference on Emerging Research Areas AICERA-2012 at Kottayam, 19th to 21st June 2012.

9. Mrs. Shalini P R has secured the first rank with gold medal for the M.Tech Programme in the academic year 2009-2011.

10. Mr. Raju K. won Best paper award for “Automatic extraction of date and courtesy amount from Indian Bank cheque images for cheque processing system”, International Conference on Systemics, Cybernetics and Informatics (ICSCI) Pentagon Research Centre, Hyderabad, 2008

11. Mr.Roshan Fernandes has secured the first rank with gold medal for the M.Tech Programme in the academic year 2005-2007.

• **Doctoral / Post-doctoral fellows** : Nil

• **Students :**

- Dept. Of IT, BT and S&T KBITS project award 2014-15, with grant money of Rs.3 lakh each of the BE projects listed below.
 - o Wireless Aerial Sprayer of Pesticides (WASP)
 - o Automated Ration Vending machine using centralized Biometric authentication
- KSCST SPP award 2014 for the BE projects titled
 - o “ Food Vending Machine for Schools”
 - o “iCar: Intelligent and interactive Interfaces for driver assistance system”
- Gandhian Young Technological Innovation award 2015 for the BE project “ Food Vending Machine for Schools”
- 11 students of UG selected for Microsoft internship program and 2 students for INTEL internship in AY 2013-14.
- Mr. Rohit Thahiliani(4NM10cs076) got Best Paper Award for Paper titled” TCP variant for Data Centre Network- A comparative Study” in International Symposium on cloud and Services Computing- ISCOS), NITK, Surathkal, Dec 2012.

- Mr. Rohit Thahiliani (4NM10CS076) is an active member of DEFCON Hacking Community, DEFCON, Bangalore.
- Rushil Shah, Tejas Somaiah, Amogh Rai won the first prize of Rs. 25000/- in state level competition on Ethical Hacking “Builders n Hackers” held at Acharya Institute of Technology, Bangalore on 21st March, 2009.
- Many awards for “Code breaking Challenge” at SRM University, “Shastra”- Robotics competition & Software contest, Winners in IIT Mumbai during 2009-11

20. Seminars/Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Seminars/Competitions : 34
Workshops : 46
Conferences : 04

Sl. No	Title of Seminars/competitions	Dates	Resource person	Number of Participants	Source of Financial Support
2015 & 2016					
47.	Inter College Paper Presentation Competition	23 rd Feb, 2017	Dr. Udaya Kumar Shenoy, Dr. Surendra Shetty, Dr. Javed Ahmed, Prof. Krthik Pai, ISE	8	CSI
48.	Srujana – The Creativity	24 th Oct 2016	Mrs. Keerthana B C, AP, CSE, NMAMIT	60	TEQIP-II
49.	Think inside the box- photography competition	5th Oct, 2016	Prof. Sharada U Shenoy	14	CSI
50.	Techthink-Techact – Technical Dumbcharades.	1 st Oct 2016	NA	46	CSI
51.	TechnoWriter-Technical Story writing Competition.	29 th Sep 2016	Dr. Jagadeesha Pai B, MIT Manipal Dr. Uma Shankaran, Asst. Director, Student Welfare, Prof. Joymartis and Prof. Vishwanath, AP, Dept of Humanities, NMAMIT	16	CSI
52.	Tech Quiz	24 th Sept, 2016	NA	100	CSI
53.	Crack the Key – Quiz	19 th Sept, 2016	NA	36	CSI
54.	Technical Talk	31 st August, 2016	Mr. Karthikey Dwivedi, Vmware, Bengaluru	22	CSI
55.	Workshop on “Develop an App in 4 mins”	29 th Aug, 2016	Mr. Sandesh B Suvarna, CTO, Thappad Pvt Ltd, IONIC framework Evangelist	155	CSI

56.	Technical Extempore	11 th March 2016	NA	14	CSI
57.	Coder Quest	11 th March 2016	NA	22	CSI
58.	CSI day –talk Wireless Sensor Networks for Environmental Monitoring and Management	11 th March, 2016	Dr. Krishna Shenai, Distinguished Professor and Director R&D, NMAMIT	110	CSI
59.	C mania,	7 th March, 2016.	NA	22	CSI
60.	Tech JUGAAD	10 th Jan, 2016	Mr. Praveen Shetty, Lab Technichian , CSE, NMAMIT	30	CSI
61.	Automation in IC design	21 st Jan, 2016	Dr. Niranjan N Chiplunkar, Principal, NMAMIT.	190	CSI
62.	Career Opportunities in Networking: Education and Work perspective in UK	6 th January, 2016	Ms. Leesha Amanna, Alumna of Dept. Of CSE, NMAMIT	305	NMAMIT ACM-W student chapter
63.	Toy Circuit Presentation	2 nd Nov 2015	Mrs. Keerthana B C, AP, CSE, NMAMIT	--	Students of III 'A' CSE
64.	Webinar on “Cloud, Analytics and Data Science”	26 th to 27 th Oct 2015	Prof. Michael Yesudas, IBM, USA	185	
65.	A quizzing and coding event “Game of Codes”	12 th Oct, 2015	II year CSE & ISE	40	CSI
66.	A talk on ‘Higher Education Abroad’	9 th Oct, 2015	Mr. Brian D’Souza, an alumnus of NMAMIT		CSI, Wenamita a
67.	Think India, Transform India, A idea contest - 2015	1 st October 2015	Mr. Kalidas Professor, Weschool, Bangalore Mrs. Hema Professor, Weschool, Bangalore	30	NAIN in Associati on with WeSchool Bangalore
68.	Role of Computer Vision in Digital Era	16 th Sep, 2015	Dr. Sharmila Kumari M, HOD, Prof. PACE, Mangalore.	86	CSI
69.	A C programming-based event “D Bug C”	15 th August, 2015	SIG, CSI	92	CSI

70.	Seminar on Web Services	11 th August, 2015	Mrs. Sumathi Pawar, Canara Engineering College Mangalore.	65	ACE
71.	I.T Quiz competition	2 nd March 2015.	NA	60	CSI
72.	Technical Paper Presentation – 2015	30 th January, 2015	NA	30	CSI
73.	technical talk on “Computer and Natural Languages	17 th January, 2015	Nadoja Prof. K P Rao, Rtd. HOD, MIT, Manipal.	10	CSI
2013- 2014					
74.	Talk –Better late than never	4 th Sep 2014	Dr. Mohit P Tahiliani, Prof, NITK, Surathkal	155	CSI
75.	networking competition from LIVEWIRE	4 th Sep 2014	CADD Centre, Mangalore	96	CSI
76.	Technical Dumb charades	1 st Mar, 2014	NA	51	CSI
77.	Quiz- Women in science and technology	5 th Mar, 2014	NA	33	CSI
78.	IT quiz	15th Mar, 2014	NA	100	CSI
79.	Computer (Science) as an Inseparable part of human life	15 th Nov, 2013	Dr. Vaman Rao, HOD, Dept. of BTE, NMAMIT	130	CSI
80.	A Picture Quiz – “Pixel “	07 th Sep 2013	NA	58	CSI
81.	Brain Stunts Quiz”	28 th March, 2013	NA	62	CSI
82.	motivational talk, “ Inspiration Unlimited”	15 th Feb, 2013	Mr.Rithesh Kamath, Founder, Managing Director, Saraswathi Group of Institutes and Mr.Mohan BN, Chief Managing head of IU Leadership & Debate Clubs.	150	CSI
2012					
83.	Seminar on Microsoft Academic Initiative	26 th Nov 2012		112	
84.	Student Oriented Programme-C Quiz	12 th Feb 2012	NA	100	CSI

85.	Student Oriented Programme-IT Wiz	09 th Feb 2012	NA	100	CSI
86.	Student Oriented Programme-C Quiz	08 th Feb 2012	NA	60	CSI
87.	Technical talk on Future of the Web	19 th Jan 2012	Mr. Naren Kodavattat, CEO, IPOINT consultancies, Mangalore	175	CSI
88.	Motivational talk on Personal Effectiveness	12 th Jan 2012	Mr. Amarnath Rao, Dhruva Consultancies for soft skill training, Hyderabad	100	CSI
2011					
89.	Seminar on Image and Video Processing in Satellites.	19 th Aug 2011	Prof. Jharna Majumdar, Rtd ISRO Scientist	175	CSI

Sl. No.	Title of workshops	Dates	Resource person	Number of Participants	Source of Financial Support
1.	Image Processing Using MATLAB	11-12 th Feb 2017	Dr. Mohammed Javed	55	ACE
2.	Workshop on User centered Design	28 th Jan, 2017	Mr. Vigneshwar Poojar, 24X7 Pvt. Ltd, Bengaluru	39	CSI
3.	FDP on Multimedia Computing and Security	18 th – 20 th Jan 2017	Dr. Dinesh, R&D Samsung, Bengaluru, and Others(7)	53	TEQIP-II
4.	Virtual Reality And Augmented Reality	17 th Dec to 27 th Dec- 2016	Mr. Sampuran Sing, Mr. Ravish Rajpal, DALVIK APPS. Mumbai	23	ACE
5.	Workshop on R-Programming	8 th – 9 th Oct, 2016	Prof. Shashank Shetty, Prof. Sunil Aithal	14	CSI
6.	Ethical Hacking	8 th -9 th October, 2016	Dalvik Apps	74	ACM
7.	Android App Development for Beginners	1 st -2 nd October, 2016	Prof. Venugopala P.S., Prof. Ashwini B., Prof. Ankitha Nayak, Mr. Kashif and Mr. Muthaheer	65	ACM
8.	Python Programming	10 th September, 2016	Mr. Pradeep B and Mr. Rameez	41	ACM
9.	Workshop on Program Verification	18 th to 20 th July, 2016	Dr. Deviprasad, SOSI Manipal	25	Dept of CSE

10.	Web Development	30-31 st May 1 st June, 2016	Mr. Raghavendra Sharma	20	ACM
11.	Embedded System	21-23 rd March, 2016	Mr. Vishnuprasad Bhat	30	ACM
12.	CISCO CCNA certification workshop	13 th to 14 th March 2016	IIT Bhuvaneshwar	88	CSI
13.	Photoshop	12 th March, 2016	Mr. Shreeram and Mr. Pavan	30	ACM
14.	iGearUP	1-2 nd Feb, '16	Mr. Hari	220	ACM
15.	Vmware Data Center Virtualization Foundations Programme	8 th -9 th January, 2016	Prof. Jason Martis, Prof. Abhir Bhandary and Prof. Srikanth Bhat	107	ACM
16.	Ns-3	19-20 th October, 2015	Prof. Manasa S	27	ACM
17.	Python	3 rd -4 th October, 2015	Mr. Shashank Shetty	96	ACM
18.	Free-Scale RoboCar	19 th September, 2015	Anjana R, Deepa B, Sourabh S Shenoy, Akarsh Hegde and B Manjunath Kamath	30	ACM
19.	Modeling and 3D Animation	12 th September, 2015	Mr. Pradeep B.,	42	ACM
20.	Network Simulator-3	12 th September, 2015	Gopika S.	18	ACM
21.	Embedded System	23-25 th July, 2015	Mr. Vishnuprasad Bhat	20	ACM
22.	workshop on "Ethical Hacking"	17 th March 2015	Mr. Amit Roy, trainer, IFC3 India.	91	CSI
23.	workshop on "Cloud Computing"	15 th to 16 th March 2015.	Mr. Karthik Kesavan, Cloud trainer, IFC3 India.	90	CSI
24.	Workshop on Adobe Photoshop	22 nd February 2015	Mr. Subramanya V, Chairman, CSI student branch.	30	CSI
25.	workshop on "Sixth Sense Technology "	14 th to 15 th of February 2015	Mr. Pawan, Geeks Lab Technologies, New Delhi.	60	CSI
26.	State Level Hackathon-2015, A Entrepreneurship Boot Camp	3 rd to 4 th Nov 2015	Dr. Moulisree, CEO, ICT Skill Development society, Dept. of IT, BT, S&T, Government of Karnataka Mr. Kiruba Shankar, CEO, Business	90	NAIN in Association with ICT Skill Development Society (ICTSDS),

			blogging, Chennai Mr. Praveen Udupa, Managing Director, A1logics Pvt. Ltd., Mangalore Mr. Prajwal Kumar, Managing Director, Robotaunics Pvt. Ltd, Mangalore		Dept. of IT, BT, S&T, Government of Karnataka (GOK)
27.	Toy Circuit Presentation	2 nd Nov. 2015	Mrs. Keerthana B C	--	Students of III 'A' CSE
28.	Workshop on "Electronic System Design and Manufacturing (ESDM)"	31 st October to 1 st November 2015	Mr. Vaibhav Pratap Singh Mr. Hari Krishna Valluru, Mr. K. Jaganmohan, Mr. B. Jayanth, CDAC, Bengaluru	132	Consortium of Electronic Industries Karnataka (CLIK), CSI- BC and CSI Student branch of NMAMIT
29.	Intel HPC Code Modernization (Parallelization)	1 st October, 2015	Mr. Sangamesh Bannapa from Wipro	100	Wipro and Intel
30.	IoT Hands On Workshop	28 th Sep. 2015	Prof. Rajneesh Acharya, dept. of EEE	30	CSI
31.	Hands on workshop on Web Automation using Ruby	19 th to 20 th Sept 2015	Mr. Rameez Shoaib, website committee member of CSI, second year, dept. of CSE.	83	CSI
32.	Student Entrepreneurship Meet-2K15, A pre-hackathon	14 th to 15 th Sep 2015	Mr. Praveen Udupa, Managing Director, A1logics Pvt Ltd., Mangalore Dr. Premalatha Founder, Euclem Biologicals Pvt ltd.	270	NAIN in Association with ICT Skill Development Society (ICTSDS), Dept. of IT, BT, S&T, GOK
33.	Workshop on Big Data Analytics- Hadoop by Azure Skynet	12 th to 13 th Sep, 2015	Mr. Krishna Babu, Tamil Nadu	71	In association with ACE
34.	Workshop on Research Methodology and LATEX	2 nd to 4 th September, 2015	Dr. Uma, RV College of Engineering , Dr. Mahananda, SJCE, Mysore Dr. Dhatta Kumar, Special Officer, VTU e- learning centre	100	NMAMIT, Nitte in association with VTU

35.	FDP on soft computing and its applications	27 th to 29 th July 2015		40	TEQIP-2
36.	IBNC Summer Training Program on CCNA routers and switches	13 th July 2015 to 23 rd July 2015	Mr. Santhosh Dhanapal (Cisco Certified Trainer from Cisco Networking Institute, Bhopal)	47	ACE
37.	Workshop on “Advancement in Big Data Analytics and Hadoop”	2 nd April, 2015	Mr. Guru Prasad, Asst. Prof., SDMIT, Ujire	60	Dept of CSE
38.	National Workshop on Computing Systems Research (NWCSR-15)	25 th to 28 th , March, 2015	Dr. Yogesh, Simmhan, IISc, Bangalore Dr. Kishore Kothapalli, IIIT-Hyderabad Dr. Arati M. Dixit, Savitribai Phule University, Pune Dr. Apal Guha, IIIT, Delhi Dr. Basavaraj Talwar, NITK Surathkal Dr. Sucheta Tripathy, IICB, Kolkata Dr. B. Neelima, NMAMIT, Nitte	40	TEQIP-II FUNDED
39.	Workshop on Windows App Development		Mr. Naveen D C	20	Microsoft AA
40.	Workshop on “A Touch to Big Data Analytics and Hadoop”	28 th Feb, 2015	Mr. Naveen D C	22	Dept. of CSE
41.	Inter-collegiate one day workshop on IOT using Intel Galileo Board	23 rd Jan, 2015	Dr. D.K. Sreekantha	60	
42.	Workshop on Windows App Development	10 th Jan 2015	Mr. Naveen D C	50	
43.	Cloud Computing and IBM Bluemix	05/11/2014	Mr.Mahesh, IBM, Bangalore.	70	ACE
44.	Entrepreneurship Awareness Camp	05/11/2014	Dr. K S Sankaran, Director JKSHIM,	180	IEI
45.	Advanced Android Application Development	28/10/2014	Mr.Shodhan, Robosoft Technology	120	ACE

46.	National Android developer championship program	27/09/14 to 28/09/14	ARK techno solutions and IIT, Bombay	211	ACE
47.	workshop on “Digital Image Processing using MATLAB”	13 th to 15 th Sep 2014.	Mr. Vallabh and Mr. Anoop Justin of Tech Talk Systems, Bengaluru	50	CSI
48.	MS Word and MS PowerPoint	2 nd to 5 th Oct 2014	SIG group of CSI	21	CSI
49.	Analyzing Networks Using Wire shark and nmap	19 th Oct 2014	Mr. Yash Mandilwar, SIG roup CSI	15	CSI
50.	Two Week Faculty Development Program on Advanced Java & Internet Programming“	14 th to 25 th July 2014	Mr. Roshan Fernandes, Mr. Venugopala P. S. Mr. Vipin, Mr. Chandramouli	20	NMAMIT
51.	Summer Internship program on Network Programming	1 st to 15 th Jul 2014		90	
52.	Wearable computing using TI Chronos watch and IOT	14 th March 2014	Prof. Rajneesh Acharya, dept. of EEE	38	CSI
53.	Workshop-Linux for Newbies	1 st April, 2014.	Mr. Vedaj Padman, SIG group	20	CSI
54.	Entrepreneurship Awareness Camp	5 th Feb 2014	Dr. Rajshekar Manjunath	120	IEI
55.	Work shop on Web Design WEB Guru – 13	August 2013	Mr.Prathamesh Pai, Manipal	140	CSI
56.	Two Day National Level Workshop on Advances in Database Systems	07 th June 2013 to 08 th June 2013	Prof. Ramasesha Mudigere Mr. Suresh Naik Dr. Nagesh HR Dr. Anil Kumar K M	73	NMAMIT
57.	Windows 8 application development- Appathon	28 th , Mar 2013	SIG group	10	CSI
58.	Workshop on LaTeX. Typesetting and	19 th Jan, 2013	Dr. Jidesh, NITK Dr. Udaya Kumar Shenoy, NMAMIT	105	CSI

	Document Preparation				
59.	A Windows 8 Application development workshop	9 th Feb, 2013	Jason, Karthik, Nikhil, SIG group	52	CSI
60.	Entrepreneurship Awareness Camp	24/12/2012	Dr. Sudhir Raj K, Professor	100	IEI
61.	Workshop on Device Driver Development for Linux Platform	25/08/2012		51	ACE
62.	workshop on “Cyber Security & Malware Analysis”	13 th -14 th October, 2012	Mr. Sai Satish, Founder and CEO Indian Servers	162	CSI
63.	Workshop on Personal Effectiveness	17/09/2011	Mr. Amarnath Rao, Dhruva Consultancies for softskill training, Hyderabad	50	CSI
64.	Workshop on Cloud Computing	26/03/2011		75	
65.	Faculty Development Programme on Advances in VLSI design and algorithms	10/01/2011 to 12/01/2011		60	

Conferences					
Sl. No	Details of the Program	Date	No. of days	No. of Participants	TEQIP Fund (Rs)
1.	National Conference on Emerging Computing Paradigms	11 and 12 th March 2016	2	30	--
2.	National Conference on Multimedia & Information Security (NCMIS-14)	25-26, Feb 2014	2	80	79,865.00
3.	International Conference on Emerging Trends in Engineering-2012	15-16, May 2012	2	600	2,81,477.00
4.	International Conference on Computer Architecture Networking and Applications	7-8, Jan 2011	2	300	6,90,755.62

21. Student profile course-wise:

The admission is shared with CET and applications received via CET except for management seats.

Name of the course(Refer question no.2) BE – CSE	Applications received	Selected		Pass percentage			Academic Year
		Male	Female	Male	Female	Total	
	NA	113	92	96.67	100	98.3	2012-13
	NA	112	86	96.47	100	98.2	2013-14
	NA	103	98	100	100	100	2014-15
	NA	88	111	96.8	99.02	97.8	2015-16
	NA	114	98	NA	NA	NA	2016-17

Name of the course(Refer question no.2) M.Tech – CSE	Applications received	Selected		Pass percentage			Academic Year
		Male	Female	Male	Female	Total	
	NA	12	13	100	100	100	2012-13
	NA	14	11	100	100	100	2013-14
	NA	7	18	100	100	100	2014-15
	NA	5	15	100	100	100	2015-16
	NA	3	16	-	-	-	2016-17

Name of the course(Refer question no.2) M.Tech – SSE	Applications received	Selected		Pass percentage			Academic Year
		Male	Female	Male	Female	Total	
	NA	1	4	100	100	100	2015-16
	NA	-	-	NA	NA	NA	2016-17

22. Diversity of students

Name of the course(Refer question no.2) B.E – CSE	% of students from the college	% of students from the State	% of students from other States	% of students from other countries	Academic Year
	NA	80.5	19.5	Nil	2012-13
	NA	75.56	24.24	Nil	2013-14
	NA	87.06	12.94	Nil	2014-15
	NA	86.8	13.2	Nil	2015-16
	NA	84.2	15.81	Nil	2016-17

Name of the course(Refer question no.2) M.Tech – CSE	% of students from the college	% of students from the State	% of students from other States	% of students from other countries	Academic Year
	Nil	84	16	Nil	2012-13
	Nil	100	Nil	Nil	2013-14
	Nil	100	Nil	Nil	2014-15
	5	95	Nil	Nil	2015-16
	5.26	89.47	5.26	Nil	2016-17

Name of the course(Refer question no.2)	% of students from the college	% of students from the State	% of students from other States	% of students from other countries	Academic Year

M.Tech-SSE	Nil	100	Nil	Nil	2015-16

Name of the course (Refer question no.2) Ph.D.-CSE.	% of students from the college	% of students from the State	% of students from other States	% of students from other countries	Academic Year
	71.4	28.6	Nil	Nil	2013-14
	50	50	Nil	Nil	2014-15
	54.5	45.5	Nil	Nil	2015-16
	100	Nil	Nil	Nil	2016-17

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations? :

2013-14	GRE – 10
2014-15	GRE – 08
2015-16	GRE – 08
2016-17	GRE – 08

24. Student progression:

Student progression	Percentage against enrolled			
	2012-13	2013-14	2014-15	2015-16
UG to PG	9%	5%	5%	3%
PG to M.Phil.	Nil	Nil	Nil	Nil
PG to Ph.D.	<1%	<1%	<1%	<1%
Ph.D. to Post-Doctoral	Nil	Nil	Nil	Nil
Employed				
• Campus selection	82%	70%	80%	73%
• Other than campus recruitment	10%	12%	8%	10%
Entrepreneurs	Nil	Nil	Nil	Nil

25. Diversity of staff

Percentage of faculty who are graduates :	
of the same parent university	74.5 %
from other universities within the State	25.5 %
from other universities from other States	NIL

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period:

Number of faculty members were awarded with Ph.D.: 03

- Dr. Yuvaraju B. N in the year 2010 from VTU, Belagavi- NMAMIT Research Centre
- Dr. Ashok Kumar in the year 2010 from VTU, Belagavi- NMAMIT Research Centre
- Dr. Neelima B in the year 2015 from NITK, Surathkal.

27. Present details about infrastructural facilities

• **Department Library :**

Title: 507; Total Books: 813; Project Reports: 707

- **Internet facilities for staff and students:**
 - o Wi-Fi campus with 310Mbps leased line.
 - o Wi-Fi facility in Hostels.
 - o Dedicated Internet Lab which will be kept open till 7 P.M and on holidays.
- **Total number of class rooms: 13**
- **Class rooms with ICT facility: 09**
- **Students' laboratories: 10**

Sl. No	Lab	No. of Equipments
1)	CSL01	31 Computers
2)	CSL02	34 Computers
3)	CSL03	32 Computers
4)	CSL04	32 Computers
5)	CSL05	33 Computers
6)	CSL06	32 Computers
7)	CSL07	25 Computes
8)	CSL08	15 Computers, 15 IC trainer kits
9)	CSL09	68 Computers

- **Research laboratories:** 01 lab with 06 GPU workstations

28. Number of students of the department getting financial assistance from College:

UG-CSE

No. of students getting financial assistance from College	Academic Year
52	2013-14
41	2014-15
72	2015-16
77	2016-17

PG-CSE

No. of students getting financial assistance from College	Academic Year
01	2013-14
Nil	2014-15
01	2015-16
01	2016-17

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes. Assessment of placement trend in the recent past shows that there are improved placements in IT companies. Almost all such openings require software engineering skills. This gives direction for increased software professionals for teaching and development. With this basis, M.Tech program in **Software Engineering** is started in the year 2015.

The methodology is as follows.

- Initially the proposal of the program was prepared by the HOD, Principal and Dean(Academics) with the syllabus and the tentative staff, in 2014
- The proposal was sent to the VTU for approval
- A committee from VTU visited the department to scrutinize the facility in 2014
- Approval is given by the university (VTU) to start the program in 2015

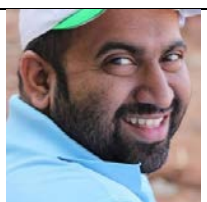
30. Does the department obtain feedback from?

- **Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.
 - Soft skill training program and Employability Skill Development are introduced.
 - The suggestions for revision of curriculum if any, are deliberated in the departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.
 - The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
- **Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.
 - Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.
 - A common questionnaire containing questions related to teaching, learning, and evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.
 - Course Exit Survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.

- BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
- The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops etc.
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this, alumni keep visiting the institution and interact with faculty members and HODs.
 - The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.
 - Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.
 - Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
 - During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
 - Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.
 - Extended timing for the library was requested, so the Library is kept open till 12 O' clock midnight.
 - Increased bandwidth for Internet (Wi-Fi) facility is provided with 310 Mbps.

31. List the distinguished alumni of the department (maximum 10):

Name	Batch	Designation	Company	
Muralidar Reddy	1990	Founder & Managing Director	Apoorva IT Solutions Hyderabad Pvt. Ltd	
Hemakiran Guptha	1990	Regional Head, Banking and Financial Services, Europe Brussels Area, Belgium Information Technology and Services	TCS	

Shashi Kumar M	1990	Managing Director	Ilogicon, Bangalore	
Biju Sebastian	1991	CEO	Andryan IT Solutions, Dubai, UAE	
Rohit Bhat	1992	MD and CEO	Robosoft Technologies, Udupi	
Srinivas Yermal	1997	Managing Director (CEO) & Co-founder	Indygo Software Systems (P) Ltd., Bangalore	
Darshan Kasravalli	1997	CEO	Ojas Testing Solutions, Bangalore	
Subodh Shetty	2002	Founder & Managing Director	Prasanna Technologies Pvt. Ltd, Mangalore	
Nischal Shetty	2007	CEO	Codigami Technologies Pvt. Ltd, Vashi, Navi Mumbai	
Devaprasad Pai	2010	Support Engineer	Microsoft Technologies	

32. Give details of student enrichment programmes (special lectures /workshops / seminar) with external experts.

Sl. No.	Name of the Conference /Workshop/Seminars	Duration	Source of Funding /Host	No of Participants
1.	Technical Extempore	11 th March 2016	CSI Student branch	14
2.	Coder Quest	11 th March 2016	CSI Student branch	22
3.	CSI day – Wireless Sensor Networks for Environmental Monitoring and Management	11 th March, 2016	CSI Student branch	110
4.	C mania,	7 th March, 2016.	CSI Student branch	22
5.	Tech JUGAAD	10 th Jan, 2016	CSI Student branch	30
6.	Automation in IC design`	21 st Jan, 2016	CSI Student branch	190
7.	Role of Computer Vision in Digital Era	16 th Sep, 2015	CSI Student branch	86
8.	Career Opportunities in Networking: Education and Work perspective in UK	6 th January, 2016	NMAMIT ACM-W student chapter	305
9.	Toy Circuit Presentation	2 nd Nov 2015	Students of III 'A' CSE	--
10.	Webinar on “Cloud, Analytics and Data Science”	26-27 th Oct 2015	IBM	180 Students and 5 staff
11.	A talk on ‘Higher Education Abroad’	9 th Oct, 2015	CSI Student branch, NMAM Institute of Technology, in association with Wenamitaa,	
12.	Think India, Transform India, A idea contest -2015	1 October 2015	NAIN of NMAM Institute of technology, Nitte in Association with WeSchool, Bangalore	30
13.	Quizz and Coding “Game of Codes”	12 th Oct 2015	CSI	40
14.	IoT Hands on workshop	28 Sep, 2015	CSI	28
15.	Workshop on Web Automation using Ruby	19-20 Sep 2015	CSI	83

16.	Role of Computer Vision in Digital Era	16 Sep, 2015	CSI	60
17.	A C programming-based competitions “D Bug C” was conducted by CSI Student Branch on the 15 th August, 2015	25 August, 2015	CSI	92
18.	Workshop on Big Data Analytics- Hadoop by Azure Skynet	12 th and 13 th Sep. 2015	ACE	71
19.	Seminar on Web Services	11 th August 2015	ACE	65
20.	Workshop on “Advancement in Big Data Analytics and Hadoop”	2 nd April 2015	Microsoft MIC, CSE dept.	60
21.	Workshop on “Cloud Computing and Ethical Hacking	15 th -17 th March, 2015	CSI	91
22.	Workshop on “A Touch to Big Data Analytics and Hadoop”	28 th Feb 2015	Microsoft MIC, CSE dept.	22
23.	Workshop on Adobe Photoshop	22 nd Feb, 2015	CSI	3030
24.	Workshop on “Sixth Sense Technology”	14 th – 15 th Feb, 2015	CSI	77
25.	Inter-collegiate one day workshop on IOT using Intel Galileo Board	23 rd Jan 2015	IoT CSE dept.	60
26.	Inter College Technical Paper Presentation – 2015	30 th Jan, 2015	CSI	20 students (10 papers)
27.	Technical talk on “Computer and Natural Languages”	17 th Jan, 2015	CSI	120
28.	Workshop on Windows App Development	10 th Jan 2015	Microsoft MIC, CSE dept.	50
29.	Cloud Computing and IBM Bluemix	5 th Nov 2014	IBM Bangalore	70
30.	workshop on “Analyzing Networks Using Wireshark and nmap”	19 th Oct, 2014	CSI	15
31.	Workshop on “MS Word and MS PowerPoint ”	5 th Oct, 2014	CSI	21
32.	Advanced Android Application Development by Robosoft Technology	28 th Oct 2014	CSE dept.	120
33.	Digital Image Processing workshop using Matlab	13 th - 15 th September 2014	CSI	50

34.	Networking Competition By Live wire	4 th Sep, 2015	CSI	96
35.	Seminar “Better late than never”, contribute to society	4 th Sep 2014	CSI	100
36.	National Android developer championship program by ARK techno solutions and IIT, Bombay	27-28 Sept. 2014	CSE dept.	211
37.	Entrepreneurship Awareness Camp	5 th Nov.2014	IEI, NMAMIT	120
38.	Entrepreneurship Awareness Camp	5 th Feb 2014	IEI, NMAMIT	120
39.	Workshop on “Latex- a Typesetting and Documentation Tool”	19 th Jan 2013	CSI	150
40.	Workshop on Web Technology	2 nd Feb 2013	ACE	140
41.	Workshop on “Windows 8 App Development”	9 th Feb 2013	CSI, Microsoft AA	52
42.	Half day Workshop on “Inspiration Unlimited”	15 th Mar 2013	CSI	150
43.	Workshop on .NET Frame work 4.0	16 th Feb 2013	ACE	60
44.	Workshop on “Android Applications “	23 rd March 2013	ACE	45
45.	Workshop on “dynamic web development” “ Web Guru ‘13”	21 st -22 nd Sept 2013	CSI	145
46.	Lecture on Computer (Science) as inseparable part of human life.	15 th Nov 13	CSI	120
47.	A Picture Quiz Called – “Pixel “	7 th Sept 2013	NMAMIT	40
48.	Seminar on “Android Application Development”	9 th Jan, 2012.	ACE	80
49.	Workshop on Device Driver Development for Linux Platform	25 th August, 2012	NMAMIT	40
50.	Workshop on “Cyber Security and Malware Analysis”	13 th Oct, 2012	CSI	180
51.	Seminar on Microsoft Application Windows 8	15 th Oct 2012	CSI, Microsoft AA	30
52.	Seminar on “Future of Web”	19 th Jan 2012	CSI	120

53.	Workshop on “Practices in Software Engineering”	27 th to 29 th Feb, 2012.	NMAMIT	31
54.	“International Conference on Emerging Trends in Engineering (ICETE – 12)”	May 15 th & 16 th 2012.	NMAMIT, CSI	55
55.	Workshop on “Android Mobile Application Development”	May 29 th - 31 st 2012.	ACE	51

33. List the teaching methods adopted by the faculty for different programmes.

- Activity based learning methods through simulations, role plays, quizzes
- Class room teaching using chalk & talk, usage of presentations, lab experiments and expert lectures/talks.
- Usages of web resources, VTU EDU-SAT programme, E-vidya Server, D-Space digital library, NPTEL videos.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (Pos) are formulated as per NBA graduate attributes. To ensure attainment of Program Outcomes (Pos) and PEOs, the students’ learning outcomes are monitored by evaluating Course Outcomes (Cos). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of program objectives and monitor of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).
- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analyzing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.
- The suggestion includes solving of additional numerical problems from exercise and GATE question papers, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students’ learning capability.
- Technical Skill Building: Students are encouraged to do mini projects and showcase them in students’ projects exhibitions.
- Participation of students in departmental research projects (if any) is highly encouraged.

- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.
- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.
- Summer research internships are offered to students.
- **Course Exit Survey** is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year
- **Programme Exit Survey** is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of Cos and Pos. The analysis of attainment of Cos and Pos is carried out.
- Based on the attainment of Cos and Pos, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of Cos and Pos.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities.

- Project C.O.N (Care Of Nature) is an initiative taken by the students of CSE representing the college at the IIT-Bombay TechFest, in an event called The Green Campus Challenge. It has carried out many eco- friendly tasks in the college relating to Energy, Climate and Air, Sustainability, Social Outreach, Going Green, Conservation of Food, Management of Waste, Bio Diversity, Saving Water, Designing for a Green Theme and Collaborating with the media about spreading the green message.
- A debate was organized in which the topic chosen was ‘Should there be new nuclear plants in India’. Taking up such a topic threw light on some of the environmental challenges that our country is facing and the degree of awareness people have about such issues, in the year 2012-13
- A ‘Clean Drive’ was organized in 2013 in the campus in collaboration with the NSS and Aura, the social organizations of the college. The biodegradable and non-biodegradable wastes collected from in and around the entire campus were segregated. The biodegradable wastes were used as manure and the non-biodegradable waste was saved for future use.
- During World Wildlife Day, a ‘Scavenger Hunt’ event was conducted in 2013 at Dr. Shivarama Karantha Wildlife Sanctuary, Pilikula, Mangalore. Many school children from Mangalore District participated and were enlightened about the beauty of nature, and their responsibilities towards care of nature.
- 30 biodiesel saplings were planted in Justice K. S Hegde Garden (Sanmathi).
- Teach good – teaching program on computer basics to rural students by ACE

(Association of Computer Engineering) in 2013-14 at Govt School, Karkala.

- The executive members of ACE, few enthusiastic volunteers, Coordinator Mr. Raghunandan K R, Mrs. Divya Jennifer and Mr. Pawan hedge (co-ordinators of ACE) visited the Chethana special school, Karkala on 3rd October, 2015. Volunteers taught how to make paper crafts and shared the basic computer skills among the inmates of the school. They also entertained the inmates with their dancing skills and some fun filled activities. They also distributed pens, books and fruits to the inmates of the school.
- The 65 members of ACE visited the “White Doves” a social organization in Mannagudda, Mangalore, on September 21, 2014. White Doves gives shelter to poor, needy and homeless. The members of the ACE interacted with the inmates through following activities:
 - o Games to entertain the inmates.
 - o Play with the children present there.
 - o Dance with the inmates.
 - o Songs sung by some interested inmates.
 - o Interaction with the inmates, discussing about their problems, their development.
 - o A talk by the founder, Corrine Rasquinha.
- “Basics of Computers & Web Designing” for English Medium School program through CSI student branch on 7th November 2014 . 40 students from Dr. NSAM English Medium High School, Nitte, of class III to VII took the benefit of this event. The UG students, who are the members of CSI student branch along with branch counsellor Prof. Sharada U Shenoy carried out hands on sessions.
- An amount of Rs. 1300/- was donated to annadana to Orphanage in Kinnimulki Udupi, by CSI student branch in April, 2016.

36. Give details of “beyond syllabus scholarly activities” of the department.

- Audit courses and R&D training programs are conducted in vacations for registered students.
- Project internship for final year/prefinal year UG/PG students in Infosys, Span Infotech, Vmware, Informatica, SAP, HP, DRDO, KAIGA Nuclear plant, IBM iCOS etc.
- Contesting in product innovation activities of Microsoft etc.
- Participating in govt. recognized projects such as IT/BT Incubation projects (title:Wireless Aerial Sprayer of Pesticides 2015), KSCST SPP projects(iCAR, Food vending machine, Ration Vending machine etc)
- Lectures, Seminars, Workshops on current technology.
- Conducting Paper Presentation and various Technical Competitions in technical events like Tech Nidarshan.
- Many Activities are conducted through professional bodies like CSI student branch, IEI student chapter, ACE (Association of Computer Engineering) and ACM/ACM-W student chapter
- Invited talk by Alumni to students like talk in Jan’16 by Mrs.Leesha Amanna, topper of 2011 batch, talk on “higher education abroad” by BrianD’Souza of batch 2001 and workshop series by Alumni Guruprasad (2012 batch) in Jan’16.

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

Sl.No	Name of Program	Name of Accreditation	Status	Period of validity	Organization
1.	B.E(CSE)	NBA	Accredited	BE(CSE) program is accredited for 3 years since July 2015	NBA

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths(S) - Well qualified and adequate number of faculty. - Good placement records. - Association with Industry for trend based curriculum framing, training, projects, internship and placement - Good Infrastructure for classrooms and laboratories. - Usage of ICT and web based teaching technologies.	Weaknesses(W) - Smaller ratio of faculty involved in research. - Negligible number of collaborations with research institutes. - Less industry funded projects/labs.
Opportunities(O) - Proposed university status. - Tie up with foreign universities for twinning programs and research collaborations. - Opportunity for more research work. - Industry collaboration, possibility of floating new courses and starting incubation programs. - Flexibility in designing new courses.	ChallengesRECEIVED - Strive to achieve 100% placement by training the lower level students to become eligible for placements. - To prepare talented students to become Entrepreneurs. - Adapting to ever changing technology and place them in core technology based companies in large numbers.

39. Future plans of the department:

- Setting up Centre of Excellence in Cyber Security, Wireless Networks and Internet of Things in collaboration with other departments.
- Enhancement of research activities.
- Striving for International collaboration.
- Increasing funded projects and Industry Consultancy.
- More emphasis on systems programming for better placements.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

1. Name of the Department & its year of establishment:

Dept of Electrical and Electronics Engineering – 1987

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.):

- U.G: BE (Electrical and Electronics Engineering),
- P.G.: M. Tech (Power Electronics);
- M.Sc by Research and Ph.D.

3. Interdisciplinary courses and departments involved:

- M. Tech (Energy Systems) with Dept of Mechanical Engineering

4. Annual/ semester/choice based credit system:

Choice Based Credit System

5. Participation of the department in the courses offered by other departments:

- **Participation of other department Students in the courses offered by the department:**
 - o Basic Electrical Engineering (EE105) a 4 credit compulsory course offered to all the students of I /II Semester.
 - o PG: M. Tech (Energy Systems Engineering) of Dept of Mechanical Engineering: Power Electronics-I, Switched Mode Power Supply, Solid State Power Controller, AC and DC Drives, Power Electronic Application to Renewable Energy Systems.
- **Following are the open electives offered by the Department of E&E to other departments.**

Sl. No.	Interdisciplinary Courses offered by IS&E department	Departments Involved
1.	8x10: Non-conventional Energy Systems	All Engineering Departments
2.	8x11 – Linear System Theory	E&C and Mech

- **Participation of the department students in the courses offered by other departments:**

Sl.No.	Course Code	Course Title	Semester	Course Offered By
1	MA8X01	Graph Theory	VIII	MATHEMATICS
2	MA8X02	Linear Algebra	VIII	MATHEMATICS
3	HUX8	Intellectual Property Rights	VIII	Department of Humanity
4	BT8X	Nano Technology	VIII	Biotechnology
5	CV8X 07	Enviromental Impact Assessment	VIII	Civil
6	CV8X30	Introduction to Geoinformatics	VIII	Civil
7	MEX8X	Industrial Pollution Control	VIII	Mechanical
8	EC8X	Robotics	VIII	Electronics and Communication

9	EC8X	Information and Electronic communication Technology	VIII	Electronics and Communication
10	EC8X	Consumer Electronics	VIII	Electronics and Communication
11	EC8X	Application of Signal Processing.	VIII	Electronics and Communication
12	CS8X	Essentials of IT	VIII	CSE
13	PH8X	Opto Electronic Devices	VIII	Physics
14	PH8X	Physics of Semiconductor Devices	VIII	Physics
15	MEX8	Management operations and Entrepreneurships	VIII	Mechanical Engineering
16	HU8X	Professional and Cognitive communicate	VIII	Department of Humanity
17	IS8X	Operating Sysytes	VIII	Information Science

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	2	3
Associate Professors	4	3
Asst. Professors	11	14

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./Ph.D./M.Phil., etc.)

Sl No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
1	Dr. Nagesh Prabhu	M. Tech, Ph.D.(IISc)	Professor/HOD	Power Systems	27	2
2	Dr. Pius Pinto A J	M. Tech, Ph.D.	Professor	Power Electronics	30	0
3	Dr. M Sathyendra Kumar	M.E., Ph.D.	Professor	Power Electronics	25	0
4	Mr. K Vasudeva Shettigar	M. Tech	Asso. Prof.	Power Systems	27	0
5	Mrs. Nayana P Shetty	M. Tech, (Ph. D.)	Asso. Prof.	Power and Energy Systems	17	0
6	Mr. Suryanarayana K	M. Tech, (Ph. D.)	Assoc. Prof.	System Analysis in Computer Applications	11	0
7	Mr. Naveen J	M. Tech	Asst. Prof.	Computer application in Industrial Drives	13	0

Sl No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
8	Mr. Pradeep Kumar	M. Tech, (Ph.D.)	Asst. Prof.	Computer application in Industrial Drives	11	0
9	Miss. Anitha M Colaco	M. Tech, (Ph.D.)	Asst. Prof.	Microelectronics and Control Systems	10	0
10	Mrs. Latha Shenoy	M. Tech, (Ph.D.)	Asst. Prof.	Digital Electronics and Advanced Communication	7	0
11	Mr. Mahabaleshwara Sharma K	M. Tech	Asst. Prof.	Instrumentation and Control Systems	10	0
12	Mrs. Raksha Adappa	M. Tech	Asst. Prof.	Digital Electronics and Advanced Communication	6	0
13	Mr. Raghavendra Prabhu	M.Tech	Asst. Prof.	Microelectronics and Control Systems	10	0
14	Mr. Dinesh Shetty	M.Tech (Ph.D.)	Asst. Prof.	Microelectronics and Control Systems	9	0
15	Mr. Girisha Joshi	M. Tech (Ph.D.)	Asst. Prof.	Power Electronics	8	0
16	Mrs. Sowmya Rani M	M. Tech (Ph.D.)	Asst. Prof.	Power Electronics	3	0
17	Mr. Gururaj K	M. Tech	Asst. Prof.	Energy Management	6	0
18	Mr. Md. Abdul Raheman	M. E	Asst. Prof.	Power and Energy Systems	2	0
19	Mr. Ravikiran Rao	M. Tech	Asst. Prof.	Power and Energy Systems	4	0
20	Mr. Swathi Hatwar H	M. Tech	Asst. Prof.	Microelectronics and Control Systems	2	0

8. Percentage of classes taken by temporary faculty – programme-wise information:
NIL.

9. Programme-wise Student Teacher Ratio:

UG: 15:1

PG : 12:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled: Sanctioned: 7 Filled: 7

11. Number of faculty with ongoing projects from a) National b) International funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Currently, there are no ongoing projects.

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received:

Granting agency	Purpose	Grant amount in Rs.	Duration
KSCST	Project on “Auxiliary switch ZVS-PWM DC-DC converters with coupled inductor”	5,000	2010-11
KSCST	Project on “Spherical Motor”	2,500	2011-12
KSCST	Project “LED Based street light for remote areas using solar power”	3,000	2011-12
KSCST	Project on “Unipolar SPWM based Reactive Power Compensator”	5,000	2014-15
KSCST	Project on “Analysis and development of Energy Efficient smart remote speed controller for a ceiling fan”	4,000	2015-16
AICTE MODROBS	Advanced Control System Lab	2.5 Lakh	2003
TEQIP I	Procurement of Lab Equipments and Software.	110.47 Lakh	2007-2010
TEQIP II	Procurement of Software.	26.6 Lakh	2011-16
HEXMOTO	Advanced Power Electronics Lab	2.55 Lakh	2015
VGST	A Remote monitoring and Control system of a three phase generator using Zigbee wireless Network	40,000	2015-16
KBITS, Govt. of Karnataka	Project on “Magneto Piezo footstep Power Generation”	35,000	2015-16

13. Research facility / centre with

- **State recognition:** Recognized Research Centre under VTU to offer M. Sc and Ph. D
- **National recognition:** NIL
- **International recognition:** NIL

14. Publications:

Year	Journal		Conferences		Total
	National	International	National	International	
2011	-	-	2	1	3
2012	-	-	-	2	2
2013	-	1	1	1	3
2014	1	4	2	12	19
2015	-	4	1	25	30
2016	3	30	1	14	48
Total	4	39	7	55	105

- **Number of papers published in peer reviewed journals (national / international):** International Journals: 43.
- **Monographs:** NIL
- **Chapter(s) in Books:** 01 chapter in 01 book.
 - o Title of the Book: Static Compensators (STATCOMs) in Power Systems.
Author: Dr. Nagesh Prabhu.
No. of Chapters published: 01 (pp # 557-593)
Title of the Chapter: Analysis and Damping of Subsynchronous Oscillations Using STATCOM.
ISBN No.: ISBN 978-981-287-280-7
Published by: Springer Science+Business Media Singapore Published in: 2015
- **Editing Books:** Nil
- **Books with ISBN numbers with details of publishers:** Nil
- **Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.):** International Journal of Electrical Power and Energy Systems (Elsevier): 02.
- **Citation Index – range / average :** Range:1 – 191; Average: 21.1
- **SNIP:** 1.6284
- **SJR:** 1.67
- **Impact factor – range / average:** Range: 0.276 – 6.55; Average: 3.5
- **h-index:** 12

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated:

One of the faculty members has given the consultancy in the field of “Industrial Drives” to Hexmoto Controls Pvt Ltd, Mysuru and received lab equipment worth Rs 2.55 Lakhs.

17. Faculty recharging strategies:

- i. Conducting a minimum one Faculty Development Programme (FDP) and one National level conference per year.
- ii. Deputing faculty members to FDP, Conferences and Workshops, Pedagogical training, Mission 10-X.
- iii. Deputing faculty on QIP (M. Tech & Ph. D.)
- iv. Research Allowances (Rs 2,000 pm) on completion of Ph.D. Course work
- v. Research Incentive -based on points earned for research contributions

Sl. No	Name	2014	2015
01	Dr. Nagesh Prabhu	2944/-	2100/-

18. Student projects

- **Percentage of students who have done in-house projects including inter-departmental:** UG:100% (2015-16); PG: 91% (31 out of 18+16)
- **Percentage of students doing projects in collaboration with industries / institutes:** UG: 0% and PG: 9% (3 out of 18+16)

19. Awards / recognitions received at the national and international level by**• Faculty:**

Faculty	Name of the Event	Organized by	Date	Award
Dr. Nagesh Prabhu	State level competition of UG projects organized by KSCST	KSCST-Bengaluru	2015	Best project of the year award
Prof. Raghavendra Prabhu	I ² CONECCT-2015	IEEE-Mangalore subsection	2015	Best project in Electrical sciences group First prize.

• Doctoral / post doctoral fellows: NIL**• Students:**

National level					
Sl.no	Name Of the Student	Name of the Event	Organized by	Date	Award
1	Mr.Nishant,Mr.Saurav, Ms.Apoorva Shetty, Ms.Madhumitha Poddar	State level competition of UG projects organized by KSCST	KSCST-Bengaluru	2015	Project of the year
2	Mr.Sagar.B.Rao & Mr.Sheharaz Sheik	Engineers of India Mangaluru	Engineers of India Mangaluru	2016	2 nd prize for project on "Plasma Speaker"
International Level					
Sl.no	Name Of the Student	Name of the Event	Organized by	Date	Award
1	Natasha Jennifer Pais	'Experience on Artificial Intelligence'	Ritsumeikan University,Japan	Dec 18 th to 24 th 2016	Selected for '10 day scholarship program'
2	Prajwal Puranik	'Experience on Artificial Intelligence'	Ritsumeikan University,Japan	Dec 18 th to 24 th 2016	Selected for '10 day scholarship program'

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Sl. No.	Title of Workshops/ Seminars/ Conferences	Date	Resource Person	No. of Participants	Source of Financial Support
2016					
1.	National Conference on Advances in Electrical Engineering (NCAEE-2016)	April 11, 12, 2016	Er. Ramakrishna, Director – Technical, MESCOM, Mangaluru	28 (External Students) + 27 (Internal students) + 18 Faculty members	NMAMIT

2	Faculty Development Programme on Embedded Systems Development Using AVR	June 27 – 29, 2016	Prof. Rajaneesh Acharya, Asst. Professor, Dept of EEE, NMAMIT, Nitte	02 (M. Tech Students) + 14 Faculty members	Nitte Education Trust (NET)
3	Faculty Development Programme on Application of LabVIEW to Automation and Robotics	July 25-27, 2016	Two Engineers from NI	02 (External) + 15 (Internal)	NET
4	FDP on, “Embeded System Design based on ARM Cortex-M3,”	Dec 19-21, 2016	Mr.Praveen Mr.Vishnu Prasad, Swadeshi	13 Students+ 7 Internal +2 External Faculty	TEQIP
5	Workshop on, “Light planning using Dialux”.	Dec, 23- 24, 2016	Mr.Gururaj , Assistant Professor, NMAMIT.	12 students+ 3 Faculty	TEQIP
6	Workshop on “Introduction to MATLAB/Simulink and PSIM”.	Dec 26-27, 2016	Mr.Raghavendra Prabhu, Mr.Abdul Rehman, Assistant Professor, NMAMIT.	16 students	TEQIP
7	Skill Development programme and FDP on, “Introduction to Industrial Automation”	Dec 28-29, 2016		46 Students+ 8 Faculty	TEQIP
2015					
8	A two day workshop on Internet of Things	October 30, 31, 2015	Prof. Rajaneesh Acharya, Asst. Professor, Dept. of E&E Engg, NMAMIT	16 students + 02 faculty members	NET
9	National conference on Advances in Electrical Engineering (NCAEE-2015)	April 02, 03, 2015	Dr. Panduranga Vittal, Professor, Dept of E&E Engg, NITK, Suratkal. Dr. Udayakumar Yeragatti, Professor and Dean, NITK, Suratkal.	27 (External) + 15 (Internal)	NET
2014					
10	Faculty Development Programme on Theory and Modelling of VSC based FACTS and HVDC controllers	July 21-25, 2014	Dr. Janaki Professor, Dept of E&E Engg, VIT, Vellore. Dr. Thirumalaivasan Professor, Dept of E&E Engg, VIT, Vellore. Dr. Saikumar HV, Professor and Head, Dept. of E&E Engg, NIE, Mysore.	30 (External) + 17 (internal)	TEQIP

11	International conference on Power Electronics and Drives (ICPEDs)	April 10, 11, 2014	Dr. Shripad T. Revankar, Professor and Director, Multiphase Fuel cell Research Lab, Perdue University, USA.	Total : 78 Participants	TEQIP
2013					
12	Faculty Development Programme on Modeling and Simulation of Power Electronics Devices and Circuits	Aug 29-31, 2013	Dr. H.P. Nagraj, PG Co-ordinator, VTU Dr. Vinayak N. Shet, Prof. And Head, Dept of E&E Engg, Goa Engg. College, Goa	20 (External) 15 (Internal)	TEQIP
13	National Conference on Advances in Electrical Engineering (NCAEE – 13)	Apr 12-13, 2013	D.T. Barki – CMD, Nobel Energy Solar Technologies Ltd.	30 (External) + 15 (Internal)	TEQIP
2012					
14	Faculty Development Programmer on Signal Processing Architecture with Microcontroller features	Aug 02-04, 2012	Dr. Ananda Narayan, Head, Selco Labs, Bangalore Dr. Ramesh Kini, Prof. Dept of E&C. NITK, Surathkal. Dr. Mrityunjaya V. Latte, Principal, JSS Academy, Bangalore	30 (External) + 15 (Internal)	TEQIP

21. Student profile course-wise

B. E Electrical and Electronics Engineering	Application Received	Selected	Enrolled		Pass percentage
Batch			Male	Female	
2011-15	NA	68	47	21	92.6%
2012-16		68	53	15	98.0%
2013-17		66	51	16	Final Year
2014-18		45	28	17	Third Year
2015-19		54	37	17	Second Year
2016-20		52	28	24	First Year

M.tech in Power Electronics	Application Received	Selected	Enrolled		Pass percentage
Batch			Male	Female	
2014-16	NA	16	07	09	87.5
2015-17		14	05	09	Final Year
2016-18		03	00	03	First Year

22. Diversity of students**B.E. (Electrical and Electronics Engineering)**

Academic Year	% of students from the State	% of students from other States	% of students from other countries (PIO quota-15% of sanctioned intake)
2009 – 10	61.5	38.5	10
2010 – 11	71.2	28.8	05
2011 – 12	66.2	33.8	-
2012 – 13	72.6	27.4	11.7
2013 – 14	67.2	32.8	05
2014 – 15	93.3	6.7	1.7
2015 – 16	92.6	7.4	-
2016 – 17	92.3	5.7	2

M.Tech in Power Electronics

Academic Year	% of students from the college	% of students from the State	% of students from other States
2014 – 15	0%	100%	-
2015 – 16	14%	84%	-
2016 – 17	33.3%	66.67%	-

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?:

Academic Year	GATE	GRE/TOEFL	IELTS	BARC
2015-16	01	2	4	1
2014-15	03	3		
2013-14	04	2		

24. Student progression

Student progression	Percentage against enrolled			
Academic Year	2012-13	2013-14	2014-15	2015-16
UG to PG	12% (08/69)	8% (06/77)	7%(05/77)	7%(05/73)
PG to M.Phil.	-	-	-	
PG to Ph.D.	04% (01/25)	-	-	
Ph.D. to Post-Doctoral	-	-	-	
Employed	43 out of 69 = 62.3%	32 out of 77 = 41.56%	34 out of 77 = 44.16%	40 out of 73 = 54.8%
• Campus selection				
• Other than campus recruitment	11 out of 69= 16%	21 out of 77= 27%	19 out of 77= 25%	18 out of 73=25%
Entrepreneurs	-	-	-	

25. Diversity of staff

Percentage of faculty who are graduates		
of the same parent university	UG: 52%	PG: 42%
from other universities within the State	UG: 42% Ph. D: 100%	PG: 42%
from other universities from other States	UG: NI	PG: 05%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period : NIL

27. Present details about infrastructural facilities

a) Library: (Deptl library): UG: 450 books, PG: 479 books and 50 CDs (accompanying soft. Copy of books)

Books (Titles)	303
Books (Volumes)	929 (UG: 450, PG: 479)
Equipment/software handbooks	481
Project reports	360
CD /VCD/ Multimedia (UG & PG Reports)	315
Workshop/ conference/ symposium proceedings/ Laboratory Manuals	18
On-line Accessibility to IEEE e-journals /transactions through central library /wifi	

b) Internet facilities for staff and students: 310Mbps leased line from BSNL for the college

c) Total number of class rooms: 06

d) Class rooms with ICT facility: All Six class rooms are equipped with LCD projector and Wi-Fi facility.

e) Students' laboratories: 07

Sl. No	Laboratory	Floor Area Sq.Ft /(sqm)
1	Electrical Machines Laboratory	2700 (~250 sqm)
2	Analog / Power Electronics laboratory	1950 (~180sqm)
3	Digital / Microprocessors, Microcontroller / Virtual Instrumentation Laboratory	970 (~90 sqm)
4	Circuits/ Measurements / Controls systems Laboratory	1020 (~95 sqm)
6	High Voltage / Relay / Project Laboratory	1080 (~100 sqm)
7	Computer Laboratory & Dept. Library	1950 (~180sqm)

f) Research laboratories: 01

Sl. No	Laboratory	Floor Area Sq.Ft /(sqm)
1	Research / PG Lab	1020 (~95 sqm)

28. Number of students of the department getting financial assistance from College:

Financial Year	Number of Students who have availed financial assistance from the College
2011-12	07
2012-13	24
2013-14	22
2014-15	18
2015-16	30
2016-17	18

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology:

As per vision 2020, there is a steady growth of power demand in India and power transmission capacity should also require enhancement. In the control of transmitted power and power utilization at the end customer, a lot of power electronics devices are being implemented. Hence there is a huge demand for Power Electronics Engineers in the Power industry and the department had submitted a proposal for introducing New M. Tech programme in Power Electronics. The AICTE and VTU have granted the approval for sanctioned M.Tech in Power Electronics from the academic year 2014-'15.

30. Does the department obtain feedback from

- **Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.
 - Soft skill training program and Employability Skill Development are introduced.
 - The suggestions for revision of curriculum if any are deliberated in the departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.
 - The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
- **Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.
 - Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.

- A common questionnaire containing questions related to teaching, learning, and evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.
- Course exit survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.
- BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
- The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops etc.
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this, alumni keep visiting the institution and interact with faculty members and HODs.
 - The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.
 - Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.
 - Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
 - During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
 - Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.

31. List the distinguished alumni of the department (maximum 10):

Sl. No.	Name	Batch	Organization	Designation
1.	Krishnaraj Kalluraya	1996	KPTCL	Asst. Engineer
2.	Smitha Pai	2000	Mumbai Engg College	Asst. Prof
3.	Vasudeva Murthy	2001	Qualcomm India Pvt. Ltd	Sr. Design Engineer
4.	Ashageetha	2002	Oracle India Pvt. Ltd, Bangalore	Technical Staff
5.	AshwiniAnchan	2004	BioMed Center, Reading, England	Engineer

6.	Sharathchandra Upadhyaya	2007	TCS	Sr. Software Engineer
7.	Guruprasad	2008	MESCOM	Asst Engineer
8.	Harshit Kundar	2010	L&T ECC, Bangalore	Asst Manager
9.	Bhuvana Baliga	2011	Infosys Technologies, Bangalore	System Engineer
10.	Saiman Shetty	2013	Tesla Motors San Francisco.	Controls Engineer

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts:

- Seminar week is conducted once in a year. The experts in different areas within the college deliver lectures on latest technologies.
- Two or three special lectures per semester are arranged by the E&E Engg students association, lectures being delivered by well known people either from the colleges or industries.
- Senior students train junior students on career aspects. Eg.: On attending the tests, group discussions, interviews etc.
- Students are encouraged to participate in Elixir – the hobby projects exhibition, various activities conducted by the department students association (ELITES).
- “Geomitra” – A competition to enhance the mathematical and logical problem solving skills of the students is conducted once a year
- Students are sponsored to take part in events like workshops, technical paper presentation, seminars conducted by other colleges.
- Students participate in the techno cultural activities of the college: TechNidarshan, Anandotsava every year.
- Students undergo internships in leading industries during their vacations.
- Skill development programmes
 - o Single Layer PCB Design
 - o “Embedded System Design based on ARM Cortex- M3”
 - o “Light Planning using Dialux”.
 - o “Introduction to MATLAB/ Simulink and PSIM”
 - o “Introduction to Industrial Automation”.
 - o Applications of PSCAD

33. List the teaching methods adopted by the faculty for different programmes:

- Didactic Lecture – In almost all the Courses
- Power Point Presentation – Where visual explanation is required
- Courses with Simulation Examples – Where simulation software are used to give better understanding of the courses
 - o Multisim / Pspice / Circuit based software / HDL– Analog Electronics Circuits, Digital Electronic Circuits, Linear Integrated Circuits, Network Analysis, Power Electronics, Switched Mode Power Controllers, etc
 - o Keil Compilers – Microcontroller
 - o MATLAB / Scilab – Digital Signal Processing, Control Systems, Power System Analysis, Fuzzy Logic, ANN, Computer Techniques in Power System Analysis, PWM Controllers etc.
 - o PSCAD, PSIM – Power System, Power Electronics
 - o LabVIEW – Graphical System Design

- Seminars – Courses with self-learning topics.
- Quiz – Mainly in laboratory courses, project work,
- Case Studies / mini projects – courses where practical verification of the concepts is possible – Linear Integrated Circuits, Programmable Logic Controller, Microcontrollers, etc.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (Pos) are formulated as per NBA graduate attributes. To ensure attainment of Program Outcomes (Pos) and PEOs, the students' learning outcomes are monitored by evaluating Course Outcomes (Cos). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of program objectives and monitor of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).
- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analyzing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.
- The suggestion includes solving of additional numerical problems from exercise and GATE question papers, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students' learning capability.
- Technical Skill Building: Students are encouraged to do mini projects and showcase them in students' projects exhibitions.
- Participation of students in departmental research projects (if any) is highly encouraged.
- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.
- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.
- Summer research internships are offered to students.
- **Course Exit Survey** is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year

- **Programme Exit Survey** is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of Cos and Pos. The analysis of attainment of Cos and Pos is carried out.
- Based on the attainment of Cos and Pos, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of Cos and Pos.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities:

Participation in school outreach programs 'SPARK', training on internet awareness, cyber crime etc (mainly to high school students), Enterprise development program, STEP activities, etc

36. Give details of “beyond syllabus scholarly activities” of the department:

- Elixir – Student hobby projects. The E&E Engg department students association encourages students to implement the theoretical concepts by making prototypes in the lab. Faculty members guide the students to do these projects. These projects would be exhibited once in a year for the benefit of all students of the college in the college premises.
- Training on mbed-ARM cortex m3 processor: To provide exposure to mbed processors, compilation of source code using cross compilers, burning of the hex file on to mbed processor, execution of simple tasks.
- Training on printed circuit board (PCB) design: Basics of PCB – Components, PADS, Traces, Vias, Solder Mask, Silk Screen; Schematic layout design using Eagle Cadsoft, Board design, Single Layer and Double Layer, Optimization on etching and auto routing; Masking of PCB, Etching of PCB, Drilling; Execution of sample projects.
- VLSI Layout design and simulation: Creation of floor planning using Magic software, Parasitic extraction and simulation using ngspice, Schema of preparation using gschema (using gEDA) and execution of sample projects.
- Training on Mathematical Modeling using MATLAB-Simulink; Basics of FACTS and POWER QUALITY CONTROLLERS.
- Technical talk on Industrial Automation: Basics of Industrial Automation using Programmable Logic Controllers (PLC), Human Machine Interface (HMI), Supervisory Control And Data Acquisition (SCADA) etc.
- Technical events conducted by the department during TechNidarshan: Burn and Run, Speed Cubing, Can u fix it, Time Lapse, Techno Crat
- Training on ATMEGA328 and MSP430 Microcontrollers, specifically on Ports, ADC, Timers and Interrupts for both the controllers.
- An initiative of designing microcontroller study aid kit (MicroLABLet) for students has been taken up by the departmet wherein all laboratory experiments can be conducted by interfacing the unit to laptop via USB.

37. State whether the programme/ department is accredited/ graded by other agencies. Give details:

- The B.E. (E&E Engg) programme has been **Accredited** by **NBA** during **2002** and **re-accredited in 2005 & 2012 (for 3 years)**.
- **ISO 9001:2008**, Dekra Certification B.V., The Netherlands, 2001
- Accredited by NAAC 2014 B grade

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department:

Strength: • Faculty with doctorate in various disciplines. • Decades of expertise. • State of the art laboratories with good number of software for research activities. • Good campus and infrastructure. • Good placement in IT industry.	Weakness: • Need to receive more research grants. • Industry Collaborations for research and consultancy •
Challenges: • Students with first preference as EE are very few. • To build confidence among students for entrepreneurship • Revising the curriculum to keep in pace with technological advancements. • Attract and retain Ph.D. qualified faculty. • Growing competitions amongst Peer engineering colleges	Opportunities: • New courses in Electrical and Electronics Engineering. • R&D center and Collaborative Research activities with industry participation. • Industrial Consultancy. • To further strengthen alumni support in developmental activities

39. Future plans of the department:

- To promote research leading to enhancement/creation of knowledge.
- To publish research papers in high impact factor indexed journals.
- To ensure that all faculty complete Ph. D.
- To promote Industry Consultancy and R&D.
- To establish MoUs with more Industries for research collaboration and consultancy.
- To establish Advanced Power Electronics Lab and focus on research in FACTS and Smart Grid.
 - PSIM, ORCAD and PSCAD softwares are procured and research work to be taken up.
- To establish Center of Excellence (CoE) in the area of “Renewable Energy and Storage”

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**1. Name of the Department & its year of establishment**

Electronics and Communication Engineering.

The department was established in the year 1986.

2. Names of Programmes / Courses offered

Sl. No.	Name of the program offered	Full Time/Part Time
1.	B.E. in Electronics and Communication Engineering	Full Time
2.	M.Tech. in Digital Electronics and Communication	Full Time
3.	M.Tech. in VLSI Design and Embedded System	Full Time
4.	Ph.D.	Part Time

3. Interdisciplinary courses and departments involved

Nil

4. Annual/ semester/choice based credit system

Choice Based Credit System

5. Participation of the department in the courses offered by other departments:

- Participation of other department Students in the courses offered by the department of E&C:

o Basic Electronics (EC112), a 4 credit course for all First Year students.

- Following are the open electives offered by our department to other departments. The classes are handled by E&C faculty to students of other departments:

Sl.No.	Subject Code	Subject
1.	EC8X 12	Information and Electronic Communication Technology
2.	EC8X 13	Robotics
3.	EC8X 18	Consumer Electronics
4.	EC8X 32	Applications in Signal Processing

- Department of CSE offers C++, DBMS courses for E&C students
- Students of EC department choose open elective subjects offered by other departments.

Sl.No.	Subject Code	Subject
1.	MA8X 01	Graph Theory
2.	MA8X 02	Linear Algebra
3.	HU8X 03	Intellectual Property Rights
4.	PH8X 04	Advanced Materials Technology
5.	BT8X 05	Nanotechnology
6.	BT8X 06	Instrumental Methods of Analysis
7.	CV8X 07	Environmental Impact Assessment
8.	ME8X 08	Industrial Pollution Control
9.	ME8X 09	Management and Entrepreneurship
10.	EE8X 10	Non-Conventional Energy Systems
11.	EE8X 11	Linear Systems Theory

12.	CS8X 14	Object Oriented Programming with C++
13.	CS8X 15	Essentials of Information Technology
14.	PH8X 19	Optoelectronic Devices
15.	HU8X 20	Value Education
16.	CH8X 21	Natural Products Chemistry for Biotech
17.	CS8X 22	Essentials of IT Service Industry
18.	MA8X 23	Statistical design and analysis of experiments
19.	HU8X 24	Professional & Cognitive Communicative
20.	MA8X 25	Introduction to Topology

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

Faculty	Sanctioned	Filled
Professor	6	7
Associate Professors	10	8
Assistant Professors	29	26

7. Faculty profile with name, qualification, designation, specialisation (D.Sc./D.Litt./Ph.D./ M.Phil., etc.)

Sl. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
1.	Dr. Rekha Bhandarkar	M.Tech Ph.D.	Professor & HOD	Digital Electronics	22	Guiding 01
2.	Dr. M. K. Parasuram	Ph.D.	Professor & Director	Power Electronics	53 Industry 02 Research 27	Guided 01
3.	Dr. Krishna Shenai	Ph.D.	Director R&D	Power Electronics	23 Industry 11	
4.	Dr. Rajesh Shetty K.	Ph.D.	Professor & Dean Admissions & Alumni Affairs	Digital Electronics & Advanced Communication	20 Industry 05	
5.	Dr. K.V.S.S.S.S. airam	Ph.D.	Professor	Industrial Electronics	18	Guiding 01
6.	Dr. Veena Devi Shastrimath V	Ph.D.	Professor	Digital Electronics & Communication	17	Guiding 01
7.	Dr. Seetharam K	Ph.D.	Professor	Artificial Intelligence	27 Industry 03	
8.	Dr. K. S. Shivaprakasha	Ph.D.	Assoc. Professor	Digital Electronics & Communication	11.5	

9.	Durga Prasad	M.E	Assoc. Professor	Power Electronics	15 Industry 2.5	
10.	Sushma P. S.	M.Tech (Ph.D.)	Assoc. Professor	Micro Electronics	18 Industry 0.5	
11.	Shrividya G.	M.Tech (Ph.D.)	Assoc. Professor	Digital Electronics & Communication	16	
12.	Padmavathi K.	M.Tech (Ph.D.)	Assoc. Professor	Digital Electronics & Communication	15	
13.	Prabha Niranjana	M.Tech (Ph.D.)	Assoc. Professor	Digital Electronics & Communication	12	
14.	Sukesh Rao M.	M.Tech (Ph.D.)	Assoc. Professor	Digital Electronics & Communication	11	
15.	Usha Desai	M.Tech (Ph.D.)	Assoc. Professor	Digital Electronics & Communication	11	
16.	Mahaveera K.	M.Tech	Asst. Prof.	Micro Electronics & VLSI Design	18	
17.	Sunitha Lasrado	M.Tech (Ph.D.)	Asst. Prof.	Micro Electronics and Control Systems	16	
18.	Satheesh Rao	M.Tech	Asst. Prof.	VLSI Design	13	
19.	Vidya Kudva	M.Tech (Ph.D.)	Asst. Prof.	Digital Electronics & Communication	15	
20.	Ravindra K. S.	M.Tech	Asst. Prof.	Digital Electronics & Communication	10 Industry 01	
21.	Pradyumna G. R.	M.Tech	Asst. Prof.	Digital Electronics & Communication	09	
22.	Roopa B.Hegde	M.Tech (Ph.D.)	Asst. Prof.	Digital Electronics & Communication	09	
23.	Charishma	M.Tech	Asst. Prof.	Micro Electronics and Control Systems	10	
24.	Niju Rajan	M.Tech	Asst. Prof.	Micro Electronics and Control Systems	07	
25.	Shubha B.	M.Tech	Asst. Prof.	Digital Electronics & Communication System	06 Industry 04	

26.	Anil Kumar Bhat	M.Tech	Asst. Prof.	Digital Electronics & Communication	04 Industry 06	
27.	Deepa K.	M.Tech	Asst. Prof.	Communication Engineering	4.5	
28.	Dileep Kumar M..J.	M.Tech	Asst. Prof.	Digital Electronics & Communication	03	
29.	Sudharshana	M.Tech	Asst. Prof.	Power Electronics System and Control	02	
30.	Bomme Gowda K. B.	M.Tech	Asst. Prof.	Industrial Electronics	02	
31.	Amrutha D. Pai	M.Tech	Asst. Prof.	Digital Electronics & Communication	04	
32.	Shivakumar B. R.	M.Tech (Ph.D.)	Asst. Prof	Digital Electronics & Communication Systems	07	
33.	Ramya Shetty	M.Tech	Asst. Prof	Digital Electronics & Communication	4.5	
34.	Karthik	M.Tech	Asst. Prof	Digital Electronics & Communication	03	
35.	Anupama B.	M.Tech	Asst. Prof	Digital Electronics & Communication	3.5	
36.	Nagapriya Kamath	M.Tech	Asst. Prof	Electronics	06	
37.	Prajwal Hegde	M.Tech	Asst. Prof	Digital Electronics & Communication	02 Industry 02	
38.	Prajnamala	M.Tech	Asst. Prof	Digital Electronics & Communication	02	
39.	Anusha R	M.Tech	Asst. Prof	VLSI & Embedded System	02	
40.	Ashwini K.	M.Tech	Asst. Prof	Micro Electronics & Control Systems	02	
41.	Shankari N.	M.Tech	Asst. Prof	Digital Electronics & Communication	-	

8. Percentage of classes taken by temporary faculty – programme-wise information

Nil

9. Programme-wise Student Teacher Ratio

- B. E. 16:1
- M.Tech. (Digital Electronics and Communication) 12:1
- M.Tech. (VLSI Design & Embedded Systems) 12:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Academic Staff – 9 Administrative Staff – 3

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

Nil

13. Research facility / centre with

- **State recognition**

Research Centre affiliated to Visvesvaraya Technological University, Belagavi, Karnataka

Sl. No.	Research Scholar Name	Title	PT/FT	Year of completion/ registration
1	Dr. Shanthala	Low Power VLSI System Design Techniques	PT	2010
2	Dr. Ramprasad P.	Multiresolution Based Dental Registration Tool for Assessing Bone Information in Periapical Dental Radiographs	PT	2011
3	Dr. Rekha Bhandarkar	Cochlear Filter Implementation on FPGA	PT	2014
4	Mrs. Sunitha Lasrado	Energy-efficient task partitioning for dependent Real time tasks	PT	Pursuing
5	Mrs. Prabha Niranjana	Development and Control of New Piezoelectric Actuator for Positioning Applications	PT	Pursuing
6	Mr. Suresh Rao M.	A novel instrumentation system for the disease diagnosis using pulse reading	PT	Pursuing

- **National recognition:** Nil

- **International recognition:** Nil

14. Publications:

- **Number of papers published in peer reviewed journals (national / international)-**
77

Year	No. of papers published		Total
	National	International	
2012	-	07	07
2013	-	06	06
2014	-	11	11
2015	-	21	21
2016	-	32	32

- **Monographs** – Nil
- **Chapter(s) in Books** – Nil
- **Editing Books** – Nil
- **Books with ISBN numbers with details of publishers**

Sl.No	Author/Dept	Chapter/Book Name	Publisher
1	Dr. S.Y. Kulkarni	Basic Electronics	I.K. International Publication Pvt. Ltd. ISBN-978 93-80578 81 1
2	Mr. Sampath Kumar	Kannada book on “Importance of Internet”	Visveswaraya Technological University (VTU), Belgaum, 2006.
3	Dr. S. Narayana Iyer	Signals and Systems	Cengage Learning, 2011. ISBN 10: 8131515842 ISBN 13: 9788131515846

- **Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.) :** Nil
- **Citation Index – range / average :** 0-12/4.8
- **SNIP :** Nil
- **SJR :** Nil
- **Impact factor – range / average:** 0.19 – 6.209/0.385
- **h-index :** 2

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated: Nil

17. Faculty recharging strategies

- Fresher’s orientation programs are conducted for newly joined teaching staff.
- Faculty members attend Faculty Development Program (FDPs), Short Term Training Programs (STTPs), Workshops, Seminars, Conferences on deputation.
- Faculty members are sanctioned with study leave with full salary for higher studies on full time basis under the Quality Improvement Program (QIP) of the institution.
- Research facilities & Incentives are given.
- Training programs for non-teaching(technical and non-technical) staff members are conducted annually to update their knowledge and skills.

18. Student projects

- Percentage of students who have done in-house projects including inter-departmental :**

B.E.: 88.7 – 100%

M.Tech.: 22 – 72 %

B.E.(Electronics & Communication)

Sl no	Academic Year	% of students who have done in-house project	% of students who have done project in Institutes/Industry
1.	2011-12	100	-
2.	2012-13	100	-
3.	2013-14	100	-
4.	2014-15	100	-
5.	2015-16	92.81	7.18
6.	2016-17	88.7	11.3

- Percentage of students doing projects in collaboration with industries / institutes**

M.Tech.: 35 – 78%

M.Tech (Digital Electronics and Communication)

Sl. No.	Academic Year	% of students who have done in-house project	% of students who have done project in Institutes/Industry
1.	2011-12	72	28
2.	2012-13	60	40
3.	2013-14	50	50
4.	2014-15	72	28
5.	2015-16	32	68
6.	2016-17	81	19

M.Tech (VLSI Design and Embedded Systems)

Sl. No.	Academic Year	% of students who have done in-house project	% of students who have done project in Institutes/Industry
1.	2012-13	39	61
2.	2013-14	22	78
3.	2014-15	44	56
4.	2015-16	61	39
5.	2016-17	61	39

19. Awards / recognitions received at the national and international level by

- Faculty**

- Dr. K Rajesh Shetty won the Best paper award at International Conference on Advanced Computing and Communication(ICACC-2010) held at Amala Jyothi College of Engineering Kottayam on May 3rd and 4th 2010.
- Mrs. Niju Rajan, Dr. Ratnamala Rao, Dr. Muralidhara won the Best paper award at IEEE sponsored International Conference on Advance Computing and Communication Systems (ICACCS-2013)held at Sri Eshwara College of Engineering Coimbatore during 19th to 21st Dec, 2013.

- iii. Mr. Anil Kumar Bhat & Zenitha Rehman won the Best Paper Award in the two day National conference on Advances in Communication and Signal Processing held at SJEC College of Engg., Mangalore on 13th & 14th August 2014.

• **Doctoral / post doctoral fellows:** Nil

• **Students**

Sl. No.	Nature of Activity	No. of students participated	Recognitions received
1	IIT Shastra, Chennai (2010-11)	15	I prize and II prize in 2 events
2	SENITA, MITE, Moodabidri (2011-12)	4	II prize in code optimization
3	VTU Fest, MSRIT, Bangalore (2011-12)	4	III prize in Extempore
4	Space Challenge'13, IIT Kharagpur	2	I Prize
5	312peciali, 2013, VIT, Vellore	3	participated
6	ICECCS 2014, December, NITK, Surathkal	3	participated
7	Shaastra 2015, IIT Chennai	1	participated
8	Shaastra 2016, IIT Chennai	4	participated
9	World Knowledge Day,	1	participated
10	Anveshana 2016, Banagalore by Synopsis	1	I Prize
11	I ² Connect IEEE Mangalore Subsection	2	I & II Prize

• **Students project Funded By KSCST**

Academic Year	Title of The Project	Name of the Guide	Student
2012-2013	Automatic Optimized Power Load Scheduling Using Wireless Technology for Minimization Of Maximum Power Demand	Dr.M.K.Parasuram	Anil Kumar K.
	Sign Language Translator	Mrs. Prabha Niranjana	Monica
2013-2014	User Defined Multi Application Inverter using IGBTs	Dr.M.K.Parasuram Mr. Sudarshan	Thanveer B. and others
	Sound Sensitive Smart Security System with user Definition	Dr.M.K.Parasuram Ms. Ankitha Rao	Athul Sony K. and others
2014-2015	Design of Machine Intelligent System for Cardiac Health Monitoring	Mrs.Usha Desai	Sagar G.Nayak Ashwin Shirva Vishwas Nayak Shaikh Mudassir

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Sl. No.	Details	Conducted on	Funding Agency	Outstanding Participants/ Resource Person
1.	ARM Processor	27 th to 30 th January, 2008	TEQIP, NET	Mr. Jivan Katariya
2.	Workshop on Digital Signal Processing	1 st , 2 nd July, 2008	TEQIP, NET	Dr. Sumam David HOD, Dept of E&C,

				NITK, Surathkal
3.	Digital Image Processing	2 nd , 3 rd February, 2008-09	TEQIP	
4.	National Level Conference & Symposium on Research, Exploration and Challenges in Electronics & Communication Engineering	3 rd , 4 th March, 2009	TEQIP	
5.	Impulse-09	5 th , 6 th March, 2009	TEQIP	
6.	Staff development Program on Wireless Communication	12 th , 13 th March 2009	TEQIP	
7.	Workshop on VTU VLSI Lab with CADENCE TOOLS	3 rd to 5 th August, 2009	TEQIP	Mr. Shivanand Koteswar, Director, Synopsys, Bangalore
8.	Workshop on DSP Architecture	8 th , 9 th September, 2009	TEQIP	Dr. Sandeep Sanchethi, Director, NITK, Surathkal
9.	Workshop on Recent Trends in Embedded System Design	23 rd , 24 th September, 2009	TEQIP	Mr. Mahesh Bhatkal, Director, Applied Digital Microsystems Pvt. Ltd., Mumbai.
10.	Seminar on Signal Integrity and Architectural Issues on Duobinary Schemes during International Conference on “Computer Architecture, Networking & Applications”	7 th January, 2011	IEEE Students Chapter	
11	Seminar on Mathematics for Engineering Research	15 th January 2013	TEQIP	Dr. S. N. Iyer, Professor, Dept. of E&C, NMAMIT, Nitte
12	Seminar on Global Navigation Satellite Systems	16 th February 2013	NMAMIT Nitte	Mr. Thyagaraja Marathe, Project leader, Accord Software, Bangalore.
13	FDP on Advances in Communication and Signal Processing	22 nd , 23 rd July, 2013	TEQIP	Dr. Pramod Viswanath, Professor, Electrical Engineering, University of Illinois, Illinois.
14	Workshop on Analog and Mixed Signal VLSI Design	29 th , 30 th July, 2013	TEQIP	Dr. S. Y. Kulkarni, Principal, NMAMIT. Nitte
15	International Workshop on Biomedical Signal Processing & Instrumentation	6 th , 7 th March 2014	TEQIP	Dr. Shubhakar K. Singapore University of Technology and Design, Singapore
16	International Conference on Emerging Trends in Engineering (ICETE-2016)	12 th , 13 th May 2016	TEQIP-II	Dr. Krishna Shenai, Distinguished Professor & Director of R&D,

				NMAMIT, Nitte and Adjunct Professor of E&E and CSE at Northwestern University in Evanston, Illinois, USA
17	Technical Seminar on “Basic Digital / Analog Instruments and its Applications” for Teaching and Non-teaching staff members	28 th July, 2016		Mr. Rajendra Hebbar Territory Manager Applied RealTech Systems Pvt. Ltd. (ARTS), Bengaluru
18	Workshop on “Virtual Laboratory”	1 st , 2 nd December 2016	TEQIP-II	Dr. K. V. Gangadharan, Director, Centre for System Design NITK, Surathkal

21. Student profile course-wise:

Name of the Course	Year	Applications received	Selected		Pass percentage	
			Male	Female	Male	Female
B. E. – Electronics and Communication Engineering	2011-12	NA	84	58	82.86	95.65
	2012-13	NA	124	71	85.45	100
	2013-14	NA	83	74	97.59	100
	2014-15	NA	103	64	97.08	98.43
	2015-16	NA	138	74	71.74	85.13
	2016-17	NA	108	74	--	--
M. Tech. – Digital Electronics and Communication (LEC)	2011-12	NA	11	14	100	100
	2012-13	NA	14	11	100	100
	2013-14	NA	13	12	92.3	100
	2014-15	NA	14	11	100	100
	2015-16	NA	10	15	90	93.33
	2016-17	NA	04	05	--	--
M. Tech. – VLSI Design and Embedded Systems (LVS)	2011-12	NA	10	8	100	100
	2012-13	NA	6	12	100	100
	2013-14	NA	12	6	100	100
	2014-15	NA	13	5	100	100
	2015-16	NA	8	10	100	90
	2016-17	NA	5	1	-	-

22. Diversity of students

Name of the Course	Year	% of students from the College	% of students from the State	% of students from other States	% of students from other countries
B. E. – Electronics and Communication Engineering	2011-12	--	71.83	23.24	4.93
	2012-13	--	65.13	31.28	3.59
	2013-14	--	62.62	37.37	--
	2014-15	--	87.5	12.5	--
	2015-16	--	90.9	9.1	--

Name of the Course	Year	% of students from the College	% of students from the State	% of students from other States	% of students from other countries
	2016-17	--	91.75	8.24	
M. Tech. – Digital Electronics and Communication	2011-12	--	88	12	--
	2012-13	4	100	0	--
	2013-14	--	100	--	--
	2014-15	--	100	--	--
	2015-16	--	100	--	--
	2016-17	--	100	--	--
M. Tech. – VLSI Design and Embedded Systems	2011-12	--	94.45	5.55	--
	2012-13	5.55	88.89	11.11	--
	2013-14	--	94.4	5.6	--
	2014-15	--	94.4	5.6	--
	2015-16	--	94.4	5.6	--
	2016-17	16.67	83.33	16.67	--

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

Sl.No.	Competitive Exam	Academic Year	No. of students
1.	Civil Services	2013-14	01
2.	Defense Services	2015-16	01
3.	NET	--	--
4.	GRE	2011-12	1
		2012-13	2
		2013-14	2
		2014-15	5
		2015-16	6

24. Student progression

Type	Academic Year	No. of students
UG to PG	2011-12	1
	2012-13	8
	2013-14	4
	2014-15	2
PG to Ph.D.	2011-12	1
	2012-13	2
	2013-14	1
	2014-15	-
	2015-16	1
Ph.D. to Post-Doctoral	----	

• **Employed through Campus selection**

Year	No. of Companies Visited	Students registered for placement (eligible)	No. of Students Selected	Average Salary (in lacs)	Highest Salary (in lacs)
2011-12	22	144	138	3.5	7.64

2012-13	26	131	86	3.25	7.2
2013-14	23	147	117	3.5	5.5
2014-15	31	163	140	3.75	6.0
2015-16	28	182	160	3.75	9.0
2016-17	20	220	137	3.5	9.56

• **Other than campus recruitment**

Academic Year	No. of Students
2011-12	06
2012-13	22
2013-14	08
2014-15	17
2015-16	2

• **Entrepreneurs**

Name	Designation	Organization
Mr. Sanjeeth Shetty	Chairman & CEO	Sanjeeth Shetty & Co.,
	Chairman & CEO	Eton & Co.,
	Chairman & Managing Trustee	The Eton Foundation
Mr. Rajesh Chowta	Founder	Mangalore Institute of Technology and Engineering, Mijar
	Managing Director	Indian Institute of Hardware Training

25. Diversity of staff

Graduates from same college	33%
Graduates from other college within the state	61%
Graduates from other college outside the state	6%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period: Ph.D. – 2

Sl.No.	Name of the Faculty	Research Topic	Year of Completion
2	Dr. K. Rajesh Shetty	Design and Construction of Algebraic Codes for Enhancing Information Integrity in Data Storage Systems	2013
3	Dr. Rekha Bhandarkar	Cochlear Filter Implementation on FPGA	2014

27. Present details about infrastructural facilities

a) Library

Floor Area: 80 sq.feet

Number of titles: 400

Number of volumes: 900

b) Internet facilities for staff and students – 310Mbps leased line from BSNL for the college

c) Total number of class room: 9

d) Class rooms with ICT facility

All class rooms are equipped with projector, facility to use laptop & Wi-Fi.

e) Students' laboratories:

Sl.No	Name of the Laboratory	Area in sq.m
1	Power & Industrial Electronics Lab	87.39
2	Project Lab-1	86.27
3	Microcontroller/ DSP (Comp Lab 1)	71.07
4	VHDL Laboratory (Comp Lab 2)	77.59
5	Project Lab-2	81.28
6	Digital Electronic Circuits Lab	84.68
7	Analog Electronic Circuits Lab	74.21
8	Communication & Microwave Lab	93.28
9	VLSI Lab	116
10	ARM Lab	116
11	EDC Lab	80

f) Research laboratories

Sl.No	Name of the Laboratory	Area in sq. m
1	PG & Research Lab	112

28. Number of students of the department getting financial assistance from College:

The fees concession up to 25% is given on merit basis for management quota students and faculty for PG studies.

Sl. No.	Academic Year	No. of Students	Total Amount in Rs.
1.	2013-14	49	35,36,675.00
2.	2014-15	61	45,56,050.00
3.	2015-16	115	87,39,925.00
4.	2016-17	88	31,68,000.00

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes, assessment exercise was undertaken before the development of new programs. A detailed study was done on the industry requirements (job opportunities) consulting various core companies. Also feedback was taken from alumni who are working in various companies / R&D labs regarding their requirements. Opinion of all the other stake holders was also considered.

30. Does the department obtain feedback from

- Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.
 - Soft skill training program and Employability Skill Development are introduced.
 - The suggestions for revision of curriculum if any, are deliberated in the

departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.

- The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
- **Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.
 - Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.
 - A common questionnaire containing questions related to teaching, learning, and evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.
 - Course Exit Survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.
 - BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
 - The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops etc.
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this, alumni keep visiting the institution and interact with faculty members and HODs.
 - The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational

Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.

- Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.
- Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
- During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
- Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.

31. List the distinguished alumni of the department (maximum 10)

Sl. No.	Name (Year of Passing)	Designation	Organization
1	Mr. Bhaskar Shenoy (1990)	Executive Director	i-Logicon ,Bangalore
2	Mr. Nanda Kumar (1991)	Vice President, Media Division	Tech Mahindra, Bangalore
3	Mr. Srivastava P. (1991)	CEO	Services & Solutions, Mumbai.
4	Mr. Sameer Kakkar (1995)	Flying Officer	IAF, Bangalore
5	Mr. Gopikrishna (1995)	Centre Head	Infosys ,Mangalore
6	Mr. Kiran Shastry(1998)	Co-founder, CEO	Findulum Techlabs Pvt. Ltd., Bangalore
7	Mr. Ganesh Gudigara(1998)	Founder & MD	Nirmitsu Technology Ltd.,
8	Mr. Ashwani Batra(1999)	COO	Saturn Infotech Inc., Northwales, USA
9	Dr. Shubhakar K.(2000)	Senior Teaching Fellow	Singapore University of Technology and Design, Singapore
10	Mr. Prajwal V. Kimar(2002)	Founder & MD	Mangalore Robautonics Pvt. Ltd., Mangalore

32. Give details of student enrichment programmes (special lectures/ workshops / seminar) with external experts.

Academic Year	Special Lectures	Workshops	Seminars	Others	Total
2011-12	04	-	01	01	06
2012-13	02	02	01	02	07
2013-14	03	-	01	02	06
2014-15	02	-	03	01	06
2015-16	01	-	02	03	06
2016-17	01	01	01	-	03

2011-12

1. ELECSA had organized a technical talk on “Image processing using Open GL” on 1st Febraury 2012. The talk was delivered by Sharathchandra Bhagawath, Software architect, Global delight Technologies, Udupi.

2. ELECSA had organized a technical talk on “Device Drivers”. The talk was delivered by Dr. Niranjana N. Chiplunkar, Vice-Principal, NMAMIT, Nitte.
3. During Tech Nidarshan '12 the events Symposium, Surya Sparsham , Robo Soccer, Linkin Parts, Convivium, Huntenna, Mine Sweeper, Quiz and Paper presentations were organized by E&C department.
4. A talk on “Basics of Signals & Systems” was delivered by Mr. Suryanarayana K., Assistant Professor, Department of Electrical & Electronics Engg, NMAMIT, Nitte , during September 2012. (IE student chapter of E&C department).
5. Prof. Ram Achar delivered an expert lecture on “Meeting the Signal Integrity Challenges of High –Speed Design on 12th December 2012. (IEEE student chapter)
6. A seminar was presented with a theme “Entrepreneurship Awareness Camp” on 21st Dec 2012 (IE student chapter of E&C department).

2012-13

1. ELECSA organized a technical talk on “Modelling using MATLAB” by Suryanarayana K., Assistant professor, Department of Electrical & Electronics Engg, NMAMIT, Nitte on 16th January, 2013.
2. A talk was delivered by Dr. Somashekar Bhat, Professor, Department of E&C, MIT, Manipal on the topic “Problem of problem solving” for 2nd year students.
3. An Industrial visit to “Varahi power plant” was arranged for 6th semester students of E&C department on 16th March 2013 by IE student chapter.
4. A seminar was arranged on “Fundamentals of Electromagnetics”, by Mr. Suryanarayana K. Assistant Professor, Department of E&E, NMAMIT, Nitte during March 2013. (IE student chapter).
5. A training program for CR s & office bearers of all branch associations had been arranged on 20th March 2013 in association with staff development college, Nitte University with the theme “Values & Personality”. Mr. Rev. Fr. Ronnie Prabhu, Former Rector, St. Aloysius & St. Joseph institutions was the speaker.
6. Various events organized by the E&C department under Tech Nidarshan 13' were Robo Thon, Link in parts, Huntenna, Paper Presentations, Surya Sparsham, Digital Fortress, Tecastle.
7. Workshop on Robotics was conducted by the students of E&C department for the students.

2013-14

1. During ICETE-14 invited talk was arranged on “Digital Signal Processing-Different and Simpler Prospective” by Dr. Arulalan, Asst. Professor, E&C Dept., NITK, Surathkal on 16th May, 2014.
2. ELECSA organized a talk on the topic “Computer Vision Applications in Electronics Industry” by Mr. Sampath Kumar Asst. Professor, MIT, Manipal on 17th September, 2014.
3. ELECSA organized a talk on the topic “Analog Electronic Circuits” by Dr. Somashekhara Bhat, Professor & Head Dept. of E&C MIT, Manipal on 8th October, 2014.
4. ELECSA organized a talk on the topic “Different Transform Techniques” by Dr. K.V.V. Murthy Visiting Professor IIT, Gandhinagar on 17th December, 2014
5. Entrepreneurship awareness camp for all final year students by IE student chapter on 26th February, 2014.
6. An Industrial visit to “MRPL, Mangalore” was arranged for 6th semester students of E&C department on 6th February 2014 by IE student chapter.

2014-15

1. ELECSA organized a technical talk on “Past, Present & Future of Communication System” , by Dr.Prashantha Kumar, Asst. Professor, Dept. of E&C, NITK on 14th January, 2015.
2. ELECSA organized a technical talk on “Optical Communication Systems” by Dr.K.V.S.S.S.S. Sairam, Professor, Dept. of E&C, NMAMIT, Nitte on 21st January, 2015.
3. During ICETE-15 invited talk was arranged on “Artificial Neural Networks” by Dr. Deepu Vijay Sen, Professor, Dept. of E&C, NITK, Surathkal on 8th & 9th May, 2015.
4. A seminar on “Next Generation Telecommunication Systems – Key Challenges and Opportunities” for PG students by Dr. Krishna Shenai, Distinguished Professor & Director of R&D, NMAMIT, Nitte and Adjunct Professor of E&E and CSE at Northwestern University in Evanston, Illinois, USA on 31st December 2015.
5. Entrepreneurship awareness camp for all final year students by IE student chapter on 21st January, 2015.
6. A seminar on “Basics of Control System” by Prof. Suryanarayana K, Assistant professor, Department of Electrical & Electronics Engg, NMAMIT, Nitte on 18th March 2015.

2015-16

1. ELECSA organized a technical talk on “Philosophy, Science & Technology” by Dr. Krishna Shenai, Distinguished Professor & Director of R&D, NMAMIT, Nitte and Adjunct Professor of E&E and CSE at Northwestern University in Evanston, Illinois, USA on 17th February, 2016.
2. ISTE (student chapter) of E&C Engg. Organized a talk on the topic “Automobile Electronics”, by Dr. M. K. Parasuram, Director, Department of Electronics and Communication Engineering on 10th February, 2016.
3. IEEE Students chapter & ELECSA organized a technical talk on “VLSI – An Overview on Broad Categories and Career Opportunities”, by Rakesh K K Ph. D. Scholars, IIT, Bombay, Laxmeesha S., Ph. D. Scholars, IIT, Bombay, Ganesh Prasad, Senior Engineer, Samsung 25th January, 2016.
4. Entrepreneurship awareness camp for all final year students by IE student chapter on 11th February, 2016.
5. An Industrial visit to “Varahi Power Plant” was arranged for 6th semester students of E&C department on 13th February 2016 by IE student chapter.
6. An Intra college Paper presentation –IEINITTE-16 was organized by IE student chapter on 5th March 2016.

2016-17

1. ELECSA organized a technical seminar on “Project Lab Concepts”, by Mr. Sunil T. Shabhatnavar, General Manager, Advanced Electronic Systems (ALS), Bangalore on 24th August 2016.
2. ELECSA organized a technical talk on “Transistor Modeling and Analysis”, by Laxmeesha S., Ph.D. Scholar, IIT, Mumbai on 26th August 2016.
3. ELECSA organized a workshop on “PCB Design and Soldering Practice” for the branch students and staff by Mr. Ansal V., Ph.D. Scholar, Department of Electrical and Electronics, NITK, Surathkal, on 2nd October 2016 and 6th November 2016.

33. List the teaching methods adopted by the faculty for different programmes.

Different teaching methods are adopted for various programmes (UG & PG) offered by the college. The details are given below:

1. Power point presentation for few subjects for effective deliberation of concepts.

2. Black board teaching for some of the courses involving mathematics.
3. Animations using Flash tools to make the students understand critical concepts.
4. Self study hours available in the class timetable during which students are made to study concepts given by the subject teachers.
5. Students are asked to refer NPTEL materials; e-journals etc. and prepare documents in various concepts.
6. Case studies on specific topics are given to students and evaluated by the faculty.
7. To attract the students into the new topic, topics are introduced through innovative introduction and brain storming techniques.
8. To make the students understand some of the topics, group of students are trained to demonstrate such topics through 'role plays'.
9. Hands-on training is provided.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (Pos) are formulated as per NBA graduate attributes. To ensure attainment of Program Outcomes (Pos) and PEOs, the students' learning outcomes are monitored by evaluating Course Outcomes (Cos). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of program objectives and monitor of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).
- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analyzing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.
- The suggestion includes solving of additional numerical problems from exercise and GATE question papers, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students' learning capability.
- Technical Skill Building: Students are encouraged to do mini projects and showcase them in students' projects exhibitions.
- Participation of students in departmental research projects (if any) is highly encouraged.
- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.
- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.
- Summer research internships are offered to students.

- **Course Exit Survey** is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year
- **Programme Exit Survey** is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of Cos and Pos. The analysis of attainment of Cos and Pos is carried out.
- Based on the attainment of Cos and Pos, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of Cos and Pos.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities.

1. The college has started and supported clubs / associations for social outreach.
2. Students are the members of “Kalanjali” – a cultural club of the college, which stage awareness programs.
3. Some of the faculty members take part in Social Service Activities through NCC, Lions Club and Rotary Club.
4. Industrial visit is organized every year for the students to expose them to Industrial environment and technology.
5. Students are members of service oriented programs like NSS, Computer literacy, helping specially abled people.
6. Project “Annadana”, a team of students work for excess food management.
7. A One Week Training on “Advanced Electronic Equipments” was conducted for M. R. Poonja ITI, Tapovana, and Thokur.
8. A course on “Mobile Repairing” was conducted for rural youth by Entrepreneurship Development Cell of the institution in EDC electronics lab.

36. Give details of “beyond syllabus scholarly activities” of the department.

Students have participated and won prizes in various technical events conducted by IITs, NITs, Universities & other recognized institution and industries.

1. Students have participated in IIT Shastra, Chennai and won prizes.
2. Students have participated in technical events conducted by IIT Kharagpur, NITK Surathkal, VIT Vellore, VTU Belagavi, Synopsis, IEEE I²Connect.
3. A group of students has published a paper in an International Conference conducted at SIT, Tumkur in association with Elsevier publications.
4. At the end of every year a project exhibition is organized by the department in order to showcase the talents of the 8th semester students.
5. ‘Challenge of the week’ is a student level circuit analyzing competition organized by the department faculty. This will enhance the circuit analyzing ability of the students.

6. Mini projects based on simulations are given for some of the theory subjects to explore the students to open source tools.
7. An Employability Skill Development class of one hour per week for pre-final year students was introduced to prepare the students for placement process.
8. Students have project club where the students design some projects.
9. Student association of the department ELECSA in consultation with the staff coordinator organizes special seminar on both technical and non-technical topics
10. A workshop on PCB design was organized for the students.
11. Students are attending audit courses during vacation.

37. State whether the programme / department is accredited / graded by other agencies. Give details.

Yes.

Programme	Accredited by	Year	Duration
B.E. (E & C)	NBA	2001	3 years
B.E. (EC)	NBA	2005	3 years
B.E. (EC)	NBA	2012	3 years
B.E. (EC)	ISO 9001-2008	2001	Till 14 th Sept 2018
M.Tech.(DEC)	NBA	2008	3 years
M.Tech.(DEC)	NBA	2015	2 years

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths • Qualified and dedicated faculty • Well designed and structured curriculum • Encouragement to pursue Research & Development. • Industrial Training for students. • Excellent placement for students. • The Dept. has state of art equipment and software tools	Weakness • Industry R&D projects • Research publications in renowned journals • Inter disciplinary research. • Locational disadvantage.
Opportunities • Continuous learning, higher studies, learning new technologies and tools. • Encouragement for attending short term courses. • Opportunity for research interaction with other universities/ organizations/ industries in India and abroad. • Opportunities for joint R&D with industry. • Many options for introducing special courses and training programs. • Opportunity for entrepreneurship. • To establish center of excellence in the areas of signal processing, communication, Embedded systems and VLSI	Challenges • Higher student intake. • More number of Institutions coming up.

39. Future plans of the department.

- Encouraging UG students of the department to convert their projects into papers
- Organizing an inter college project exhibition
- Atleast two guest lectures in a semester for UG/PG students
- Encouraging non doctoral faculty members to register for Ph.D. and for faculty who have registered to complete at the earliest.
- Further enhancing Faculty Training.
- Bridge Courses supported by Industry.
- Introduction of Certification courses.
- Teaching Latex for UG and PG students.
- Providing GATE coaching for students
- Setting up of a Centre for Excellence in Wireless Sensor Networks and Signal Processing.
- To focus on funded research projects.
- Organizing an International Conference jointly with world class professional bodies like IEEE/IET/ACM/Springer.
- To offer Industry Consultancy.
- Establishing MoUs with the research wings of IISc, IITs, IIITs, NITs and other premier institutions.
- Establishing MoUs with the research wings of the corporate sectors IBM, National Instruments, ITTIAM Systems.
- Centre of Excellence in VLSI, Embedded Systems, Signal Processing and Wireless Communication.

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

1. Name of the Department & its year of establishment

Information Science & Engineering and established in 1999.

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

- UG – B. E. (Information Science & Engineering)
- P.G – M. Tech. (Computer Network & Engineering)

3. Interdisciplinary courses and departments involved

Nil

4. Annual/ semester/choice based credit system

Choice Based Credit System

5. Participation of the department in the courses offered by other departments

- **Participation of other department Students in the courses offered by the department:**
 - Following are the open electives offered by our department to other departments. The classes are handled by ISE faculty to students of other departments.

Sl. No.	Open Electives offered by ISE	Departments Involved
1	13IS8X26 – Data Structures	All Engineering Departments except CS&E, IS&E
2	13IS8X27 – Fundamentals of Operating System	All Engineering Departments except CS&E, IS&E

- **Participation of the department students in the courses offered by other departments:**
 - Following are the open electives offered by other departments to students of ISE. The classes are handled by respective department faculty.

Sl.No	Subject	Subject Code	Offered by
1.	Environmental Impact Assessment	CV8X07	Civil Engg.
2.	Consumer Electronics	EC8X18	E&C Engg.
3.	Robotics	EC8X13	E&C Engg.
4.	Non-Conventional Energy Systems	EE8X10	E&E Engg.
5.	Intellectual Property Rights	HU8X03	Dept. of Humanities
6.	Value Education	HU8X20	Dept. of Humanities
7.	Linear Algebra	MA8X02	Dept. of Mathematics
8.	Industrial Pollution Control	ME8X08	Mech.Engg.
9.	Management and Entrepreneurship	ME8X09	Mech.Engg.
10.	Optoelectronic devices	PH8X19 For EE, EC, CSE & ISE Branches	Physics
11.	Graph Theory	MA8X01	Mathematics
12.	Statistical design and analysis of experiments	MA8X03	Mathematics

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

Faculty	Sanctioned	Filled
Professor	02	02
Associate Professors	04	02
Assistant Professors	09	14

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./Ph.D. /M.Phil. etc.)

Sl. No	Name	Qualification	Designation	Specialization	No. of Years of Experience
1	Dr. B. Neelima	M.Tech., M.B.A., Ph.D.	Professor & HOD	High Performance Computing; Cyber Security, Distributed Computing and Big Data Analysis	Industry-1 Teaching-14
2	Dr. Balasubramani R.	Tech., Ph.D.	Professor	Digital Image Processing	Industry-12 Teaching-14
3	Mr. Karthik Pai B. H.	Tech., (Ph.D.)	Associate Professor	Computer Networks	Teaching-18
4	Mrs. Ashwini B.	Tech., (Ph.D.)	Associate Professor	Data Mining	Teaching-12
5	Mr. Vasudeva Pai	Tech.	Assistant Professor Gd-II	Computer Network	Industry-1 Teaching-10
6	Mr. Pranesh V K	Tech.	Assistant Professor Gd-II	Computer Network	Industry-5 Teaching-7
7	Mrs. Deepa J Shetty	Tech.	Assistant Professor Gd-II	Software Engineering	Teaching-11
8	Mr. Devidas	Tech.	Assistant Professor Gd-II	Computer Science & Engineering	Teaching-9
9	Mrs. Rashmi Naveen	M. Tech.	Assistant Professor Gd-II	Computer Science & Engineering	Teaching-9
10	Mr. Rakesh Joshi U	M. Tech.	Assistant Professor Gd-II	Computer Science & Engineering	Industry-1 Teaching-7
11	Mr. Jason Elroy Martis	M. Tech., (Ph.D.)	Assistant Professor Gd-II	Computer Science & Engineering	Teaching-7
12	Ms. Chinmai Shetty	M. Tech.	Assistant Professor Gd-II	Computer Science & Engineering	Teaching-7

Sl. No	Name	Qualification	Designation	Specialization	No. of Years of Experience
13	Mr. Abhir Bhandary	M. Tech.	Assistant Professor Gd-I	Computer Science & Engineering	Industry- 6 months Teaching-4
14	Mr. Shrikanth Bhat	M. Tech.	Assistant Professor Gd-I	Computer Science & Engineering	Teaching-3
15	Sharath Yaji	M.Tech	Research Scholar	Computer Science & Engineering	Teaching - 5
16	Akshaya	M. Tech.	Assistant Professor Gd-I	Computer Science & Engineering	-
17	Prathyakshini	M.Tech	Assistant Professor Gd-I	Computer Science & Engineering	-
18	Kajal Bangera	M.Tech	Research Associate	Computer Science & Engineering	-

8. Percentage of classes taken by temporary faculty – programme-wise information:
NIL

9. Programme-wise Student Teacher Ratio

BE (ISE): (180/12) = 15:1

M.Tech (Computer Network Engineering): (36/03) = 12:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Sanctioned -04, Filled – 02

11. Number of faculty with ongoing projects from a) national b) International funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

NIL

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

NIL

13. Research facility / centre with

• State Recognition:

VTU recognized Research Centre available jointly with CSE department, students register for Ph.D. under the faculty of CSE.

(List of students doing Ph. D. under ISE faculty).

Sl. No	Candidate Name	Course	Candidate USN	Year of Registration	Research Guide	Research Topic
1.	Mangala A G	Ph.D.	4NM14PEM01	2014	Dr. Balasubramani R	Study on Automated Method of Bacteria Image Identification and Classification using Image Analysis
2.	Harsha SS	Ph.D.	4NM14PEM02	2013	Dr. Balasubramani R	Efficient Multimedia Processing over Embedded Devices using Various Power Saving Techniques
3.	Mamatha Balipa	Ph.D.	4NM14PBM03	2013	Dr. Balasubramani R	Automatic Consolidation of Online Healthcare Solutions
4.	Jason Elroy Martis	Ph.D.	4NM15PEJ04	2014	Dr. Balasubramani R	A Deterministic approach for mood estimation using real time data
5.	Pallavi Shetty	Ph.D.	4NM15PEJ05	2014	Dr. Balasubramani R	Leaf characteristics analysis for identification and classification of hibiscus plant using image processing techniques
6.	Naveen D Chandavarkar	Ph.D.	4NM16PEJ05	2015	Dr. Balasubramani R	Speech Recognition Based Sentimental Analysis to Enhance the Efficiency of Product Reviews
7.	Dhananjaya V	Ph.D.	BL14PHCS066	2015	Dr. Balasubramani R	Information Security Over Cloud Computing Using Holomorphic Scheme
8.	SharathYaji	Ph.D. Full Time	4NM16PEJ08	2016	Dr. B. Neelima	Privacy Preserving in Big Data Analytics

14. Publications:

Number of papers published in peer reviewed journals (National / International)

Sl.No	Year	No. of papers published in Journals		Total
		National	International	
1.	2011	00	01	01
2.	2012	01	03	04

3.	2013	00	01	01
4.	2014	01	08	09
5.	2015	01	10	11
6.	2016	00	19	19
Total		03	42	45

- **Monographs :** NIL
- **Chapter(s) in Books:** NIL
- **Editing Books**

Sl. No.	Author(s)	Book Title	Publisher	Year of publication
1.	Dr. Balasubramani R	Object Oriented Systems (B1185)	Sikkim Manipal University, Manipal	Spring 2009
2.	Dr. Balasubramani R	Design Patterns (B1365)	Sikkim Manipal University, Manipal	Spring 2009
3.	Dr. Balasubramani R	Website Design (B1005)	Sikkim Manipal University, Manipal	Spring 2009
4.	Dr. Balasubramani R	Computer Organization and Architecture (B0952)	Sikkim Manipal University, Manipal	Spring 2009
5.	Dr. Balasubramani R	Object Oriented Analysis & Design (B1010)	Sikkim Manipal University, Manipal	Fall 2007
6.	Mr. Karthik Pai B H	Logic Design	Sikkim Manipal University, Manipal	Spring 2008

- **Books with ISBN numbers with details of publishers:** NIL
- **Number listed in International Database :** NIL
(For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.) : NIL
- **Citation Index – range / average :** 0 – 46
- **SNIP:** NIL
- **SJR :** NIL
- **Impact factor – range / average :** 0 – 1
- **h-index :** 0 – 5

15. Details of patents and income generated :
Nil

16. Areas of consultancy and income generated

Sl.No	Topic	Consultant	External Participants	Date(s)	Income Generated
1	Outcome Based Education & Accreditation	Dr. Balasubramani R.	8	7 th June 2014 & 14 th -16 th June 2014	Rs. 66,000

17. Faculty recharging strategies

- Regular Faculty Development Programs, seminar, training workshops on contemporary topics are conducted by the department and the faculties have to

compulsorily attend.

- Faculty members are deputed to attend seminars, workshops, short term courses.
- Faculty members are motivated to do research by providing facilities and awarding incentives for their research outputs, publication and patents.
- Special allowance is also given to those who complete Ph. D. course work.
- Sponsorship or fees concession will be given for those who want to pursue higher studies under Quality Improvement Program.

18. Student projects

	2014-15		2015-16	
	UG	PG	UG	PG
Percentage of students who have done in-house projects including inter-departmental	69.14% 19 Project Teams	47.05% 8 Students	81% 18 Project Teams	59% 10 Students
Percentage of students doing projects in collaboration with industries / institutes	30.86% 25 Students	52.94% 9 Students	19% 14 Students	41% 7 Students

19. Awards / recognitions received at the national and international level by

- **Faculty:**
Dr. B. Neelima:
- Honored with IEEE Senior Membership w.e.f. 12th November, 2015. She was elevated to senior membership grade up on her significant technical contributions to the filed.
 1. Selected as Executive Member of IEEE Mangalore Subsection, Mangalore.
 2. **Member, Program Committee**, 15th IEEE International Symposium on Parallel and Distributed Computing (ISPD-2016) to be held from 8th to 10th July, 2016 at FuZhou, China.
 3. Best Poster Award (HiPC-SRS) for the poster titled “SWIFT: A Fast Enhanced String Matching Algorithm for Heterogeneous Architectures” at Student Research Symposium (SRS) co-located with 22nd IEEE International Conference on High Performance Computing held at Bangalore, India from 16th to 19th December, 2015. Given by Technical Committee on Parallel Processing (TCPP) of IEEE Computer Society, IEEE and ACM, 2015.
 4. Best Poster Award for the poster titled “String Sorting on GPU using Hybrid Algorithms” at Student Poster Session co-located with 42nd ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL 2015) held at Tata Institute of Fundamental Research, Mumbai, India during 12th to 18th January, 2015.
 5. **Reviewer**, Concurrency and Computation: Practice and Experience, Published by John Wiley, for a Special Issue in 2015.
 6. **Program Committee Member**, 14th International Symposium on Parallel and Distributed Computing, to be held at Limassol, Cyprus from 29th Jun to 2nd Jul, 2015.
 7. **Reviewer** for Cluster Computing, The journal of Networks, Software Tools and Applications with an impact factor of 0.949. Cluster Computing is a peer reviewed journal from Springer publications.
 8. Invited and placed in the list of “**Women Who CUDA**” by CUDA in Action Team of NVIDIA. Details <http://www.nvidia.com/object/women-and-cuda.html>.

9. Received prestigious **IEEE-TCPP (Technical Committee on Parallel Processing) Travel Grant** for attending 28th IEEE International Parallel and Distributed Processing Symposium held at Arizona, USA during 19th to 23rd May, 2014 to present a paper titled “Predicting an Optimal Sparse Matrix Format for SpMV Computation on GPU.”
10. **Granted International Travel Grant from Department of Science and Technology, Govt. of India** to attend a 13th International Symposium on Parallel and Distributed Computing. Held in France during 24th to 27th of June, 2014 to present a paper titled “A GPU Framework for Sparse Matrix Vector Multiplication on GPU.”

Dr. Balasubramani R – Recognized for the contribution to WOSA14 (World Summit on Accreditation – 2014) organized by NBA, New Delhi.

Dr. Balasubramani R & Prof. Ashwini B. – Recognized as Silver Level Partner by Infosys-Campus Connect.

- **Doctoral / post doctoral fellows:** NIL
- **Students:**
 - o Deepak K (4NM05IS013) secured 1st Rank and Gold Medal in B.E (ISE) under VTU 2009
 - o 9 projects have been selected for KSCST funding

Sl. No.	Proposal Reference No.	Year	Title of the Project	Student Leader	Guide Name
1	31S725	2008-09	Socio-Certificate Web	Aniz M	Mr. Vinay S
2	34S0403	2010-11	Dyslexionary	Sudheer Yadav	Ms. Pragathi Hegde
3	34S0402	2010-11	Virtual College	Rajendra H N	Mr. Devidas Bhat
4	35S0638	2011-12	Road Traffic Simulator	Bhushan Kamath	Mr. Vinay S
5	35S0635	2011-12	Musical Notes and Translation	Jimmi Nongamaithen	Dr. Ashok Kumar A
6	36S0462	2012-13	Mobile Application for Bus Strike	Dhananjaya S Shet	Ms. Manasa S
7	37S0801	2013-14	Speech Auxiliator	Abhilash Bhat	Mr. Rakesh Joshi U
8	38S0437	2014-15	Bioinformatic Analysis of Cancer Cells Using Weka Tool	Shriraksha N	Mr. Devidas Bhat
9	39S_BE_0274	2015-16	Design And Development of A Location Aware Embedded Device for Securing People	Sanjaykumar	Mr. Rakesh Joshi

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Sl. No.	Name of the Seminars / Conferences / workshops	Duration	Source of funding	No. of Participants
1.	Three days FDP on “Linux Administration ”	5 th -7 th August 2010.	College	-
2.	A special Lecture on “ Intelligent Agent Optimization of Urban Bus Transit Operations”	12 th August 2010.	College	63
3.	Three days FDP on “Advances in VLSI Design and Algorithms”	10 th -12 th January 2011.	VTU-VGST Sponsored	-
4.	One day workshop on “Linux Awareness Programme for High School teachers ”	26 th February 2011	College	-
5.	International Conference on Emerging Trends in Engineering	May 4 th and 5 th May 2011.	College	-
6.	One day FDP programme on “Agile Methodologies”	24 th January 2012.	College	37
7.	Three Day workshop on “ Practices in Software Engineering”	7-29 February 2012.	College	44
8.	Three days FDP on” Mobile Application Development using Android”	Jan 09-11 ,2013	College	38
9.	A Five day Campus Connect Faculty Enablement Program on “Mobile Application development using Android”	May 26-30 ,2014.	College	36
10.	Two days workshop on “ Recent Advances in Multimedia Mining”	July 24-25, 2014.	College	36
11.	Two days workshop on “ Recent Advances in Multimedia Wireless Sensor Networks”	July 30-31, 2014.	College	40
12.	Four Days Workshop on “IBM Rational SEED Program”	September 8-11, 2014.	College	10
13.	Five days FDP on “Storage Area Networks-Configuration and Management Simplifies”	15 th to 19 th December 2014.	College	30
14.	Three day “Engineering Faculty Workshop”	9 th – 11 th March,2015	College	32
15.	International Conference on Emerging Trends in Engineering IICETE-15).	May 8 th and 9 th May 2015	College	86
16.	A Five Day FEP on “Mobile Application Development using Android and PhoneGap”	7 th to 11 th September 2015	College	34
17.	A two day national level workshop on “ns-3”	19-20 October 2015	Registration Fee	27
18.	Two Days workshop on “ Mobile Application Development using Android and PhoneGap”	4-5 February 2016.	College	34

19.	Three day workshop on “Embedded System”	21-23 March 2016	Registration Fee	03
20.	Five day FDP on “Recent Trends in Information and Network Security”	28 th November-2 nd December 2016	TEQIP-II	45

21. Student profile course-wise:

The admission to UG is made as per the government / management stipulation i.e. 50% through CET conducted by Government of Karnataka, 25% through COMEDK and remaining 25% including NRI through management.

Name of the Course	Year	Application Received	Selected		Pass percentage	
			Male	Female	Male	Female
B. E in Information Science & Engineering	2010-11	NA	23	37	92.3	100
	2011-12		26	45	92	96
	2012-13		31	38	100	97.2
	2013-14		29	40	97.4	100
	2014-15		31	31	95.1	100
	2015-16		24	40	90	97
	2016-17		56	69	----	-----

Name of the Course	Year	Application Received	Selected		Pass percentage	
			Male	Female	Male	Female
M.Tech (Computer Network Engineering)	2012-13	NA	07	11	100	100
	2013-14		11	06	100	100
	2014-15		05	13	92.30	100
	2015-16		08	06	100	100
	2016-17		01	00	--	--

22. Diversity of students

Name of the Course (refer question no.2)	% of students from the College		% of students from the State		% of students from other States		% of students from other countries	
	UG	PG	UG	PG	UG	PG	UG	PG
2010-11	-	-	88	-	12	-	-	-
2011-12	-	-	78	-	18	-	04	-
2012-13	-	05	77	94	20	06	03	-
2013-14	-	-	78	88	21	12	01	-
2014-15	-	04	57	14	05	-	-	-
2015-16	-	-	86	100	09	-	05	-
2016-17	-	-	93	100	07	-	-	-

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

12 students cleared GATE/GRE/other competitive exams since last 5 years.

24. Student progression

Student progression	Percentage against enrolled (Last 5 years) 2011-16
UG to PG	10%
PG to M.Phil.	0
PG to Ph.D.	0
Ph.D. to Post-Doctoral	0
Employed	
Campus selection	79.5%
Other than campus recruitment	6.2%
Entrepreneurs	0.5%

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	86%
from other universities within the State	7%
from other universities from other States	7%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period.

- Dr. B. Neelima awarded Ph.D. in the year 2015 from National Institute of Technology Karnataka, Surathkal, Karnataka.
- Dr. Balasubramani R awarded Ph.D. in the year 2011, Vinayaka Missions University, Salem, Tamilnadu.

27. Present details about infrastructural facilities

a) Library: Total No. of books available:	506
b) Internet facilities for staff and students: campus & hostels, dedicated internet lab	310Mbps leased line, wifi
c) Total number of class rooms :	03
d) Class rooms with ICT facility:	03
e) Students' laboratories:	04
f) Research laboratories:	01

28. Number of students of the department getting financial assistance from College:**Fees Concession from the Institution**

Academic Year	Number of Students
2016-17	29
2015-16	23
2014-15	18
2013-14	30

SC/ST Scholarship

Academic Year	No. of SC/ST Students
2016-17	19
2015-16	25
2014-15	23

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes. The department has started M.Tech in Computer Network Engineering in 2012, based on Industry requirements, market analysis, feedback from stake holders, and student interests.

30. Does the department obtain feedback from

- Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.
 - Soft skill training program and Employability Skill Development are introduced.
 - The suggestions for revision of curriculum if any, are deliberated in the departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.
 - The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
- Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.

- Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.
- A common questionnaire containing questions related to teaching, learning, and evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.
- Course Exit Survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.
- BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
- The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this, alumni keep visiting the institution and interact with faculty members and HODs.
 - The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.
 - Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.
 - Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
 - During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
 - Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.
 - Feedbacks are analyzed & appropriate actions are initiated
 1. Study hours are introduced in the hostel
 2. Internet lab & library is established in hostels
 3. Multi cuisine dining is introduced in hostel

31. List the distinguished alumni of the department (maximum 10)

Sl. No.	Name	Batch	Organization	Location	Designation
1.	Prasanna Sherigar	2000-04	Warbabank	Kuwait	Senior DB Admin
2.	Ritesh Kumble	2000-04	Infosys	Bangalore	Lead, Education & Research
3.	Sweekrath	2000-04	Digital Planet	Mangalore	Managing Director

4.	Arjun U K	2004-08	Incede Technologies	Mangalore	CEO
5.	Deepak Karkala	2005-09	PayPal Inc.	California	Software Engineer II
6.	Bhushan Poonja	2005-09	A1 Logics	Mangalore	Partner
7.	Karthik Kastury	2006-10	PayPal	California	Software Engineer
8.	Uzma Kausar	2009-13	SPAN Infotech	Bangalore	Software Engineer I
9.	Nagesh Kini	2010-14	Oracle	-	Associate Programmer Analyst
10.	Vinayaka D	2011-14	IBM	-	System Admin

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

Sl. No	Module Description	Duration	Resource Person	Source of funding	No. of Participants
Special Lectures					
1.	A Special Talk on “Software Engineering”	26 th March 2010	1.Dinesh, 2.Biju P, TCS Bangalore	Placement Department NMAMIT	118
2.	A Technical Talk on “IT Service Industry Expectation from a software engineer”	18 th August 2012	Mr.Shrinivas Bhat, SPAN InfoTech	Placement Department NMAMIT	60
3.	A Invited Talk on “Financial Management”	14 th March 2013	Prof. Radhakrishna Sharma, JKSHIM, Nitte	VISTA & SEBI	52
4.	A Special Lecture on “Hadoop”	19 th August 2013	Mr. Vedej P Padman, NMAMIT,	VISTA	45
5.	A Invited Lecture on “IBM Blue-mix”	5 th Nov 2014	Mr. Mahesh, IBM	VISTA	23
6.	A Technical Lecture on “Cloud Computing”	3 rd Feb 2015	Mr. Himanshu Dogra, NNSC, Delhi	VISTA	53
7.	A Technical Talk on “Engineers and Innovation”	16 January 2016	Mr. Praveen Udupa, Proprietor, A1 Logics, Mangalore	ACM Student Chapter	70
8.	A Technical Talk on “Software Testing Principles”	9 th March 2016	Mrs. Ashwini, ASTUTE, Mangalore	ACM Student Chapter	84
Workshops					
9.	LINUX HABBA	9 th April 2011	Mr.Vasudeva Kamath, Invenger Pvt. Ltd Mangalore	FOSS Community	60
10.	Ethical Hacking Contest Organized	27 th August, 2011	Mr. Karthik Ranganath Mr. Raghavendra Karthik Mr. Harikrishnan R	Net Nobels Corporation	35

11.	Mini Debian Conference	28 th – 30 th October, 2011	Mr. Christian Perrier Mr. Jonas Smedegaard Mr. Shirish Agarwal Mr. Karthik Mistry Mr. Praveen Arimbrathodiyil	FOSS Community	127
12.	A Workshop on “Open Street Map”	13 th and 14 th April 2012	Pavithran Sakumari (OSM Hacker) Praveen (OSM Contributor)	VISTA	19
13.	A Workshop on “C# & .NET development Programming	28 th December 2012 to 2 nd Jan 2013	Mr. Jason Elroy Martis NMAMIT, Nitte	VISTA	32
14.	A 2-day workshop on Web Development	12 th and 13 th of January 2013.	Mr. PrathameshPai, Founder and Lead Developer, Transducent Technologies	VISTA	75
15.	A Workshop on “Hack Track”	8 th and 9 th November 2013	Mr. Nitin Sharma	VISTA	136
16.	A Workshop on “Ethical Hacking”	19 th and 20 th September 2014	Mr. T Sabapathy & Team, Bangalore	Student Fee	123
17.	A Workshop on “Cloud Computing”	21 st -22 nd February, 2015	Mr. Yuvaraj from IBNC Delhi	Student Fee	65
18.	A Workshop on “Linux Server & Security”	February 28 & March 1 2015	Mr. Varun Pathak NNSC & in association with E-Cell IIT Bombay	Student Fee	99
19.	Ten Days Project based Industrial level Summer training programme on” CISCO Routers and Switches”	11-21 May 2015.	Mr. Saransh Merothiya, NNSC, Gurgaon	Student Fee	36
20.	Three days workshop on “ Embedded System” was organized in association with SWADESHEE	23-25 July 2015	Mr. Vishnu prasad Bhat, Proprietor, Swadeshee, Udupi	Student Fee	20
21.	A Workshop on “Network Simulator 3 ” was organized	12 th September 2015	Gopika S, Final year IS Student	Student Fee	18
22.	A Workshop on “Modeling and 3D Animation” was organized	12 th September 2015	Pradeep B, Second year CS student	Student Fee	42

23.	A Workshop on “Free-Scale RoboCar”	19 th September 2015	Anjana R – Final ECE, Deeksha M – Final ECE, Deepa B – Final ECE, Sourabh S Shenoy – Final ECE, Akarsh Hegde – Final CSE, B Manjunath Kamath – Final ECE	Student Fee	30
24.	A one day paper presentation competition “Vedanth”	26 th September 2015	-	Student Fee	09 Teams
25.	A two day workshop on “Python” in association with VISTA	3 rd and 4 th October, 2015	Mr. Shashank, Trainer, IBNC	Student Fee	96
26.	One day event on “Hour of Code”, was organized	12 th December 2015	Pradeep B & Team, NMAMIT, Nitte	ACM Student Chapter	90
27.	Two day workshop on “VMWare Data Center Virtualization Foundations Programme”	8-9 January 2016	Prof. Jason Martis, Prof. Abhir Bhandary & Prof. Srikanth Bhat, Dept. of ISE	Student Fee	107
28.	“Eminent Speaker Programme”	30 th January 2016	Ms. Rashmi Mohan, Sr. Engineering Manager, Yahoo Labs in Bangalore	ACM Student Chapter	125
29.	Two Day workshop on “iGearUp” in association with Infosys Development Centre, Mangalore.	1-2 February 2016	Mr. Hari, Lead, Education Training and Assessment Department of Infosys Development Centre, Trivandrum	Student Fee	220
30.	One day workshop on “Photoshop”	12 th March 2016	Mr. Shreeram (CSE student) and Mr. Pavan (EEE student), NMAMIT, Nitte	Student Fee	34
31.	Three Day workshop on “Web Development”	30-31 May, 1 st June 2016	Mr. Raghavendra Sharma, Huttirifly Infotainment Pvt. Ltd., Mannagudda, Mangalore	ACM Student Chapter	20
Seminars					
32.	A Seminar on “Image Processing”	16 th August 2011	Dr. M K Unnikrishnan	VISTA	60
33.	A Seminar on “Financial Education workshop”	17 th August 2011	Prof. Radhakrishna Sharma	VISTA & SEBI	65

34.	A Session on “Analytics”	19 th Sept 2014	Mr. T Sabapathy Bangalore	VISTA	34
35.	One Day “National Seminar on Emerging Trends in Computer Science and Information Technology”	2 nd April 2016	Dr. Sithu D Sudarsan and Mr. Senthil Kumar Vadivel from ABB Corporate Research, Bangalore	ACM Student Chapter	50

33. List the teaching methods adopted by the faculty for different programmes.

- Class room teaching like chalk & talk
- Activity based learning methods, simulations, role play
- Power Point presentation
- Quiz
- Group Discussion
- Seminars, tutorials , sessionals (home assignments)
- Mini Projects

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (Pos) are formulated as per NBA graduate attributes. To ensure attainment of Program Outcomes (Pos) and PEOs, the students’ learning outcomes are monitored by evaluating Course Outcomes (Cos). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of program objectives and monitor of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).
- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analyzing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.
- The suggestion includes solving of additional numerical problems from exercise and GATE question papers, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students’ learning capability.
- Technical Skill Building: Students are encouraged to do mini projects and showcase them in students’ projects exhibitions.
- Participation of students in departmental research projects (if any) is highly encouraged.

- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.
- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.
- Summer research internships are offered to students.
- **Course Exit Survey** is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year
- **Programme Exit Survey** is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of Cos and Pos. The analysis of attainment of Cos and Pos is carried out.
- Based on the attainment of Cos and Pos, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of Cos and Pos.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities.

- ACM Student Chapter of NMAMIT, Nitte organized a coding event called “Hour of Code” on 12th December 2015. 90 students from Dr. NSAM English Medium School, Nitte have utilized this opportunity.
- Conducted one day Linux Habba for neighboring high school and PUC students and faculties.
- Conducted Mini Debian Conference to give awareness of free open source software to the students of CS, IS & MCA.

36. Give details of “beyond syllabus scholarly activities” of the department.

Events Organized Under Association for Computing Machinery (ACM) Student Chapter:

Sl. No	Title of Seminars / competitions / Workshops	Dates	Resource person	Number of Participants	Source of Financial Support
1	Three Day workshop on “Web Development”	30-31 May, 1 st June 2016	Mr. Raghavendra Sharma, Huttirifly Infotainment Pvt. Ltd., Mannagudda, Mangalore	20	ACM Student Chapter
2	One Day “National	2 nd April	Dr. Sithu D Sudarsan	50	ACM

	Seminar on Emerging Trends in Computer Science and Information Technology”	2016	and Mr. Senthil Kumar Vadivel from ABB Corporate Research, Bangalore		Student Chapter
3	Three day workshop on “Embedded System”	21-23 March 2016	Mr. Vishnu prasadBhat, Proprietor, Swadeshee, Udupi	03	Registration Fee
4	One day workshop on “Photoshop”	12 th March 2016	Mr. Shreeram (CSE student) and Mr. Pavan (EEE student), NMAMIT, Nitte	34	Student Fee
5	Technical Talk on “Software Testing Principles”	9 th March 2016	Mrs. Ashwini, ASTUTE, Mangalore	84	ACM Student Chapter
6	Two Days workshop on “Mobile Application Development using Android and PhoneGap”	4-5 February 2016	Prof.Ashwini B, Dept. of ISE, Prof.Venugopla P S and Prof.Roshan Fernandez, Dept. of CSE , NMAMIT, Nitte	34	TEQIP & Registration Fee
7	Two Day “iGearUp” Workshop in association with Infosys Development Centre, Mangalore.	1-2 February 2016	Mr.Hari, Lead, Education Training and Assessment Department of Infosys Development Centre, Trivandrum	220	Student Fee
8	“Eminent Speaker Programme”	30 January 2016	Ms.Rashmi Mohan, Sr. Engineering Manager, Yahoo Labs in Bangalore	125	ACM Student Chapter
9	Technical Talk on “Engineers and Innovation”	16 January 2016	Mr. Praveen Udupa, Proprietor, A1 Logics, Mangalore	70	ACM Student Chapter
10	Two day workshop on “Vmware Data Center Virtualization Foundations Programme”	8-9 January 2016	Prof. Jason Martis, Prof.AbhirBhandary& Prof. SrikanthBhat, Dept. of ISE	107	Student Fee
11	One day event on “Hour of Code”	12 th Dec 2015	Pradeep B & Team, NMAMIT, Nitte	90	Student Fee
12	A two day national level workshop on “ns-3”	19-20 October 2015	Ms. Manasa S.,Dept. of ISE, NMAMIT, Nitte	27	Registration Fee
13	A two day workshop on “Python” in association with VISTA and IBNC	3 rd and 4 th October, 2015	Mr. Shashank, Trainer, IBNC	96	Student Fee
14	A one day paper presentation competition “Vedanth”	26 th September 2015	-	09 teams	Student Fee
15	A Workshop on “Free-Scale RoboCar” was organized	19 th September 2015	Anjana R – Final ECE & Team, NMAMIT, Nitte	30	Student Fee

16	A Workshop on “Modeling and 3D Animation”	12 th September 2015	Pradeep B, Second year CS student	42	Student Fee
17	A Workshop on “Network Simulator 3 ”	12 th September 2015	Gopika S, Final year IS Student, NMAMIT, Nitte	18	Student Fee
18	A Five Day FEP on “Mobile Application Development using Android and PhoneGap”	7 th to 11 th September 2015	Mr. Hari& Mr. Madhav, Lead, Education, Training & Assessment, Infosys, Trivandrum DC	34	TEQIP II
19	Three days workshop on “Embedded System” was organized in association with SWADESHEE	23-25 July 2015	Mr. Vishnu prasadBhat, Proprietor, Swadeshee, Udupi	20	Student Fee
20	Ten Days Project based Industrial level Summer training programme on” CISCO Routers and Switches”	11-21 May 2015	Mr.SaranshMerothiya, NNSC, Gurgaon	36	Student Fee

Events Organized Under Computer Society of India (CSI) Student Chapter:

CSI Student Chapter					
Sl. No	Title of Seminars/ competitions	Dates	Resource person	Number of Participants	Source of Financial Support
2015-16					
1.	Technical Extempore	11 th March 2016	NA	14	CSI Student branch
2.	Coder Quest	11 th March 2016	NA	22	CSI Student branch
3.	C mania,	7 th March, 2016.	NA	22	CSI Student Branch
4.	CSI day – Wireless Sensor Networks for Environmental Monitoring and Management	11 th March, 2016	Dr. Krishna Shenai, Distinguished Professor and Director R&D, NMAMIT	110	CSI Student branch
5.	Tech JGAAD	10 th Jan, 2016	Mr. Praveen Shetty	30	CSI Student branch
6.	Automation in IC design	21 st Jan, 2016	Dr. Niranjana N Chiplunkar	190	CSI Student branch
7.	Role of Computer Vision in Digital Era	16 th Sep, 2015	Dr. SharmilaKumari M	86	CSI Student branch
8.	A quizzing and coding event “Game of Codes”	12.10.2015	II YR CSE & ISE	40	CSI Student branch

9.	A talk on 'Higher Education Abroad'	9.10.2015	Mr. Brian D'Souza, an alumnus of NMAMIT		CSI Student branch, NMAMIT, Wenamitaa,
10.	A C programming-based event "D Bug C"	15 th August, 2015		92	CSI Student branch
11.	Technical Paper Presentation – 2015	30 th January, 2015	NA	30	CSI
12.	technical talk on "Computer and Natural Languages"	17 th January, 2015	Nadoja', Prof. K P Rao	120	CSI
13.	I.T Quiz competition	2 nd March 2015.		60	CSI
2013-2014					
14.	Talk –Better late than never	4 th September 2014	Dr. Mohit P Tahiliani	155	CSI Student branch
15.	networking competition from LIVEWIRE	4 th September 2014	CADD Centre	96	CSI Student branch
16.	A Picture Quiz – "Pixel "	07 th Sept 2013	NA	58	CSI Student branch
17.	Computer (Science) as an Inseparable part of human life	15 th November, 2013	Dr. Vaman Rao, HOD, Dept. of BTE	130	CSI Student branch
18.	Technical Dumb charades	1 st March, 2014	NA	51	CSI Student branch
19.	Quiz- Women in science and technology	5 th March, 2014	NA	33	CSI Student branch
20.	IT quiz	15 th March, 2014	NA	100	CSI Student Branch
2012					
21.	Seminar on Microsoft Academic Initiative	26/09/2012		112	
22.	Student Oriented Programme-C Quiz	12/02/2012	NA	100	CSI
23.	Student Oriented Programme-IT Wiz	09/02/2012	NA	100	CSI
24.	Student Oriented Programme-C Quiz	08/02/2012	NA	60	CSI
25.	Technical talk on Future of the Web	19/01/2012	Mr. Naren Kodavattat, CEO, IPOINT consultancies, Managalore	175	CSI

26.	Motivational talk on Personal Effectiveness	12/01/2012	Mr. Amarnath Rao, Dhruva Consultancies for softskill training, Hyderabad	100	CSI
2011					
27.	Seminar on Image and Video Processing	19/08/2011		175	CSI

CSI Student Chapter					
Sl. No	Title of workshops	Dates	Resource person	Number of Participants	Source of Financial Support
2015-16					
1.	Workshop on “Ethical Hacking”	17 th March 2015	Mr. Amit Roy, trainer, IFC3 India	91	CSI student branch
2.	workshop on “Cloud Computing	15 th and 16 th March 2015.	Mr. Karthik Kesavan, Cloud trainer, IFC3 India	90	CSI student branch
3.	Workshop on Adobe Photoshop	22 nd February 2015	Mr. Subramanya V, Chairman, CSI student branch	30	CSI student branch
4.	Workshop on “Sixth Sense Technology ”	14 th and 15 th of February 2015	Mr. Pawan, Geeks Lab Technologies, New Delhi	60	CSI student branch
5.	Workshop on “Electronic System Design and Manufacturing (ESDM)”	31 st October & 1 st November 2015	Mr. Vaibhav Pratap Singh Mr. Hari Krishna Valluru, Mr.K.Jaganmohan, Mr.B.Jayanth From CDAC,Bengaluru	132	Consortium of Electronic Industries Karnataka (CLIK), Computer Society of India, Bangalore Chapter (CSI-BC) and CSI Student branch of NMAMIT, Nitte,
6.	IoT Hands On Workshop	28.09.2015	Prof. Rajneesh Acharya, dept. of EEE	30	CSI Student branch
7.	Hands on workshop on Web Automation using Ruby	19 th and 20 th of September 2015	Mr. Rameez Shoaib, website committee member of CSI, second year, dept. of CSE.	83	CSI Student branch

2014					
8.	Workshop on “Digital Image Processing using MATLAB”	13 th to 15 th September 2014.	Mr. Vallabh and Mr. Anoop Justin of Tech Talk Systems, Bengaluru	50	CSI student branch
9.	MS Word and MS PowerPoint	2 nd to 5 th October 2014	SIG group of CSI	21	CSI student branch
10.	Analyzing Networks Using Wireshark and nmap	19 th October 2014	Mr. Yash Mandilwar, SIG roup CSI	15	CSI student branch
11.	wearable computing using Texas instruments Chronos watch and internet of Things	14 th March 2014	Prof. Rajneesh Acharya, dept. of EEE	38	CSI
12.	Workshop-Linux for Newbies	1 st April 2014	Mr. Vedaj Padman, SIG group	20	CSI

Services to Society

- Basics of Computers & Web Designing, 7th November 2014, 40 students from Dr. NSAM English Medium High School, Nitte, of class III to VII reaped the benefit of this event. By CSI student branch
- An amount of Rs. 1300/- was donated to annadana to Orphanage in Kinnimulki Udupi, by CSI student branch in April, 2016

Events Organized Under IE(I) Student Chapter:

Sl.No.	Event	Dates	Total
1.	Technical Paper Presentation & Project Model Exhibition “IEINITTE-2016”	5 th March 2016	20
2.	Intra College Essay Competition “Digital India Highway for good governance and economic growth”	February 2016	11
3.	Talk on “Yettinahole Project” By Er. Dr. S G Mayya	11 th Feb. 2016	18
4.	One day “Entrepreneurship Awareness Camp” for Final year students by Dr. Sudhirraj K and Team JKSHIM, Nitte”	12 th Jan. 2016	48
5.	Talk on Higher Studies and Carrier Opportunities By Prof. Manjunath Prasad H	26 th Oct. 2015	34
6.	One day “Entrepreneurship Awareness Camp” for Final year students by Dr. Rajshekar Manjunath and Team JKSHIM, Nitte	30 th Dec. 2014	70
7.	Intra College Android Quiz Competition	28 th Oct. 2014	38
8.	One day “Entrepreneurship Awareness Camp” for Final year students by Dr. Rajshekar Manjunath and Team JKSHIM, Nitte	5 th Feb. 2014	69

9.	One day “Entrepreneurship Awareness Camp” for Final year students by Dr. Sudhirraj K and Team JKSHIM, Nitte”	26 th Dec. 2012	60
10.	Special Talk on “Adversities Quotient: Turning Obstacles into Opportunities” By Dr. Sudhir Raj, Professor, JKSHIM, Nitte.	12 th Oct. 2012	25

Events Organized Under ISTE Chapter:

ISTE Chapter Activities			
2015-16			
Sl.No.	Department	Programme Title/Resource Person	Date
1	Department of Information Science & Engineering	“Stress management” By Mr. Sunil Prabhu, Freelancer	19 th September 2015
2	Department of Information Science & Engineering	Higher Studies and Career Opportunities By Mr.Manjunath Prasad	26 th October 2015
2016-17			
3	Department of Information Science & Engineering	Circuit Design Competition for 3 rd semester ISE Students, NMAMIT, Nitte	20 th October 2016
4	Department of Information Science & Engineering	FDP on Data Analytics with R	15 th December 2016

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

YES

Name of Programme	Accreditation Status	Period of Validity	Accreditation Agency
B.E in Information Science & Engineering	Accredited	3 years w.e.f.22-01-2008	NBA
		1 st July 2001 to 23 rd April 2009	KEMA Netherland
		1 st July 2013 to 1 st July 2016	DEKRA Netherland
		1 st July 2015 to 1 st July 2017	NBA

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths (S): - Academic Autonomy - Research Oriented Faculty - Good Placements for students - Vibrant Industry Institute Interaction - Good Campus & Infrastructures	Weakness(W): - To focus on Quality Research leading to publications in renowned journals - To focus on strengthening Consultancy activities - Research Grants from External Agencies - Need to attract good talented students

<u>Opportunities(O):</u> 1. University Status 2. Start new courses(UG&PG) 3. Use of latest technology 4. New Research Lab	<u>ChallengesI:</u> 1. New emerging Technologies 2. Competition-Admission of quality students 3. Training students to face various competitive examinations at State, National & International levels

39. Future plans of the department

- Enhancing the Industry collaboration through laboratory infrastructure and industry oriented projects
- Establishing Quality Circles based on thrust areas of the faculty in the department
- Enhancing research and consultancy capabilities of our students and faculty
- Starting a PG programme in IOT (Internet of Things)
- Establishing CISCO Networking Academy

DEPARTMENT OF MECHANICAL ENGINEERING

1. Name of the Department & its year of establishment

Department of Mechanical Engineering; 1986

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

- UG –B.E (Mechanical Engineering)
- PG- M.Tech (Energy Systems & Engineering) & M.Tech (Machine Design)
- Ph.D. – Mechanical Engineering in the Engineering Faculty

3. Interdisciplinary courses and departments involved

M.Tech in Energy Systems Engineering, in which, Mechanical Engg and Electrical & Electronics Engg. Departments are involved.

4. Annual/ semester/choice based credit system

Choice Based Credit System

5. Participation of the department in the courses offered by other departments

- Participation of the department students in the courses offered by other departments:

Sl. No.	Course	Course Code	Department
1.	Nano Technology	BT8X05	Biotechnology
2.	Corrosion Science	CH8X31	Chemistry
3.	Programming with C++	CS8X14	Computer science Engg.
4.	Essentials of Information Technology	CS8X15	Computer science Engg.
5.	Environmental Impact Assessment	CV8X07	Civil Engg.
6.	Introduction to Geoinformatics	CV8X30	Civil Engg.
7.	Consumer Electronics	EC8X18	Electronics and Communications Engg.
8.	Non-Conventional Energy Systems	EE8X10	Electrical and Electronics Engg.
9.	Intellectual Property Rights	HU8X03	Humanity
10.	Professional & Cognitive Communicate	HU8X24	Humanity
11.	Graph Theory	MA8X01	Mathematics
12.	Linear Algebra	MA8X02	Mathematics

- Participation of other department Students of first year in the courses offered by the department of Mechanical Engineering :
 - o Elements of Mechanical Engg (ME104), a 4 credit course for all First Year students.
 - o Computer Aided Engineering Graphics (ME115), a 3 credit course for all First Year students.
- Participation of other department Students in the courses offered by the department:
 - o Open Electives offered in 8th semester B.E:

Sl. No.	Course	Course Code	Faculty
1	Industrial pollution control	13ME8X08	Mr. Aneesh Jose
2	Industrial Management and Entrepreneurship	13ME8X28	Mr. Gururaj Upadhyaya Mr. Venkatesh Murthy Mr. Mohan N Poojari

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	05	09
Associate Professors	10	07
Asst. Professors	31	29

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./Ph.D./M.Phil., etc.)

S. No	Name	Qualification	Designation	Specialization	Exp. In years	No. of Ph.D. students guided in the last 4 years
1.	Dr. Shrinivasa Rao B.R	Ph.D.	Vice Principal/ Professor/ Controller of Examinations	Thermal Science	27	3
2.	Dr. Subrahmanya Bhat K.	Ph.D.	Professor	TQM	27	
3.	Dr. Srinivasa Pai P	Ph.D.	Professor/ Dy. Controller of Examinations	Tool Condition Monitoring	20	2
4.	Dr. Sudesh Bekal	Ph.D.	Professor / Dean (R&D)	Thermal Science	30	
5.	Dr. Narasimha Marakala	Ph.D.	Professor	Thermal induced Vibrations	26	
6.	Dr. Muralidhara	Ph.D.	Professor	Micro Machining	18	
7.	Dr. Shashikantha Karinka	Ph.D.	Professor / HOD	Thermal Science	30	
8.	Dr. Mallikappa	Ph.D.	Professor	Thermal Engg.	21	
9.	Dr. Narasimha Bailkeri	Ph.D.	Professor	Energy Systems & Engg.	25	
10.	Prof. Vinaya B. R.	M.Tech	Assoc. Prof.	Heat Power Engg.	32	
11.	Prof. Manjunath Shenoy	M.Tech	Assoc. Prof.	Production Engg.	27	
12.	Mr. T. R. Venugopal	M.Tech (Ph.D.)	Assoc. Prof.	Manufacturing Engg.	29	
13.	Mr. Gururaj Upadhyaya	M.Tech (Ph.D.)	Assoc. Prof.	Engg. Management	15	

14	Mr. Suresh Shetty	M.Tech (Ph.D.)	Assoc. Prof.	Energy Systems & Engg.	12	
15	Mr. Ananthakrishna Somayaji	M.Tech M.B.A (Ph.D.)	Assoc. Prof.	Production Technology & Management	15	
16	Mr. Udaya D	M.Tech (Ph.D.)	Assoc. Prof.	Energy Systems & Engg.	14	
17	Mr. Ravishankar Bhat	M.Tech	Asst. Prof.	Heat Power Engg.	27	
18	Mr. P. Venkatesh Murthy	M.Tech (Ph.D.)	Asst. Prof.	Engg. Management	19	
19	Mr. Ravindra	M.Tech (Ph.D.)	Asst. Prof.	Energy Systems & Engg.	14	
20	Mr. Austin Dinesh D' Souza	M.Tech	Asst. Prof.	Machine Design	15	
21	Mr. Kumar H S	M.Tech (Ph.D.)	Asst. Prof.	Production System Technology	09	
22	Mr. Dilip Kumar K	M.Tech	Asst. Prof.	Machine Design	06	
23	Mrs. Rashmi P Shetty	M.Tech (Ph.D.)	Asst. Prof.	Energy Systems Engg.	07	
24	Mr. A. Adarsh Rai	M.Tech (Ph.D.)	Asst. Prof.	Energy Systems Engg.	09	
25	Mr. Aneesh Jose	M.Tech	Asst. Prof.	Energy Systems Engg.	05	
26	Mr. Veeresh R K	M.Tech (Ph.D.)	Asst. Prof.	Design Engg.	06	
27	Mr. Nithin Kumar	M.Tech (Ph.D.)	Asst. Prof.	Machine Design	06	
28	Mr. Grynal D'Mello	M.Tech (Ph.D.)	Asst. Prof.	Manufacturing Technology	05	
29	Mr. Divijesh P	M.Tech (Ph.D.)	Asst. Prof.	Design Engg.	06	
30	Mr. Santhosh G	M.Tech (Ph.D.)	Asst. Prof.	Nanotechnology	03	
31	Mr. Rajath N Rao	M.Tech	Asst. Prof.	CAMDA	04	
32	Mr. Vishwanath J S	M.Tech (Ph.D.)	Asst. Prof.	Engg. Analysis and Design	06	
33	Mr. Ajit M Hebbale	M.Tech (Ph.D.)	Asst. Prof.	Engg. Analysis and Design	04	
34	Mr. Krishna Prasad	M.Tech	Asst. Prof.	Energy Systems Engg.	04	
35	Mr. Sharathchandra	M.Tech (Ph.D.)	Asst. Prof.	Robotics & Automation	04	
36	Mr. Manjunath Maiyya	M.Tech	Asst. Prof.	Manufacturing Technology	04	
37	Mrs. Akshatha Manjunath	M.Tech	Asst. Prof.	Energy Systems Engg.	04	

38.	Mr. Srinivasa Prabhu	M.Tech	Asst. Prof.	Machine Design	08	
39.	Mr. Gautama Hebbar	M.Tech	Asst. Prof.	Nuclear Engg	03	
40.	Mr. Ravikiran Kamath B	M.Tech	Asst. Prof.	Machine Design	07	
41.	Mr. Melwyn Rajesh Caselino	M.Tech	Asst. Prof	Machine Design	11	
42.	Mr. Bhaskar Achar	M.Tech	Asst. Prof	Production Engg. & Systems Technology	04	
43.	Mr. Mohan Poojari	M.Tech	Asst. Prof	Machine Design	08	
44.	Mr. Vishwash B	M.Tech	Asst. Prof	Machine Design	02	
45.	Mr. Vincent Linish D'souza	M.Tech	Asst. Prof	Machine Design	02	

8. Percentage of classes taken by temporary faculty – programme-wise information

Nil

9. Programme-wise Student Teacher Ratio

UG: 15:1 PG: 12:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Sanctioned		Filled	
Technical	12	Technical	12
Administrative	8	Administrative	8

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

Sl. No.	Title of the Project	Funding Agency	Amount (Rs. In Lakhs)	Principal Investigator
1.	Investigations on machining depth control in micro-electro-discharge machining (micro-EDM) process using 3D process simulation	VTU, Belagavi Under Research Grants Scheme 2011-13	12.4	Dr. Muralidhara
2.	Modeling and Optimization of Surface Roughness in Ti-based alloys using vibration	AICTE, New Delhi Under Research Promotion Scheme & NMAMIT Research Grant 2013-15	17.4 + 0.15	Dr. Srinivasa Pai P

3.	Embedded Control System design for position and tracking control of a prototype actuator	DST, New Delhi Under SERC Fast Track Proposal & NMAMIT Research Grant 2012-15	16.14 + 6	Dr. Muralidhara
4.	Modrobs of Mech Lab [8024/RIFD/MOD-216(Pvt)/Policy-III /2011 – 12]	AICTE, New Delhi 1998-99, 2002-03 2011-12	29	Dr. Subrahmanya Bhat
5.	IEI Grant for R&D PG 2014016 Dated 23-04-2014	The IE(I) 2014-15	0.15	Dr. Srinivasa Pai P
6.	Embedded Control System design for position and tracking control of a prototype actuator	NMAMIT Research grant 2012-15	3.53	Dr. Muralidhara
7.	Defect characterization in antifriction bearing using vibration signal analysis for Condition Monitoring	VTU Research grant 2008-09	6.50	Dr. Srinivasa Pai P
8.	Design, Fabrication and Testing of Micropump manufactured using Tool based micromachining process for drug delivery system	VGST, Karnataka 2015	0.3	Dr. Muralidhara Mr. Veeresh R K
		Total	Rs. 91.57 Lakhs	

13. Research facility / centre with

The Mechanical Engineering Department has the following Research Centres (R.C.) approved by Visvesvaraya Technological University (V.T.U.)-Belagavi to offer M.Sc.(Engg.) by Research and Ph.D. programmes.

Research Centre details
Centre for Alternative Fuels Research
Centre for System Design, Fabrication and Testing
Centre for Tool based Micromachining Research
Centre for Condition Monitoring and Advanced Machining Research

14. Publications:

- Number of papers published in peer reviewed journals (national / international)

Year	Journal		Total
	National	International	
2011	-	3	3
2012	10	6	16
2013	-	3	3
2014	2	9	11
2015	1	9	10
2016	3	28	31
Total	16	58	74

- Monographs: Nil

- **Chapter(s) in Books**

Advances in Manufacturing Technology-2012

Chapter 11: Investigations on Machining of Micro channels on silicon wafer using micro EDM

Author- Dr. Muralidhara

Publisher- Universities press

ISBN- 9788173717550

- **Editing Books:**

Nil

- **Books with ISBN numbers with details of publishers**

Proceedings of International Conference on Emerging Trends in Engineering(ICETE 2013), ISBN 978-93-82880-29-5

- **Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.)**

: Nil

- **Citation Index – range / average**

: 1-78/12.5

- **SNIP**

: 3.984 (Total)

- **SJR**

: 2.356 (Total)

- **Impact factor – range / average**

: 0.5-3/1

- **h-index**

: 2-10

15. Details of patents and income generated : Nil

16. Areas of consultancy and income generated

Year	Name of the Faculty	Name of the Company	Problem
2014	Dr. Shashikantha Karinka	M/S Lamina Suspension Products Ltd., Mangalore	Furnace Oil consumption-measurement Diagnosing discrepancies
Findings		Recommendations	
• The flow meters cannot be used to ascertain oil receipt from supplier as the dip-stick method is the only legally valid method • Flow meters are used to take oil from the tank for various in-house applications. The two readings must match within 1 percent • Flow meters give a very long life, however the calibration may have to be carried out at predefined regular intervals to remove flaws of flow meter if the deviation is more than 1% between dip-stick and flow meter • There are several brands of flow meters and other devices and hence careful decision to be made while buying • Devices used for testing of lubricating oil/FO/Diesel can be used for internal		• Energy conservation and CO₂ reduction will become extremely important in the days ahead • Reduction of carbon footprint calls for green manufacturing, hence implementation of ISO 50001 Energy Management System will become a reality soon • Some European countries are already showing interest in ISO 50001 for component sourcing from Indian companies • It is better to be prepared to face the future challenge • We may enter into Green Co competition organized by CII, that will add value and create awareness for energy conservation • Since NMAMIT has M.Tech in Energy Systems, it would be appropriate to make	

process improvement purposes and to alert the supplier it cannot be legally valid if the test is not done as per IS standards in NABL accredited laboratory Flow meters and lubricating oil centrifuge units have been successfully used in known industries, but the devices are a mix of makes	a comprehensive plan : ISO 50001 implementation in Lamina Group of companies and the Energy monitoring and conservation projects may be taken up for students An energy conservation cell to be made involving faculty and industry representatives of Nitte

Income generated: Nil (On mutual benefit basis)

17. Faculty recharging strategies

1. Faculty members are encouraged to conduct Faculty development programmes and workshops in emerging technologies and using advanced software.
2. Faculty members are deputed to attend workshops, seminars and conferences in other institutions including IITs and NITs.
3. They are provided incentives for carrying out funded sponsored research projects and publishing papers in reputed journals and conferences.

1. Faculty Development Programme/Workshop conducted by the Department:

Sl. No.	Name of the FDP/Workshop conducted	Date & Month	Source of Financial Support	Sponsored	No. of Participants
01	One Day Faculty Conclave on Engineering Education Research (EER 2015)	May 6, 2015	Funded by TEQIP Phase II	Nil	30
02	State level Engg. Students Technical paper presentation and Project model exhibition IEINITTE-2016	5 th March 2016	TEQIP-II	IE(I) STUDENTS CHAPTER, NMAMIT, NITTE	75
03	Technology Barrier Reduction Program(TBRP) summer camp for 10 th std. students of Udupi district	18 th April to 6 th May 2016	Zebra Technologies Corporation, Bangalore	Foundation for Advancement of Education and Research (FAER), Bangalore	36
04	Two Day Faculty Development Workshop on Responsive Web Applications	04-05, Feb 2016	BITES Bangalore	BITES Bangalore	30
05	"Research Methodologies and Latex" – MITS	2-5, Aug 2015	VTU Belagavi +TEQIP	VTU Belagavi	120
06	3 Day Workshop on LaTeX	14-16, July 2015	TEQIP	TEQIP	25

07	Recent Developments in Measurement Science	April 22-23, 2016	NMAMIT,NITTE	TEQIP PHASE – II sponsored	28
08	Training/Demonstration session on Plagiarism Check using “Turnitin” software	14 May 2015	Own fund of NMAMIT	--	200
09	Expert lecture series on “Distributed Clean Energy and Power Systems”	5 October 2015	Own fund of NMAMIT	--	200
10	Training on Professionalism	22 March 2016	Own fund of NMAMIT	--	150
11	Expert lecture on “Zero Net Energy Building”	23 March 2016	Own fund of NMAMIT	--	200
12	Practical durability assessment of automotive and welding design	23-24 th dec 2016	-----	TEQIP PHASE – II	44

2. Faculties are deputed to attend workshops, seminars and conferences in other institutions including IITs and NITs

Sl. No.	Name of the Faculty	Name of the Conference/Workshop/Seminar attended	Place	Date
01	Ajit M Hebbale	3-day training on LATEX	NMAMIT-Nitte	14-16 July /2015
02	Ajit M Hebbale	Workshop on “Soft Computing Paradigm and its Applications”	NMAMIT-Nitte	27-29 July /2015
03	Ajit M Hebbale	TEQIP Workshop on “Research Methodologies and LATEX”	NMAMIT-Nitte	2-4 September /2015
04	Ajit M Hebbale	TEQIP Workshop on “Materials Microstructure Characterization using optical & Scanning Microscopy”	IIT-Hyderabad	20-24 December/ 2015
05	Ajit M Hebbale	ICEMS-2016	Jaipur National University-Jaipur	17-19 March 2016
06	Ajit M Hebbale	Application of LABVIEW for Automation and Robotics.	NMAMIT-Nitte	July 27-29, 2016
07	Rashmi P. Shetty	Advances in Energy Conversion Technologies	MIT, Manipal	28 /01/ 2016
08	Rashmi P. Shetty	Recent developments in measurements science	NMAMIT, Nitte	22/04/ 2016
09	Rashmi P. Shetty	Introduction to Therapeutic counseling for engineering teachers	NMAMIT, Nitte	13/07/ 2015

10	Vishwanatha J S	Research Methodologies & Latex	NMAMIT-Nitte	September 2-4, 2015
11	Dr. Narasimha Marakala	Seventh National Conference on Ethics and Governance in Management	Justice KS Hegde Institute of Management, Nitte	29 th and 30 th December 2015
12	Dr. Narasimha Marakala	International Conference on Emerging Trends in Engg. ICETE-2016	NMAMIT-Nitte	12 th and 13 th May 2016
13	M. Ananthakrishna Somayaji	TEQIP Workshop on “Research Methodologies and LATEX”	NMAMIT-Nitte	2-4 September /2015
14	Ravikiran Kamath B.	Proceedings of the International Conference on Emerging Trends in Engineering – ICETE 2015, paper titled “Earlier fault detection and improve the performance of induced draught fan through condition based monitoring system”, ISBN : 978-93-84935-30-6, page 51-55.	NMAMIT-Nitte	8-9 th May 2015
15	Dilip Kumar K	The two days training on “Basic course on ANSYS-Mechanical” by Mind Box	NMAMIT Nitte.	21 st March to 22 nd March
16	Udaya Devadiga	FDP programme on Soft Computing Paradigm and its Applications	NMAMIT Nitte	27,28 and 29 th July 2015
17	Udaya Devadiga	ICAMPS 2015	Indian Institute of Metals, Trivandrum	13-15 May 2015
18	Mr. Grynal D’Mello	International Conference on Emerging Trends in Engineering (ICETE -2015)	NMAMIT, Nitte	8 th – 9 th May, 2015,
19	Mr. Grynal D’Mello	Jnanasangama -2015 – A National Level Student Conference,	VCET, Puttur	2 nd May, 2015
20	Mr. Grynal D’Mello	Proceedings of 30 th National Convention of Production Engineers on the theme ‘Sustainable Manufacturing	NIT, Agartala, Tripura	18 th -19 th July, 2015
21	Mr. Grynal D’Mello	National Conference on Advances in Mechanical Engineering Science (NCAMES-2016)	SIT, Valachil, Mangaluru	7 th May, 2016
22	Mr. Grynal D’Mello	One day Executive program on ‘Neuroleadership for Value Creation’	JKSHIM, Nitte	20 th November 2015

23	Dr. Shashikantha Karinka	Indo-German dialogue on Excellence in Research & Education, conference held in Bangalore on 20 November-15	Bangalore	20 November 2015
24	Dr. Shashikantha Karinka	One day awareness programme on Intellectual property rights – MSME, Government of India	Mangaluru	26 February 2016
25	Mr. Ravikiran Kamath B	3 day workshop on “LaTex”	NMAMIT, Nitte	25-27 th July, 2016
26	Mrs. Akshatha Manjunath	3 day workshop on “LaTex”	NMAMIT, Nitte	25-27 th July, 2016
27	Mr. Ravikiran Kamath B	4 day workshop on “Therapeutic Counseling for Teachers in Higher Education”	NMAMIT, Nitte	17-20 th May, 2016
28	Mr. A. Adarsh Rai	4 day workshop on “Therapeutic Counseling for Teachers in Higher Education”	NMAMIT, Nitte	17-20 th May, 2016
29	Mr. Austin Dinesh D’souza	4 day workshop on “Therapeutic Counseling for Teachers in Higher Education”	NMAMIT, Nitte	17-20 th May, 2016
30	Mr. Ravikiran Kamath B	TEQIP-Phase II sponsored FDP on “Recent Developments in Measurement Science”	NMAMIT, Nitte	22-23 rd April, 2016
31	Mr. Vincent Linish D’souza	TEQIP-II funded 3 days FDP on “Application of Lab VIEW to Automation and Robotics”	NMAMIT, Nitte	25-27 July, 2016
32	Mr. Divijesh P	TEQIP-II funded 3 days FDP on “Application of LabVIEW to Automation and Robotics”	NMAMIT, Nitte	25-27 July, 2016
33	Mr. Rajath N Rao	TEQIP-II funded 3 days FDP on “Application of LabVIEW to Automation and Robotics”	NMAMIT, Nitte	25-27 July, 2016
34	Mr. Vincent Linish D’souza	Summer Course on Applied CFD & FEA using ANSYS	MIT, Manipal	4 th -13 th July 2016
35	Mr. Vincent Linish D’souza	Basic course on ANSYS Mechanical	NMAMIT, Nitte	21 st -22 nd March 2016
36	Mr. Vincent Linish D’souza	Recent developments in measurement science	NMAMIT, Nitte	April 22 nd to 23 rd 2016
37	Mrs. Akshatha Manjunath	Structured Approach in Engineering Education for Quality Enhancement	NMAMIT, Nitte	29 th -30 th July 2016
38	Mr. Austin Dinesh D’ Souza	Seminar on “Materials and their Interaction with Environment” Dr. H.V. Sudhaker Nayak (Former Director, NITK)	NMAMIT, Nitte, Mechanical Department	29-03-2016
39	Mr. Divijesh P	Recent developments in measurement science	NMAMIT, Nitte	April 22 nd to 23 rd 2016

40	Mr. Veeresh R K	Recent developments in measurement science	NMAMIT, Nitte	April 22 nd to 23 rd 2016
41	Udaya Devadiga	Recent developments in measurement science	NMAMIT, Nitte	April 22 nd to 23 rd 2016
42	Mr. Austin Dinesh D'Souza	Recent developments in measurement science	NMAMIT, Nitte	April 22 nd to 23 rd 2016
43	Mr. Srinivasa Prabhu	Recent developments in measurement science	NMAMIT, Nitte	April 22 nd to 23 rd 2016
44	Mr. Mohan Poojari	Structured Approach in Engineering Education for Quality Enhancement	NMAMIT, Nitte	29 th -30 th July 2016
45	Mr. Vishwanath J S	Structured Approach in Engineering Education for Quality Enhancement	NMAMIT, Nitte	29 th -30 th July 2016
46	Mr. Krishna Prasad	Structured Approach in Engineering Education for Quality Enhancement	NMAMIT, Nitte	29 th -30 th July 2016
47	Mr. Manjunath Maiya	Structured Approach in Engineering Education for Quality Enhancement	NMAMIT, Nitte	29 th -30 th July 2016
48	Mr. Gautama Hebbar	Structured Approach in Engineering Education for Quality Enhancement	NMAMIT, Nitte	29 th -30 th July 2016
49	Dr. Narasimha Bailkeri	Summer Course on Applied CFD & FEA using ANSYS	MIT, Manipal	4 th -13 th July 2016
50	Mr. Vishwanath J S	Participated in the National workshop on "Artificial Neural Network and Its Applications"	Bearys Institute of Technology, Mangaluru	28 th April, 2016
51	Mr. Santhosh G	Global Initiative of Academic Networks	Mysuru	30 th May to 10 th June, '16
52	Mr. Bhaskar Achar	3 week workshop on Solid modeling in CATIA V5R16 package	NMAMIT, MECH. DEPT.	1 st – 22 nd June 2016
53	Mr. Bhaskar Achar	One day workshop on Application of CNC Programming and Simulation in Machining of Castings	NMAMIT, MECH. DEPT.	09.02.2016
54	Vincent L D'Souza	Two days' workshop on Computational Dynamics	NITK, Surathkal	26 th Sep to 27 th Sep '16
55	Srinivas Prabhu	Two days' workshop on Computational Dynamics	NITK, Surathkal	26 th Sep to 27 th Sep '16
56	Dilip Kumar K	Two days' workshop on Computational Dynamics	NITK, Surathkal	26 th Sep to 27 th Sep '16

57	Dr. Narasimha Marakala	Two days' workshop on Advanced Materials and Manufacturing	NITK, Surathkal	28 th Sep to 30 th Sep 2016
58	Dr. Shashikantha Karinka	Guest Speaker to participate in the "Green Drive – Competences and Skills for the Engineers of Tomorrow's Green Vehicles"	University of Antwerp, Belgium	21 st to 23 rd Sep. 2016

3. Faculties are provided incentives for carrying out funded sponsored research projects and publishing papers in reputed journals and conferences.

Sl. No	Name	2013	2014	2015	2016
01	Dr. Sudesh Bekal	4100/-	2438/-	750/-	900/-
02	Dr. Mallikappa	7700/-			
03	Dr. Srinivas Pai	3800/-	5524/-	6193/-	6400/-
04	Mr. Kumar H.S	--	563/-	--	--
05	Dr. Shashikanth Karinka	---	---	--	2000/-

18. Student projects

- Percentage of UG students who have done in-house projects including inter-departmental**

Year	In-house	Industry/Government
2012-2016	93%	7%
2011-2015	95%	5%
2010-2014	95%	5%
2009-2013	100%	-
2008-2012	100%	-
2007-2011	100%	-

Government funded UG project: Mr. Jithin Jose D' Souza, Mr. Aravind Shetty, Mr. K. Rajath Shetty, Mr. Deepak G P carried out a final year UG project on "Design and Fabrication of a Multiple Biodiesel Seed Decorticator" under the guidance of Dr. Shashikantha Karinka, Professor of Mechanical Engineering Department at NMAMIT-Nitte. The project work was sponsored by Design Clinic Scheme-MSME India through National Institute of Design, Ahmedabad and NMAMIT-Nitte.

- Percentage of PG students doing projects in collaboration with industries / institutes**

Year	Specialization	In-house	Industry
2014-2016	Energy Systems Engg.	100	---
	Machine Design	43%	57%
2013-2015	Energy Systems Engg.	94%	6%
	Machine Design	47%	53%
2012-2014	Energy Systems Engg.	61%	39%
	Machine Design	71%	29%
2011-2013	Energy Systems Engg	88%	12%
2010-2012	Energy Systems Engg	94%	6%

• **Number of UG/PG projects which are done at international level – Total 3 nos.**

Details:

- UG project -1
- M. Tech. Projects – 2 (Machine Design -1 and Energy Systems Engineering-1)

UG Project (Belgium National):

1. Mr. Toon Daems, **Student of Professional Bachelor in Automotive Technology from Department of Industrial Sciences, Karel de Grote University College, Antwerp, Belgium** has successfully completed the project work-cum-Internship, during 1st March to 23rd May at NMAMIT, Nitte and M/S Lamina Foundries Limited, Nitte-India. The title of the project is “Manufacturing process defects of automotive brake drums and implementation of poka-yoke.” His NMAMIT guide was Dr. Shashikantha Karinka, Professor of Mechanical Engineering Department.

M.Tech. Project:

1. Mr. Yathin Krishna pursued his M. Tech. project work titled “Simulation of Solid Oxide Fuel Cell (SOFC) using solid porous electrolyte” under the guidance of Prof. Yoshinobu YOSHIHARA of Mechanical Engineering Department in the Faculty of Engineering at **Ritsumeikan University, Japan**. The NMAMIT guide of Yathin is Dr. Shashikantha Karinka, Professor of Mechanical Engineering & PG Coordinator.
2. Mr. Karthikeya Kamath B, pursued his M. Tech. project work titled “Design and Development of Ground Contact Sensing Biped Foot” under the guidance of Dr. Sang Ho Hyson of Mechanical Engineering Department in the Faculty of Engineering at **Ritsumeikan University, Japan**. The NMAMIT guide of Karthikeya is Dr. Muralidhara, Professor of Mechanical Engineering & PG Coordinator.

19. Awards / recognitions received at the national and international level by

1. Dr. Muralidhara won the best paper award in international conference held at IITM titled “Investigation on proposed tool wear compensation technique for micro EDM” in Jan 2009.
2. Dr. Muralidhara won the best paper award in international conference held at Shri Eshwar college of Engg. Coimbatore in Dec 2013 titled “Experimental Investigation on active vibration isolation using piezo electric actuator”.
3. Dr. Muralidhara has won Certificate of Achievement for having guided the ISTE-GSFC National Award for Best M. Tech Thesis (II Prize) for 2013-14.
4. Dr. Muralidhara received second consolation prize for the presentation of his research work “Development of Micro-Electro-Discharge machining (Micro-EDM) with Piezoactuated tool feed system” in the exhibition of Academia project at IMTEX Forming 2014 held at Bangalore during 23-28 Jan-2014.
5. Dr. Muralidhara and his research team won the First Place for their research work on “Investigation on mechanical micromachining process with piezoactuated machining depth control and its application in MEMS device fabrication” at the IMTEX Exhibition – 2015 held in Bengaluru for their innovative research project.
6. Dr. Narasimha Marakala won the best paper award in ICETE-2012 held at J. J. Mugdam College of Engg., Kolhapur titled “Combined effect of thermal and fluid induced vibration in slender pipe”.
7. Dr. Srinivasa Pai P won the Certificate of Achievement for having guided the Best M.Tech Thesis (II Prize) titled “Fuzzy logic based Prediction of performance and

- emission parameters of a dual fuel CI engine” submitted by A. Adarsh Rai during 42nd Annual National Convention of ISTE held at Hyderabad in 2013.
8. Dr. Narasimha Bailkeri won Best paper award in the international conference RACE-2012 held at MIT Manipal during Jan-2012 titled “Performance Study on twin plug SI Engine at different Ignition timings”.
 9. Adarsh A Rai, Faculty, Dept. of Mechanical Engg. And M.Tech Student of ESE won Best M.Tech Thesis (II Prize) titled “Fuzzy logic based Prediction of performance and emission parameters of a dual fuel CI engine” during 42nd Annual National Convention of ISTE held at Hyderabad in 2013.
 10. NID Ahmadabad’s “Design Clinic” for MSME, Govt. of India funded Rs. 1.02 lakhs for a UG project titled “Design and fabrication of Multiple biodiesel seed decorticator” for the year 2014-15 with Dr. Shashikantha Karinka as the Faculty Coordinator.
 11. Mr. Grynal D’Mello won the best paper award in National Conference Jnanasangama held at Vivekananda Institute of Technology titled “Design and development of coconut climber and plucker robot” in June 2015.
 12. Mr. Prasad Prabhu and Mr. Sandesh Nayak of 4th Semester M.Tech. (Machine Design) have participated in IEEE Mangalore Sub-section’s I2CONECCT – a Regional M. Tech. Project Competition held at Canara Engineering College on 14th May 2016. They won the awards in the Non-Circuit Category.
 13. Mr. Grynal D’Mello won the best paper award in International Conference on Advancements in Aeromechanical Materials for Manufacturing held at Marri Laxman Reddy Group of Technology titled “Surface roughness modeling in high speed turning of Ti6Al4V – Artificial Neural Network approach” in June 2016.
 14. Dr. Muralidhara was invited as Resource Person for Faculty Development Program at St. Joseph Engineering College, Department of mechanical Engineering, Vamanjoor, Mangalore, which was held on 15th July 2016.
 15. Dr. Srinivas Pai P was a keynote speaker in e-TIME-2016: National Conference and Faculty Development Program on Emerging Trends in Mechanical Engineering held at St. Joseph Engineering College, Department of Mechanical Engineering, Vamanjoor, Mangalore held on 5th and 6th of August 2016.
 16. Dr. Shashikantha Karinka has been invited as a Guest Speaker to participate in the “Green Drive – Competences and Skills for the Engineers of Tomorrow’s Green Vehicles”. He has attended the conference as a speaker in the session on “Asian Region – Challenges on Industry and Education in Developing Country” with reference to India. The conference is organized by a consortium of 4 European Universities and the invitation on behalf of the consortium is sent by University of Antwerp, Belgium. The Consortium meeting and the conference will be held during 21-23 September 2016 at University of Antwerp, Belgium.

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Sl. No.	Name of the Workshop	Date & Month	National / International	Source of Financial Support
1.	Recent Advances in Machining (RAM 2013)	10 th -15 th June 2013	National	ISTE, New Delhi
2.	Recent Advances in CAD/CAM software	22-27 July 2013	National	TEQIP
3.	A three day workshop on “Recent	5-7, June 2014	National	TEQIP

	Developments in Condition Monitoring and maintenance of Machinery”			
4.	A five day STTP on “Design and Simulation of MEMS Devices”	16-20 June 2014	National	TEQIP
5.	One Day Workshop on Tribocorrosion for Medical and Healthcare Applications	21 st July 2014	National	TEQIP
6.	Half day workshop on “Structural Health Monitoring” by Dr. M R Bhat	11 th Oct. 2014	National	TEQIP
7	Two day FDP on “Recent Developments in Measurement Science”	22 nd -23 rd April 2016	National	TEQIP
8	Two day workshop on “Structured approach in engineering education for quality enhancement” by Dr. K Subrahmanya Bhat and Dr. Srinivasa Pai P	29 th -30 th July, 2016	National	TEQIP

Sl. No.	Name of the Conference	Date & Month	National / International	Source of Financial Support
1.	International Conference on Emerging Trends in Engineering (ICETE-'13)	15 th and 16 th May 2013	International	TEQIP

21. Student profile course-wise:

Name of the Course (refer question no.2)	Year	Applications received	Selected		Pass percentage	
			Male	Female	%Male	%Female
B.E (Mechanical Engg.)	2016-17	NA	181	4	-	-
	2015-16		203	4	86	-
	2014-15		210	4	91	100
	2013-14		205	3	94	100
	2012-13		218	-	90	100
M.Tech (ESE)	2016-17	NA	6	-	-	-
	2015-16		6	3	100	100
	2014-15		7	2	100	100
	2013-14		13	2	93.3	100
	2012-13		15	3	94.4	100
M.Tech (Machine Design)	2016-17	NA	14	2	-	-
	2015-16		14	1	88.88	100
	2014-15		18	0	94.12	--
	2013-14		17	0	100	--
	2012-13		17	0	100	--

22. Diversity of students

Name of the Course (refer question no. 2)	No. of students from the College	Year	% of students from the State		% of students from other States		% of students from other countries	
			No.	%	No.	%	No.	%
BE	NA	2016-17	157	85	28	15	0	0
		2015-16	180	87	27	13	0	0
		2014-15	176	82	38	18	0	0
		2013-14	157	75	51	25	0	0
		2012-13	154	71	64	29	0	0
M.Tech (ESE)	00	2016-18	06	100	0	0	0	0
	00	2015-17	09	100	0	0	0	0
	00	2014-16	08	100	0	0	0	0
	00	2013-15	15	100	0	0	0	0
	00	2012-14	18	100	0	0	0	0
M.Tech (MMD)	00	2016-18	16	100	0	0	0	0
	01	2015-17	16	100	0	0	0	0
	02	2014-16	17	100	0	0	0	0
	02	2013-15	17	100	0	0	0	0
Ph.D.	01	2016	01	100	0	0	0	0
	01	2015	01	100	0	0	0	0
	01	2014	01	100	0	0	0	0
	06	2013	06	100	0	0	0	0
	07	2012	07	100	0	0	0	0
	02	2011	05	100	0	0	0	0
	01	2010	02	100	0	0	0	0

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

Number of students cleared GATE/GRE/IELTS: 31

Year	Number of students
2012	04
2013	08
2014	05
2015	09
2016	04

24. Student progression

Student progression	Percentage against enrolled
UG to PG	Average 7 % in last four years
PG to Ph.D.	Average 2 %
Ph.D. to Post-Doctoral	Nil
Employed campus selection	Average 52 %
Employed: Other than campus recruitment	Average 20-40 % per year
Entrepreneurs	Average 02 %

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	35%
from other universities within the State	60%
from other universities from other States	5%

Percentage of faculty who are graduates			
Name of University	Number		Percentage
VTU	27	Same parent university	58.7
Mangalore University	6	Other universities within the State	34.8
Bangalore University	3		
MAHE, Manipal	6		
Kuvempu University	1		
IIT Bombay	1	Other universities from other States	6.5
IIT Madras	1		
Calicut University, Kerala	1		

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period.

Ph.D.: 03

Name of the faculty	University	Year
Dr. Narasimha Marakala	NITK, Surathkal	2012
Dr. Narasimha Bailkeri	VTU, Belagavi	2014
Dr. Mallikappa	NITK, Surathkal	2014

27. Present details about infrastructural facilities

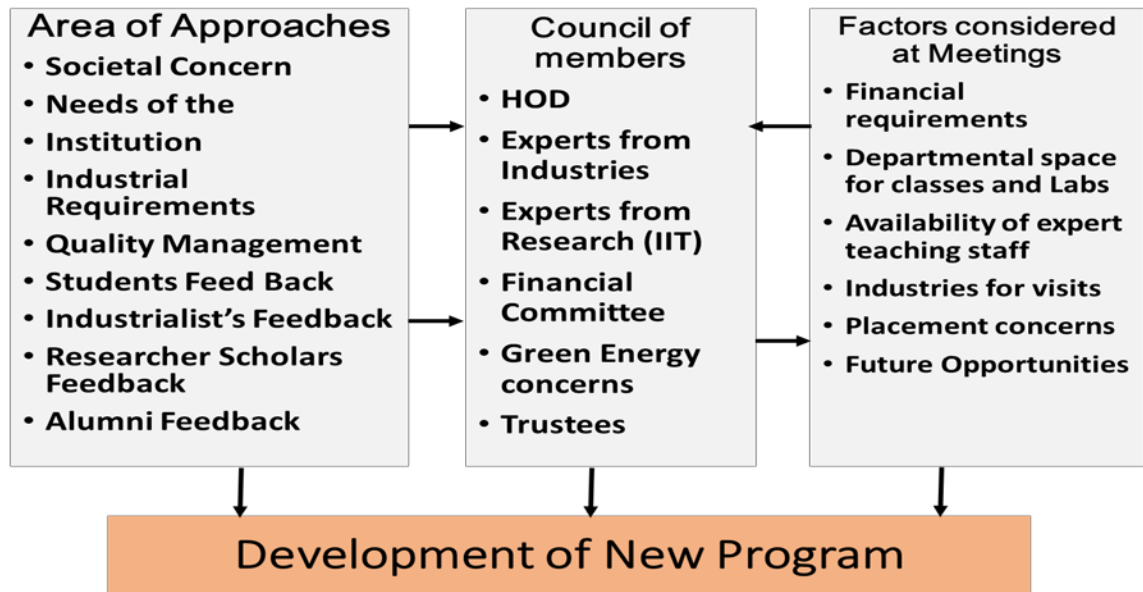
Infrastructural facilities of Mechanical Department			
1.	Library:	Title: 145	Volume: 700
2.	Internet facilities for staff and students:	310 Mbps	
3.	Class rooms with ICT facility	13	
4.	Students Laboratories	11	
5.	Research laboratories	04	
6.	Seminar Hall	01 (Phalguni Hall)	110 Seating capacity
7.	Energy parks	01 (Solar energy park)	

28. Number of students of the department getting financial assistance from College:

S. No	Year	Number of UG students	Number of PG students
1.	2011-12	26	02
2.	2012-13	53	01
3.	2013-14	43	04
4.	2014-15	48	01
5.	2015-16	58	--
6.	2016-17	36	01
Total		264	09

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes, severe assessment exercise has been undertaken before the development of new program.



- Meetings of all professors identifying both aspects the need of students and from the technology point of view, based on feedback given by alumni, industrial experts and companies coming for placement, a new PG course in Machine Design was started in the year 2012.

30. Does the department obtain feedback from:

- **Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.
 - Soft skill training program and Employability Skill Development are introduced.
 - The suggestions for revision of curriculum if any, are deliberated in the departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.
 - The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
 - Accordingly, Elements of Mechanical Engineering (first year course) is revised in 2016 and Auto motive Lab is introduced as a lab component in the course Automobile Engineering in the academic year 2014-15.

- **Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.
 - Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.
 - A common questionnaire containing questions related to teaching, learning, and evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.
 - Course Exit Survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.
 - BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
 - The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops etc.
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this, alumni keep visiting the institution and interact with faculty members and HODs.
 - The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.
 - Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.

- Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
- During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
- Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.
- Mr. Naveen B.M., of M/s U Solar Ltd., Bangalore, who is former alumnus of M.Tech (ESE) from NMAMIT, has suggested necessary modifications to M.Tech (ESE) syllabus, particularly courses related to solar energy and these changes have been incorporated in the syllabus.

31. List the distinguished alumni of the department (maximum 10)

Sl. No	Name of the Alumni	Department	Designation
1.	Ullas Shetty	Industrial Engg.	Manager, Fedral Mougla, Bangalore
2.	Shankar Naik	Production	Asst. Manager, HAL, Bangalore
3.	Rahul Patel	Design	Asst. Manager, L&T ECC-Gandhi Dham
4.	Bharath Kumar Badri	Production	Asst. Manager, JSW-Bellary
5.	Pawan Shetty	HRD	HR Manager, Accenture – India, Bangalore
6.	Naveen B. M	Design	Senior Consultant, U Solar Ltd. Bangalore
7.	Sathish K. Shetty	HRD	Executive (O&M) GMR Energy Ltd.,
8.	Nithin Noel Rodrigues	Design	Design Manager ,M/s BEISSE, Bangalore
9.	Shadab Alam	CAE	System Engineer, Infosys Technologies Hyderabad
10.	Bharath Kedlaya	Design	M/s ACE Manufacturing Systems, Bangalore

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

I. Special lectures

- A lecture on finite element analysis by Mr. Rajkumar, Magna Technologies Bangalore, Organized by AIMS in 2010.
- KSCST Sponsored Special Lecture on Commemoration of 150th Birthday of Sir M. V. on 9/6/2011 by Dr. Prasad Krishna –Prof. NITK, Surathkal on “Advances in CNC Machine tools”
- A talk on technologies used in computer aided engineering by Mr. Samuel Abraham, I-POINT Technologies Mangalore in Jan-2012.
- Talk on ‘IC-Engines’ for final year students under AIMS by Dr. B. S. Samaga in 2012.
- A Technical talk on ‘Back to the future’ by Dr. Sreekumar Menon, Commissioner of Customs, Central Excise and Service Tax in Feb 2012.

- Talk on Opportunities in Marine Engineering by Lt. Col. Unnikrishnan for final year students in Feb-2013.
- A Technical talk on 'Model based identification of misalignment in rotor-coupling- bearing systems' by Dr. Rajeev Tiwari, Professor, Dept. of Mechanical Engg. IIT-Guwahati in 2013.
- "CMSI chapter" Inauguration and a talk on "Significance of Condition Monitoring in Industries" by Mr. Deepak Prabhakar, DGM, MRPL on Feb.1st 2014
- "SESI chapter" Inauguration and a talk on "Best practices in Research" by Dr. Sreedhar S, IIT Bombay, Mumbai on 31st Oct .2014
- A talk on "Condition Monitoring of Rotating Machinery" by Mr. Arun Kulkarni, Senior manager, Mechanical Maintenance, MRPL, Mangalore (CMSI Chapter) on 10-11-2014
- "Empowering Yourself-You Are What You Think" by Mr. Oliver Sutari, Counsellor, Manipal (SESI Chapter) on 13-01-2015
- Overhauled'15- A One day technical fest, where events like The Royal Hunt, Master Mind and R U Creative were conducted on 14th Feb. 2015
- "Dynamics of Environmental conditions and Recent trends in Satellites" on 17-01-2015 by Mr. Ramesh Naidu V, Deputy Manager, Vibration Lab, ISAC ISRO, Bangalore
- Inauguration of CMSI Chapter on 9.11.2015 by Mr. Anil Kumar Prabhu Senior GM –Lamina Foundries
- "Career opportunities in Merchant Navy for graduate Mechanical Engineers" on 20-08-2016 from 11AM to 1PM by Mr. Sudhakar Shetty Sailing as Chief Engineer
- "Design and Validation Process for a durable Vehicle-An overview of the automobile Industry's needs" on 22-08-2016 from 12PM to 1.30PM by Mr. Sathya Prakash Chief Technical Officer Mahesh Software Systems Pvt. Ltd.,104, Kumar Pooja, Karvenagar,
- "Clean Energy & Renewable Energy and related technology Advancements to prevent climate change" 30-08-2016 by Mr. Shuichi TORII, Prof. Department of Mechanical System Engg. Kumamoto University
- A talk on Career Opportunities in Robotics & Automation was organized on 17/09/2016 by Dr. S Mohan Kumar, Professor in Mechanical Engineering, Malnad College of Engineering, Hassan.
- A talk on "Career Opportunities in Automotive Engineering" was organized by AIMS on 13/10/2016, Thursday at Sambram Auditorium, NMAMIT Nitte. Mr. C Prakash, General Manager, R & D Ashok Leyland – Chennai was the resource person.

II. Workshops

- 3 day workshop on Automotive Basics and Designing-Auto factory by Metawings Pvt. Ltd. From 19/12/2012-21/12/2012.
- A two day workshop on 'Advances in Aerospace Engineering' and 'Geometry-Dimension and tolerances' by Mr. Abhilash V and Mr. Palaniyappan of M/s MSM Consultancies Bangalore in Oct 2012.
- A two day workshop by ARK Techno solutions, Mumbai on "IC Engines" during 3rd and 4th of October 2015. No. of Participants: 84

- Faculty Development Programme on “Recent Developments in Measurement Science” from April 22nd to 23rd 2016.
- A two days’ workshop on “Structured Approach in Engineering Education for Quality Enhancement” from July 29 to 30th 2016.
- Skill development/certification programme by Product Development Process (through KH Designs Bangalore and through NASSCOM Exam)

33. List the teaching methods adopted by the faculty for different programmes.

- The faculty makes use of LCD projectors in their classes and present real time models to make students understand the working of various mechanisms.
- Seminars and quizzes are conducted and assignments given.
- Teaching Aids (models) are used.
- Faculty also make use of on-line resources which includes E-books, open courseware (like NPTEL, VTU EduSAT), videos, YouTube and sometimes social media.
- Conventional blackboard and hands-on session are effectively used.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (Pos) are formulated as per NBA graduate attributes. To ensure attainment of Program Outcomes (Pos) and PEOs, the students’ learning outcomes are monitored by evaluating Course Outcomes (Cos). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of program objectives and monitor of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).
- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analyzing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.
- The suggestion includes solving of additional numerical problems from exercise and GATE question papers, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students’ learning capability.
- Technical Skill Building: Students are encouraged to do mini projects and showcase them in students’ projects exhibitions.
- Participation of students in departmental research projects (if any) is highly encouraged.
- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.
- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.

- Summer research internships are offered to students.
- **Course Exit Survey** is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year
- **Programme Exit Survey** is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of Cos and Pos. The analysis of attainment of Cos and Pos is carried out.
- Based on the attainment of Cos and Pos, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of Cos and Pos.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities.

Sl. No.	Activities
1	AIMS (Association for interaction of mechanical students) together with NSS unit of our college conducted a blood donation camp on 13 th February 2016.
2	Mr. Gururaj Upadhyaya and Mr. Bhaskara P Achar, have provided vocational training on CNC (Computerized Numerical Control) and foundry defects for the ITI employees of Lamina Foundries, Nitte.
3	AERO club conducts Aero Modeling workshop for school students.
4	AERO club also conducts demonstration of Remote control aircraft modeling with salient features of aircrafts for rural students of surrounding areas during TBRP(Technology barrier reduction program) every year.

36. Give details of “beyond syllabus scholarly activities” of the department.

- The Department conducts soft skill training for UG as well as PG students.
- **“Team NITTE Racing”** has represented NMAMIT as one among the seven other colleges from Karnataka for the BAJA SAE 2014 competition held in Pithampore, Madhya Pradesh during 19th to 22nd February 2014. Students designed, fabricated and validated a single seater four wheeler off road vehicle. The team secured an overall ranking of 41 out of 109 colleges and 31 rank in endurance race at the National level. It stood 3rd in Karnataka state.
- **“Team NITTE Racing”** has represented NMAMIT again as one among the five other colleges from Karnataka for the BAJA SAE 2015 competition held in Pithampore Madhya Pradesh during 20th to 22nd Feb 2015. Students designed, fabricated and validated a single seater four wheeler off road vehicle.
- Students have competed in the **“International Go-Kart Championship”** held in Lovely Professional University Punjab by LPU SAEINDIA Collegiate Club during 27 to 30 March 2015. The Team got 7th place in the competition.

- Students of the department have participated in the “Student Karting Championship” held at Lahari Resorts Hyderabad, during 23th to 27th October 2015. The Team got 20th place in the competition.
- 27 Students of the department participated in Mega ATV Championships held in Bhubaneswar Orissa during 4th to 8th March 2016 and got an overall 11th ranking at the National level.
- The department also organizes Industrial visits for students to enable them understand the various processes in industry.
- The department also conducts aptitude tests and technical events to help students expose their technical skills through student association, AIMS.
- Special lecture on Advanced Topics and current issues are arranged.
- Catia-V5 software training was given to the students from 01 to 25 June 2016.
- Students from Mechanical Engg. Have won gold medals in Weightlifting and Powerlifting competition in VTU inter collegiate level event was organized at Global Academy of Technology, Bengaluru during 11th – 13th November, 2016.
- In VTU state level inter – collegiate Wrestling, Judo, Taekwondo, Gymnastic and Malakhamba tournament was held at VDMRIT, Haliyal between 20th to 21st October, 2016, students from Mechanical Engg. Have won 1 silver and two bronze medals.

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

Yes. Department has ISO 9001:2008 Certification from DEKRA and NBA (UG) accreditation (three cycles completed). M.Tech (Energy Systems Engineering PG) is provisionally accredited by NBA under OBE in 2015.

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

➤ **STRENGTHS:**

- Well qualified and experienced faculty
- Department has State-of-art laboratories, good brand name and committed Visionary management.
- The courses offered by the department are autonomous.
- It has decades of expertise.
- The placements are good.
- Good campus and infrastructure

➤ **WEAKNESSES:**

- The college is located in a village far away from industries.
- To focus on research outcomes

➤ **OPPORTUNITIES:**

- University status can be obtained.
- New programmes in engineering can be started.
- Opportunity to strengthen collaboration with industries.
- Developing more Centres of Excellence
- Consultancy opportunities

➤ **CHALLENGES:**

- Foreign universities entry
- Competition: admission of quality students
- Opening of newer engineering colleges in the nearby area.

39. Future plans of the department:

- Tying up with industries for student projects and internships. Apart from the students, this will also help the faculty to be in phase with the industry requirements and to make the students directly employable by core industries.
- Establish MoU with more foreign universities for UG and PG student exchange on internship/projects or other matters of academic requirement.
- Getting more funded R&D projects from various sources
- Getting consultancy work from the local industries.
- Develop at least one of the laboratories as a certified testing laboratory.
- Continuous Upgradation of infrastructure to meet the ever-changing requirements.
- Further developing research labs such as Condition monitoring lab, Micromachining lab and Alternate fuels lab
- Establishing Centres of Excellence in three areas – Micromachining, Condition monitoring and Advanced Machining
- Starting new UG courses- Automobile Engg., Mechatronics Engineering and Marine Engineering
- Having 100% of faculty with Ph.D. degree in three years.
- Establishing Indian Welding Society NMAMIT Chapter
- Industry assisted laboratory and standardization of laboratory manual through industry help
- Establishing Active learning laboratory.
- Improving core company placements for students through specialized skill development programmes.

DEPARTMENT OF SCIENCE AND HUMANITIES

1. Name of the Department & its year of establishment:

Dept. of Science & Humanities – 1986

* (Departments of Physics, Chemistry, Mathematics and Humanities)

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.):

Ph.D (Mathematics, Physics, Chemistry).

3. Interdisciplinary courses and departments involved:

IPR and professional and cognitive communiqué open electives are offered to all final year UG students

4. Annual/ semester/choice based credit system:

Choice Based Credit System.

5. Participation of the department in the courses offered by other departments:

- All first year B.E students – Courses Offered are: Engineering Mathematics, Engineering Physics, Engineering Chemistry, English and Communication Skills, Constitution of India & Professional Ethics.
- Enhancing Self Competence – soft skills oriented course offered by the Department of Humanities in 3rd and 4th Semesters of all Engineering Programmes.
- Engineering Mathematics offered to all branches of Engineering in 3rd and 4th Semesters and also in M. Tech programmes,
- Institution Core Humanities Courses offered in 6th, 7th and 8th Semesters of all Engineering Branches such as Engineering Management, Engineering Economics, Industrial Management, etc.
- Open elective for VIII Semester BE students of all branches:

Open Electives	Department
Graph Theory	Mathematics
Linear Algebra	
Natural Products Chemistry	Chemistry
Corrosion Science	
Opto Electronic Devices	Physics
Advanced Materials Technology	
Physics of Semiconductor Devices	
Intellectual Property Rights	Humanities
Professional and Cognitive Communiqué	

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors):

	Sanctioned	Filled
Professor	05	05
Associate Professors	02	02
Asst. Professors	25	27

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./Ph.D./M.Phil., etc.)

Sl. No.	Name	Qualification	Specialization	Designation	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
PHYSICS						
1	Dr. Manjunatha K B	M.Sc., Ph.D.	Solid State Physics/ Non-linear Optics	Asst. Prof	04	01 (Guiding)
2	Dr. Sharada G Prabhu	M.Sc., Ph.D.	Electronics/Nonlinear Optics	Professor	34	01 (Guiding)
3	Dr. G.K. Shivakumar	M.Sc., Ph.D.	Solid State Physic	Professor	41	02
4	Shobha R Prabhu	M.Sc. (Ph.D.)	Nuclear Physics/ Crystal Growth	Asst. Prof	17	
5	Raghavendra Bairy	M.Sc. (Ph.D.)	Electronics/Nonlinear Optics	Asst. Prof	09	
6	Shekara Poojari	M.Sc.	Physics	Asst. Prof	22	
CHEMISTRY						
1	Dr. Ramesh Bhat	M.Sc., Ph.D.	Physical Chemistry	Associate Professor	12	01 (Guiding)
2	Dr. Janardhana Nayak	M.Sc., Ph.D.	Organic Chemistry	Professor	19	05 (Guiding)
3	Dr. Aarti S	M.Sc., Ph.D.	Inorganic Chemistry	Asst. Prof	05	02 (Guiding)
4	Dr. Subrahmanya I Bhat	M.Sc., Ph.D.	Organic Chemistry	Asst. Prof	06	
5	Mr. Shivaprasad Shetty M	M.Sc. (Ph.D.)	Industrial Chemistry	Asst. Prof	09	
6	Neetha Neerupama	M.Sc.	Chemistry	Research Scholar	01	
MATHEMATICS						
1	Dr. Shankaran P	M.Sc., Ph.D.	Graph Theory	Professor	19	02 (Guiding)
2	Dr. Shashirekha B Rai	M.Sc., M.Phil., Ph.D.	Lattice Theory	Professor	30	02 (Guiding)
3	Dr. Sharad Hegde	M.Sc., Ph.D.	Ring Theory	Asst. Prof	03	01 (Guiding)
4	Dr. Kumudakshi	M.Sc., Ph.D.	Graph Theory	Asst. Prof	11	
5	Mrs. Ambika N	M.Sc.	Ring Theory	Asst. Prof	11	
6	Mrs. Vinaya Acharya	M.Sc.	Mathematics	Asst. Prof	09	

7	Mrs. Anitha D Bayar	M.Sc, B.Ed. K-SET	Mathematics	Asst. Prof	04	
8	Ms. Bhavya K	M.Sc.	Mathematics	Asst. Prof	04	
9	Ms. Chaithra K	M.Sc.	Graph Theory	Asst. Prof	04	
10	Ms. Bhavya D	M.Sc.	Mathematics	Asst. Prof	04	
11	Ms. Sharmila	M.Sc.	Mathematics	Asst. Prof	03	
12	Ms. Anjana Pai	M.Sc.	Mathematics	Asst. Prof	03	
13	Ms. Soumya	M.Sc.	Mathematics	Asst. Prof	03	
14	Ms. Smitha	M.Sc. UGC- CSIR (NET) K-SET	Mathematics	Asst. Prof	03	
15	Apoorva D'Souza	M.Sc.	Mathematics	Asst. Prof	01	
HUMANITIES						
1	Mrs. Rashmi D Hegde	(Ph.D.) M.A	English English	Associate Professor	22	
2	Mr. Ramakrishna B	(Ph.D.) M.Phil. M.A. M.B.A UG C (NET)	Economics and Entrepreneurship Economics Economics Human Resource Management Economics	Asst. Prof	24	
3	Mr. Vishwanatha	(Ph.D.) M.Phil. M.A.	English English English	Asst. Prof	11	
4	Mr. Joy Elvine Martis	M.Phil. M.A. PGDTE	English English English	Asst. Prof	08	
5	Mr. Sandeep Kharvi	M.A.	English	Asst. Prof	03	
6	Mrs. Sonia Lobo	M.B.A B.E.	Finance Computer Science & Engineering	Asst. Prof	01	
7	Mr. Srinivas Nekkar	M.A. B.Ed.	English English	Asst. Prof	02	

8. Percentage of classes taken by temporary faculty – programme-wise information
NA

9. Programme-wise Student Teacher Ratio:
NA

10. Number of academic support staff (technical) and administrative staff:
Sanctioned: 09, Filled: 09

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise:

Principal Investigator	Name of the Project	Funding Agency	Year of sanction and duration	Grant Received
Dr. Aarti S	NiO nanophosphors: Microwave synthesis microstructure and photoluminescence	Vision Group of Science and Technology, Government of Karnataka	2014 01 Year	Rs. 4 lakhs

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received :

Principal Investigator	Name of the Project	Funding Agency	Year of sanction and duration	Grant Received
Dr. Sharada G Prabhu	Growth of optical crystal, nano crystals, crystals on polymer as substrate for various optical applications	VTU, Belagavi, Karnataka	2012 01 Year	Rs. 3.75 lakhs

13. Research facility / centre with

- **State recognition:** VTU, Belagavi, Karnataka
- **National Recognition :** NA
- **International Recognition :** NA

14. Publications:

- **Number of papers published in peer reviewed journals (national / international) :** 30
- **Monographs :** Nil
- **Chapter(s) in Books:** Nil
- **Editing Books :** Nil
- **Books with ISBN numbers with details of publishers: 01**
Fundamentals of Intellectual Property Rights – For Students, Industrialists and Patent Lawyers; Ramakrishna B & Anil Kumar H S; **Notion Press**, Old No. 38, New No. 6, McNichols Road, Cherpet, Chennai – 600 031; ISBN 978-1-946556-31-8; 2017
- **number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) :** Nil
- **Citation Index – range / average :** 1-170/13.2
- **SNIP - range/average:** 0.210 – 1.046/0.689
- **SJR- range/average:** 0.124 – 1.096/0.506
- **Impact factor – range / average :** 0.2-5.97
- **h-index - range/average:** 1-9/4.4

15. Details of patents and income generated : Nil

16. Areas of consultancy and income generated : Nil

17. Faculty recharging strategies :

Faculty has been deputed to attend

- o Workshops on teaching pedagogy, soft skills, research methodology and such other relevant areas.
- o Faculty Development Programmes (organized by the institute internally and in association with companies, training institutes within the institute and deputed to attend such programmes organized by other organizations and corporate units).
- o Conferences and Seminars.
- o Short term training programmes, etc.

18. Student projects :

NA

19. Awards / recognitions received at the national and international level by :

- Faculty: Dr. Shashirekha B Rai received “Certificate of Excellence” award for the paper presented in International Conference held at CIT, Coimbatore; July 2012.
- Doctoral / post-doctoral fellows
- Students

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any. :

Name	Date	Outstanding Participants	Source of Funding
Workshops:			
Enhancing Teaching-Learning Skills in Humanities	25 November 2016	- Prof. Uma Sankaran, - Prof. Joy Elvine Martis - Prof. Sonia Lobo	Institute (NMAMIT)
Transform Techniques and Mat Lab Applications	16 th & 17 th April, 2015	- Dr. Arulalan, Associate Professor, Department of Electronics & Communication Engg., NITK, Surathkal, - Prof. Pradeep Kumar, Dept. of E&E, NMAMIT, Nitte, - Prof. Abdul Rehman, Dept. of E&E, NMAMIT, Nitte	TEQIP II
Communication Skills	13 th and 20 th October 2014	- Prof. Vishwanatha and Prof. Joy Elvine Martis, Department of Humanities, NMAMIT, Nitte. (Participants: MCA Students, NMAMIT, Nitte)	Institute (NMAMIT)
Modern Trends in Chemical Research and Their Applications	10-11, July 2014	- Dr. Balakrishna Kalluraya, Mangalore University, - Dr. S.T. Nandibewoor, Karnataka University, Dharwad, - Dr. A Nithyananda Shetty, NITK, Surathkal, - Dr. Keshava A Bulbule, Nijalingappa	TEQIP II

		College, Bangalore, - Dr. B. M. Nagabushana, MSRIT, Bangalore, - Dr. A Chittaranjan Hegde, NITK, Surathkal, - Dr. Yashoda M.P., MIT, Manipal.	
Technical Documentation using LaTeX	14 th July 2014	- Dr. Laxminidhi, NITK, Surathkal	TEQIP
Recent Advances in Optoelectronic Materials and Devices	30 th & 31 st July 2014	- Prof. S. M. Shivaprasad, JNCASR, Bangalore. - Dr. P. Pradeep, NITC, Calicut. - Dr. Sujith, NITC, Calicut. - Dr. Rajeev N. Kini, IISER-Trivandrum. - Dr. Santhosh Chidangil, CAMP, Manipal University, Manipal. - Dr. Muralidhar Kulkarni, NITK, Surathkal. - Dr. V.P. Mahadevan Pillai, Kerala University, Trivandrum. - Dr. Praveen C Ramamurthy, IISc., Bangalore.	TEQIP II
Mathematical & Statistical Methods – Applications	5 th & 6 th Dec, 2013	- Dr. Haridas U Acharya, Professor, Indian Statistical Institute, Bangalore, - Dr. Ravichandra Rao, Former Professor, Indian Statistical Institute, Bangalore;	TEQIP II
National level workshop on “Advanced Materials Research for Device Applications	25th and 26th of July, 2013	- Dr. Narayana Rao, Professor, Department of Physics, University of Hyderabad, - Dr. Rejiphilip, Scientist, RRI, Bangalore, Karnataka	TEQIP- II & NMAMIT
National level workshop on “Linear Algebra and its Applications”	3-5, March 2011	- Dr. Ashok Rao, Former Professor, IISc, Bangalore	TEQIP
Training Programmers:			
FAER-Motorola Technology Barrier Reduction Program – Summer Camp	from 21 April to 15 May 2014	- Local experts	NMAMIT & Motorola Solutions, Bangalore
FAER-Motorola Technology Barrier Reduction Program – Summer Camp	from 22 April to 21 May 2013	- Local experts	NMAMIT & Motorola Solutions, Bangalore

21. Student profile course-wise:

Details of the First Year Intake:

Academic Year	Admissions		Percentage of Total Admission		Total
	Male	Female	Male	Female	
2010-11	388	235	62.2	37.8	623
2011-12	521	240	68.5	31.5	761
2012-13	660	274	70.7	29.3	934
2013-14	628	275	69.5	30.5	903
2014-15	594	283	67.7	32.3	877
2015-16	553	332	62.5	37.5	885

Results and Pass percentage:

Academic Year	First Semester			Second Semester		
	Total Appeared*	Number of Students Passed	Pass Percentage	Total Appeared*	Number of Students Passed	Pass Percentage
2010-11	631	489	77.49	628	453	72.13
2011-12	625	481	76.96	620	462	74.52
2012-13	770	648	84.16	790	618	78.23
2013-14	934	730	78.16	936	753	80.45
2014-15	904	709	78.43	901	711	78.91
2015-16	882	665	75.40	878	662	75.40

* The Number of total appeared also includes repeaters re-joined over and above the actual admission during the academic year.

22. Diversity of students:

Academic Year	Karnataka Students		Non-Karnataka Students		Total
	Number	Percentage	Number	Percentage	
2010-11	462	74.16	161	25.84	623
2011-12	543	71.35	218	28.65	761
2012-13	617	66.06	317	33.94	934
2013-14	678	75.25	223	24.75	901
2014-15	757	86.32	120	13.68	877
2015-16	779	88.02	106	11.98	885
2016-17	815	88.30	108	11.70	923

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations? :

NA

24. Student progression: NA

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	NA
from other universities within the State	87%
from other universities from other States	13%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period: NA

27. Present details about infrastructural facilities

a) Central Library : YES

	Physics	Chemistry	Mathematics	Humanities	Total
Titles	608	589	1276	4658	7131
Volumes	1187	1157	3696	5511	11551
Journals	09	09	06	12	36

b) Internet facilities for staff and students: 100 Mbps leased line from BSNL

c) Total number of class rooms: 15 for I Year BE, 01 exclusively for the soft skill course – Enhancing Self Competence & 08 for open Elective

d) Class rooms with ICT facility: LCD Projectors, Facilities use Laptops & Wi-Fi

e) Students' laboratories: 02 (physics), 02 (Chemistry), 01 (Humanities - English Language Lab): **Total – 05**

f) Research laboratories: 02

28. Number of students of the department getting financial assistance from College:
The details are given specific branches of engineering.

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology:
No new programmes were started during the assessment period.

30. Does the department obtain feedback from

- Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.
 - Soft skill training program and Employability Skill Development are introduced.
 - The suggestions for revision of curriculum if any, are deliberated in the departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.

- The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
- **Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.
 - Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.
 - A common questionnaire containing questions related to teaching, learning, and evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.
 - Course Exit Survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.
 - BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
 - The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops etc.
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this, alumni keep visiting the institution and interact with faculty members and HODs.
 - The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.

- Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.
- Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
- During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
- Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.

31. List the distinguished alumni of the department (maximum 10) :

NA

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts :

Interactive Sessions with Alumni, Career Option Guidance such as lecture series to Motivate and Familiarize students to prepare for UPSC/Defence Service examinations, Participation in Social Service Activities and Swachcha Bharat Andolan, NSS activities, etc.

33. List the teaching methods adopted by the faculty for different programmes: Didactic

Lectures; PPT; Tutorial approach, problem solving, Input from internet, Quizes, Assignments, Tutorials, Self-study, Peer Teaching, etc.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?:

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (POs) are formulated as per NBA graduate attributes. To ensure attainment of Program Outcomes (POs) and PEOs, the students' learning outcomes are monitored by evaluating Course Outcomes (COs). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of program objectives and monitor of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).
- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analyzing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.

- The suggestion includes solving of additional numerical problems from exercise and GATE question papers, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students' learning capability.
- Technical Skill Building: Students are encouraged to do mini projects and showcase them in students' projects exhibitions.
- Participation of students in departmental research projects (if any) is highly encouraged.
- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.
- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.
- Summer research internships are offered to students.
- **Course Exit Survey** is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year
- **Programme Exit Survey** is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of COs and POs. The analysis of attainment of COs and POs is carried out.
- Based on the attainment of COs and POs, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of COs and POs.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities.

The college supports many creative clubs in the campus, which has the active participation from both students and faculty. Some of the students extend their supportive hands in teaching English and Communication Skills to the Primary and High school students in association with the staff members. Students and the department faculty involve very actively in NSS activities, Swachha Bharat programmes, afforestation (Vanamahostava), educating people of the locality about educating women and their rights, drug abuse and other social problems through organizing street plays, etc.

36. Give details of “beyond syllabus scholarly activities” of the department.

- Workshops and Faculty Development Programs are organized to upgrade faculty skill also many of our faculties attend such programs outside the college.
- Career counselling and Guidance Programmes have been organized for the benefit of the students ('Motivation and Introduction to UPSC/Defence Service Lecture Series' to mention as an example)

37. State whether the programme/department is accredited/ graded by other agencies. Give details.

NA

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department :

Sl. No	Strengths	Weaknesses,	Opportunities	Challenges
1	Flexibility in course curriculum designing due to academic autonomy	Less number of Ph.D. holders.	Enhanced learning activities	Effective teaching and learning for academically weaker students
2	A supportive involvement of the Management both financially and morally in institutional and department level activities and initiatives.	Far away from industries	Collaborative Research activities	To avail grants from funding agencies
3	Quality Infrastructure facilities and focus on research and development		Opportunity for research scholars to register for Ph.D.	Students to pursue research
4	Qualified and focused faculty and staff members with commitment, factuality and loyalty to the institution		Strengthen Collaboration with Premier national and international institutions	
5	Good laboratory facilities and ties up with other institutes to carry out research.		Enhance Industry-Institute interaction and Internship programmes	

39. Future plans of the department.

- Promotion of Research Activity applying for more grants and project funding and also to depute more faculty members for Ph.D. programmes.
- To set up well equipped research laboratory and also to involve students in research activities.
- To attract more number of research students to enrol for research.
- To start M.Sc. course in Physics, Applied Mathematics , Chemistry and English
- To offer certificate courses in English.
- To start a regular Annual Short Term Training Course on Research Methodology.

DEPARTMENT OF BUSINESS ADMINISTRATION**1. Name of the Department & its year of establishment :**

Department of Business Administration, Established in the year 1998.

2. Names of programs / Courses offered (UG, PG, MPhil, Ph.D., Integrated Masters; Integrated Ph.D., etc.)

- PG: Master of Business Administration
- Doctor of Philosophy: Recognized research centre for Visvesvaraya Technological University since 2000

3. Interdisciplinary courses and departments involved : None**4. Annual/ semester/choice based credit system :**

MBA Program: Semester Based Credit System

Ph.D. Program: Yearly Basis.

5. Participation of the department in the courses offered by other departments: None**6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)**

	Sanctioned	Filled
Professor	02	05
Associate Professors	06	04
Asst. Professors	16	12
Professor Emeritus	-	02

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./ MPhil, etc.):

Sl. No	Name	Qualifications	Designation	Date of Joining	Industry Experience	Academic Experience	No of Ph.D. Guided for the last 4 years
1.	Dr. K. Sankaran	B.Tech (Hons., Mining), PGDM (Project Management), Ph.D. (Corporate Strategy)	Director	01/09/2012	15	17	2
2.	Dr. A. P. Achar	B. Com, M. Com, Ph.D. (Human Resource)	Dean – Corporate Program	01/04/2016	0	30	
3.	Dr. G.V. Joshi	B.A, M.A (Economics), M.A(Pol. Sc.), M. Phil (Economics) Ph.D (Economics)	Professor	02/05/2009	0	44	1

4.	Dr. Radhakrishna Sharma	B.Com, MBA (Finance), PGDFA, CFM, DICM,(Ph.D.)	Professor	20/08/2004	2	25	
5.	Dr. Sudhir Raj K	BA, M.A(Economics & HR), Ph.D (Economics & HR)	Professor	01/05/2003	0	31	1
6.	Dr. Ashalatha K	BBM, MBA(Finance), Ph.D (Banking & Finance)	Associate Professor	03/03/2003	7	13	
7.	Prof. Sandhya Rao K P	BSc(BZC), MBA (Marketing), (Ph.D.)	Associate Professor	16/01/2009	6	12	
8.	Dr. Sudhir M	BBM, MBA (Finance), Ph.D. (CSR)	Associate Professor	03/10/2000	0	16	
9.	Dr. Vanishree Joseph	M.A (Development Administration), MA (Public Administration), Ph.D. (Gender Governance & Development)	Associate Professor	02/09/2013	0	9	
10.	Prof. Bharath G. Kumar	BBM, MBA	Asst. Prof.	05/04/2010	4	6	
11.	Prof. Issac K. Varghese	B Tech (Biotechnology), (FPM)	Asst. Prof.	16/07/2015	3	1	
12.	Prof. Jnaneshwar Pai	BBM(Finance & HR), MBA(Finance), M. Phil (Management), (Ph.D.)	Asst. Prof	16/07/2012	6	7	
13.	Prof. Krishna Prasad	B.Com, MBA (Finance), (Ph.D.)	Asst. Prof	19/07/2010	1	6	
14.	Prof. Saravanan S.	B.Sc.(Physics), MBA (Marketing & HR), M. Phil (Marketing), (Ph.D.)	Asst. Prof	18/03/2011	3.5	9	
15.	Prof. Guruprashanth K.	B.Com, MBA	Asst. Prof.	07/01/2013	17	3	
16.	Prof. Geetha Kumary	BBM, MBA (Finance)	Asst. Prof.	01/12/2004	0	12	
17.	Prof. Rakshesh Shetty	B.Com, MBA (Finance)	Asst. Prof	16/07/2012	4	4	
18.	Prof. Ritamoni Boro	B.Sc(Statistics), PGDM (Marketing & HR)	Asst. Prof	01/02/2014	6	2	
19.	Prof. Sheethal Kumar M.	BE(E&C), MBA (Marketing & Finance)	Asst. Prof	15/07/2013	2	3	

20.	Prof. Shilpa Praveen	B.Sc.(Electronics & Computer Science), MBA (Finance & Marketing, (Ph.D.)	Asst. Prof.	26/09/2014	5	2	
21.	Natasha Samani	B.E, M.S	Asst Prof	01/09/2016	2	10	
22.	Dr. N.K. Thingalaya	BA, M.A. Ph.D.,	Emeritus/Professor	01/09/1998	33	17	
23.	Dr. N.S. Shetty	BA, M.A., Ph.D.	Emeritus/Professor	01/09/2008	33	17	

* Degrees in brackets represent that faculty is currently pursuing the said degree.

8. Percentage of classes taken by temporary (visiting) faculty – program-wise information

20% of the MBA Program:

9. Program-wise Student Teacher Ratio : MBA Program: 16:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled: 16

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise :

Completed Projects

Name of the PI & Co-PI	Granting agency	Title of the Project	Grant amount in Rs.	Duration	Status
Dr. Savita Singh and Dr. Vanishree Joseph	Ministry of Women and Child Development, Government of India	Evaluation of Working Women's Hostels with Day Care centre	Rs. 27,00,000	2011-2013	Completed
Dr. Vanishree Joseph	The Institute for Development Studies, UK	Political Economy of State-Business Relations– Gender Perspective	Rs. 50,000	August, 2015	Completed
Dr. Vanishree Joseph	Sri Aurobindo Society, Pondicherry	Sustainable Development	Rs. 20,000	April, 2016	Completed
Dr. Josef Novotny (Charles University in Prague) and Dr. Vanishree Joseph	Charles University in Prague	Factors and conditions affecting sanitation behavior change in Developing Countries	Rs.3,00,000	2016-2017 One Year	Completed in November 2016
Total Grants Received till date: Rs. 30,70,000					

12. Departmental projects funded by DST-FIST; DBT, ICSSR etc.: Total grants received:

Details of the projects done by the department:

Name of the PI & Co-PI	Granting agency	Title of the Project	Grant amount in Rs.	Duration	Status
Dr. G. V. Joshi	Indian Institute of Banking and Finance	Bank Finance for Agro Business: A case study in Dakshina Kannada	Rs.1,50,000	2011-2012	Completed
Dr. G. V. Joshi and Ms. K.R Suprabha	SKDRDP, Dharmasthala	Inclusive Rural Development in Reality	Rs. 1,55,000	2010-2012	Completed
Dr. N.K Thingalaya, Dr. N.S Shetty and Dr. M.S Moodithaya	Department of Economic Affairs, Ministry of Finance, GOI	A Study on the challenges of Financial Inclusion in India: An empirical assessment	Rs. 1,50,000	6 months (Jan 2011)	Completed
Dr. N.K Thingalaya, Dr. N.S Shetty and Dr. M.S Moodithaya	Department of Economic Affairs, Ministry of Finance, GOI	A Study on expanding Financial Inclusion in the North Eastern States	Rs. 2,00,000	6 months (Jan 2011)	Completed
Dr. N.K Thingalaya, Dr. N.S Shetty and Dr. M.S Moodithaya	Corporation Bank	An Evaluation study of Branchless Banking Initiatives of Corporation Bank	Rs 2,00,000	2011	Completed
Dr. N.K Thingalaya, Dr. N.S Shetty and Dr. M.S Moodithaya	Indian Council of Social Science Research	Financial inclusion and Beyond: Issues and Challenges	Rs 4,94,500	2008-2010	Completed
Dr. N.S Shetty, Dr. G. V. Joshi, Prof. Rakshesh Shetty	Udupi Zilla Panchayath, Udupi	Human Development Report for Udupi Zilla Panchayath	Rs 2,95,000	4 months (2012)	Completed
Total Grants Received till date:			Rs 16,43,500		

13. Research facility / centre with

- **State recognition** : Recognized as research centre by VTU, Belagavi
- **National recognition** : None
- **International recognition** : Nil

14. Publications: Number of papers published in peer reviewed journals (national / international):

- 78
- **Monographs:** Nil
- **Chapter(s) in Books:** 17
- **Editing Books:** 06
- **Books Authored:** 08

Sl. No.	Faculty	Title of the paper	Publisher	Year
1	Dr. N. K. Thingalaya	Banks in the South: Past, Present and their Future	JKSHIM, Nitte	2009
2	Dr. Vanishree Joseph	Networking of Elected Women Representatives at Grassroots	Concept Publishers	2009
3	Dr. N. K. Thingalaya	Gramin Banks: Bounce Back	JKSHIM, Nitte	2010
4	Dr. Vanishree Joseph	Capability of Elected Women Representatives on Gender Issues in Grassroots Governance	Concept Publishers	2011
5	Dr. G. V. Joshi	Inclusive Rural Development in Realty – Triumph of SKDRDP	Sri Kshetra Rural Development Project Dharmasthala	2012
6	Dr. N. K. Thingalaya	Gramin Banks Revisited	JKSHIM, Nitte	2013
7	Dr. G. V. Joshi	Bank Finance for Agri Business	Indian Institute of Banking and Finance	2013
8	Dr. K. Sankaran	Quadrant Puzzles	Notion Press	2014

- **Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) :** 7
- **Citation Index – range / average:**
- **SNIP:** 7
- **SJR:** 7
- **Impact factor – range / average:** 0.58-3.81/1.384
- **h-index:**

15. Details of patents and income generated:

One Patent on “Leave Trading System” by Dr. Radhakrishna Sharma, currently under approval process

16. Areas of consultancy and income generated:

An illustrative list is given below:

Name of the PI & Co-PI	Granting agency	Title of the Project	Grant amount in Rs.	Duration	Status
Dr. G. V. Joshi	Indian Institute of	Bank Finance for Agro Business: A	Rs.1,50,000	2011-2012	Completed

	Banking and Finance	case study in D.K			
Dr. G. V. Joshi and Ms. K.R Suprabha	SKDRDP, Dharmasthala	Inclusive Rural Development in Reality	Rs. 1,55,000	2010-2012	Completed
Dr. N.K Thingalaya, Dr. N.S Shetty and Dr. M.S Moodithaya	Department of Economic Affairs, Ministry of Finance, GOI	A Study on the challenges of Financial Inclusion in India: An empirical assessment	Rs. 1,50,000	6 months (Jan 2011)	Completed
Dr. N.K Thingalaya, Dr. N.S Shetty and Dr. M.S Moodithaya	Department of Economic Affairs, Ministry of Finance, GOI	A Study on expanding Financial Inclusion in the North Eastern States	Rs. 2,00,000	6 months (Jan 2011)	Completed
Dr. N.K Thingalaya, Dr. N.S Shetty and Dr. M.S Moodithaya	Corporation Bank	An Evaluation study of Branchless Banking Initiatives of Corporation Bank	Rs 2,00,000	2011	Completed
Dr. N.K Thingalaya, Dr. N.S Shetty and Dr. M.S Moodithaya	Indian Council of Social Science Research	Financial inclusion and Beyond: Issues and Challenges	Rs 4,94,500	2008-2010	Completed
Dr. N.S Shetty, Dr. G. V. Joshi, Prof. Rakesh Shetty	Udupi Zilla Panchayath, Udupi	Human Development Report for Udupi Zilla Panchayath	Rs 2,95,000	4 months (2012)	Completed
Total Grants Received till date: Rs 16,43,500					

17. Faculty recharging strategies:

The department encourages all faculty members to participate in workshops, FDP/EDP/MDP and other engagements that add value to their teaching and pedagogy enhancement. Also, our faculty engage themselves in conducting EDP/MDP. The department also conducts various training programs in-house for the faculty

18. Student projects:

- **Percentage of students who have done in-house projects including inter-departmental :**
On an average about 20% of students do in house projects.
- **Percentage of students doing projects in collaboration with industries / institutes:**
Nearly 80% of our students undertake their project work in industries.

19. Awards / recognition received at the national and international level by

- Faculty**

Dr. K Sankaran

:

1. Emerald Group Publishing Limited - International Marketing Review- Award for Best paper with an International Focus co-authored with Catherine Demangeot by Dr. K. Sankaran, 2011.

Dr. G. V. Joshi

1. Nominated as a member of the Prestigious Body, Karnataka State Planning Board (2010-2013)
2. Appointed as Visiting Professor at Makerere University Business School, Uganda since March 3, 2011. Invited to guide Ph.D. candidates and also for conducting Doctoral Seminars. Also invited to contribute to the research agenda that will be indicated in MUBS, Uganda.
3. Visited MUBS during September 20 - 30, 2011. Delivered special lectures to PG students in Business Management. Delivered lectures on Research Methodology to Ph.D. students. Suggested improvements in the syllabi on Managerial Economics and Micro Finance. Addressed the meeting of Deans of various Faculties at MUBS.

- Doctoral / post-doctoral fellows** :Nil

- Students:**

Partial list of Student achievements in Management festivals from 2012 onwards

Navneeth	1 st place in Hospitality at St. Aloysius Fest
Karthik K S	1 st place in IT and Operations at Manipal Institute of Management
Darshan M	Fest
Anup Shetty	1 st place in CSR Event at Manipal Institute of Management Fest
Prasad C Rao	2 nd place in Automobile Event at St. Aloysius Fest
Jathin R B	2 nd place in rural marketing at St. Aloysius Fest
Shruthi M Rai	2 nd Place in Strategy event at MDMIS, Kasargoad
Shareen Rodrigues	Best Manager in St. Aloysius Fest
Muzzamil Saiyed	1 st place in Event Management at SDM Shrestha Fest
	1 st place in Marketing at SDM Mangalore
	1 st place in Marketing at St Joseph
	1 st place in Marketing at MDMIS, Kasargoad
Karthik Nayak	1 st place in Marketing at MDMIS, Kasargoad
Goutham Kumar	1 st place in Marketing at JSS Mysore.
Shiv Kumar	2 nd place in Finance at Manipal Institute of Management Fest
Prithvi	2 nd place in Finance at Manipal Institute of Management Fest
Sumith Suvarna	1 st place in Off Roadies at Manipal Institute of Management Fest
Niroop	1 st place in Duet Dance at Manipal Institute of Management Fest
Deepak Salian	2 nd in Financial Service St. Aloysius Fest
Ananya Harish	1 st place in solo singing at Manipal Institute of Management Fest
Sharanya	1 st place in Duet Dance at Manipal Institute of Management Fest
Ashraf Ali	1 st place in Solo Dance at Manipal Institute of Management Fest.
Devi Prasad	2 nd in Financial Service St. Aloysius Fest
	2 nd place in Automobile Event at St. Aloysius Fest
Sports:	
Adil Sayed	VTU inter college power lifting gold, weightlifting bronze held in SDM College Ujire and also participated all India

Ritesh	Power lifting Competition held in Udaipur Rajasthan. Gold Medal in Javelin throw in VTU athletic meet held in Tumkur, represented college in Football tournament VTU level and also selected for All India Athletic meet in Javelin throw.
Nithin Kumar Shetty Sumith Suvarna and Dhruva Ranjith	1 st place in Volleyball at Yenepoya University Winner in Inter- Nitte Basket Championship held at Nitte Winner up in BSI Kumar Memorial Basketball Championship held at Yenepoya College
Sneha	Winner in South Zone VTU Basketball championship held at MITE Moodbidri
Gautham Suvarna	2 nd place in Volleyball at Inter University held in Bangalore 1 st place in Wrestling and Judo at Inter college competition State level player and represented VTU in Interuniversity competition

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

The institute believes in organizing Conferences annually and Workshops and FDP/EDP/MDP programs at regular intervals based on needs. List of National and International conferences organized at the institute is presented below.

a.) National Conferences:

7 th National Conference on “ Ethics and Governance in Management”	29 th -30 th December 2015
6 th National Conference on “Market, State and Society in Emerging India”	29-30 December 2013
5 th National Conference on “Development Challenges in the 12 th Five Year Plan”	29 th -30 th December 2011
4 th National Conference on “Recession, Recovery and Resurgence: Responses in the Indian Economy”	29 th – 30 th January 2010

b.) International : International Conferences as detailed below:

First International Conference on “Better Business Practices for Sustainable Social Change.”	29 th – 30 th December 2008
Second International Conference on “Redefining the Roles of Business, NGOS and Governments: A Mission for a Better Global Society.”	29 th – 30 th December 2010
Third International Conference on “Development Challenges Global Aspirations and Local Realities.”	29 th – 30 th December 2012
International Conference on “Micro Finance At Cross Roads: A Global Perspective.”	20 th January 2012
Fourth International Conference on “Higher Education: Special Emphasis on Management Education.”	29 th – 30 th December 2014
Fifth International Conference on “Social Entrepreneurship as a Means to Achieve Win-Win Situations: Global Experiences, Achievements and Perspectives.”	29 th – 30 th December 2016

c.) Seminars, workshops, EDP/MDP: The list of seminars, workshops, EDPs and MDPs organized at the institute.

FDP, EDP, MDP held at the institute by Dr. Sudhir Raj K/Dr. G. V. Joshi

- One day Intensive Development Program on Harnessing Emotional Intelligence for High Performance held on 7th May 2009
- One day Executive Development Program on “Entrepreneurial Development and Resource Management – A Three Dimensional Approach” held on 25th February 2010.
- One day Executive Development Program on “Corporate Governance and Principle Centered Leadership” held on 17th September 2010.
- One day Management Development Program on “Bonding, Branding and Customer Care Relations” held on 23.09.2011.
- Training Programs for Employees/Executives of Lamina Foundries, Nitte on 16.02.2012
- Two days Faculty Development Program on “Research in social and One day Executive Development Program on “Unleashing Mind Power for High Performance Leadership” on 7th September 2012
- Two days Faculty Development Program on “Research in Social and Management Sciences: Opportunity and Challenges” held on 7-8th December, 2012.
- One day EDP on “Transforming Executives into Leaders – Essence of Building Effective Organizations” on 9th February, 2013.
- One Day MDP on “ Mindfulness for Outstanding Performance” , Sept 04, 2014
- One day MDP on “ Neuro leadership for value creation”, in Nov, 2015

EDP held at the Institute by Prof. R. K. Sharma

- One day Executive Development Program on “Derivatives and Risk Management” at Justice K. S .Hegde Institute of Management on February 6, 2009 at Nitte.
- One day Intensive Executive Development Program on “Mutual Funds and Wealth Creation” at the Institute at Nitte on 28th January, 2011.
- One day Intensive Executive Development Program on “Futures Market and Trading Strategies” at Justice K.S. Hegde Institute of Management, Nitte on 29th July, 2011.
- One day Intensive Management Development Program on 6th January, 2012 at Justice K.S. Hegde Institute of Management, Nitte on the topic “ Leave Trading System: A Tool to Conquer Absenteeism” for the Principals, HODs of various branches and Faculty members of educational institutions. \
- One day intensive FDP on “Leave trading system: A tool to conquer Absenteeism” held at the department on Sept 04, 2015.

21. Student profile course-wise: MBA

Batch	Applications received	Selected (Total)	Male (in percentage)	Female	Pass Percentage
2009-11 (Intake -120)	385	120	68	32	84
2010-12 (Intake -120)	190	119	64	36	94
2011-13 (Intake -180)	175	175	69	31	97
2012-14 (Intake -180)	260	180	53	47	91
2013-15 (Intake -180)	300	161	57	43	95
2014-16 (Intake -180)	208	170	58	42	88
2015-17 (Intake -180)	235	180	52	48	-

22. Diversity of students

Name of the Course (refer question no. 2)	% of students from the College	% of students from the State	% of students from other States	% of students from other countries
MBA (2009-11)	Nil	97.5	2.5	---
MBA (2010-12)	Nil	97.5	2.5	---
MBA (2011-13)	Nil	97.7	2.3	---
MBA (2012-14)	Nil	96.1	3.9	---
MBA (2013-15)	Nil	92.6	7.4	---
MBA (2014-16)	1	95.9	4.1	---
MBA (2015-17)	Nil	97.8	2.2	---

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations? : NA**24. Student progression:**

Students who finish MBA are usually taken up for corporate jobs. A small percentage goes for Ph.D./FPM programs.

Student progression	Percentage against enrolled	
UG to PG	NA	
PG to M. Phil.	NA	
PG to Ph.D.	2008	1/120
	2009	4/120
	2010	1/117
	2011	0/120
	2012	1/119
	2013	0/172
	2014	1/180
	2015	0/161
	2016	0/171
Ph.D. to Post-Doctoral	NIL	
Employed • Campus selection	2008-10	85
	2009-11	71
	2010-12	44
	2011-13	47
	2012-14	71
	2013-15	78
	2014-16	78
• Other than campus recruitment	2008-10	04
	2009-11	05
Entrepreneurs	More than 25	

25. Diversity of staff:

Percentage of Faculty with Highest Degree	
Of the same parent university	29%
From other universities within the State	33%
From other universities from other States	29%
From Foreign Universities	8%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period:

Ph.D.: 3

27. Present details about infrastructural facilities**a) Library**

Books	Journals	CDs	Any Other
11470 (Volumes) 8721 (Titles)	Total- 118 Indian - 110 Foreign – 8	275	- Journal Database - Proquest ABI Inform Complete - Prowess - Company Database-Capitaline.com - Easy lib with web OPAC (Access to Library Catalog from outside the campus) - SAGE Journals (limited version) - SPSS

b) Internet facilities for staff and students:

100MBPS leased line from BSNL with WI-FI connectivity to the entire campus including hostels.

c) Total number of class rooms: 09**d) Class rooms with ICT facility:**

All class rooms are connected with internet, WI-FI and audio visuals.

e) Students' laboratories:

Not applicable

f) Research laboratories:

A Bloomberg terminal is being planned

28. Number of students of the department getting financial assistance from College.

The Management gives financial assistance/scholarships to meritorious students and the students belonging to the economically weaker sections of the society in the form of fee concessions. No of students availed fee concessions for the last 5 years is listed below.

Sl. No	Year	No of students availed fee concessions
1	2010-2012	08
2	2011-2013	12
3	2012-2014	12
4	2013-2015	45
5	2014-2016	68
6	2015-2017	65

SC/ST category students with family income less than a specified amount are exempted from the payment of tuition fees which is borne by the Government.

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology. :

- Department follows a process driven approach
- Alumni representatives are members on the board of studies and their views are considered during framing of the syllabus and curriculum.
- Corporate Relations Manager collects feedback from the employers. In keeping with the spirit of consultation with the industry, the department developed the entire curriculum for the new IT specialization.

30. Does the department obtain feedback from:

- **Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - Yes. There is continuous feedback provided by the faculty to Departmental Head on classroom activities, curriculum fit, and innovations in pedagogy.
 - Members of the faculty meet regularly and mutually exchange their experiences so that good practices can be adopted by fellow faculty.
 - Based on the feedback of the faculty, we combined modules from International Business Management and Economic Environment to create a new course namely International Economic Environment.
 - Similarly, after collective discussion and feedback from faculty we introduced two courses in the first year i.e. Critical Thinking and Creative Thinking.
- **Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Student feedback is collected by administering a questionnaire online at the end of the semester.
 - The Director reviews the feedback and discusses with the faculty. If any changes in curriculum and pedagogy required, the same discussed in staff meeting and necessary changes incorporated, on a year on year basis.
- **Alumni and employers on the programs and what is the response of the department to the same?**
 - Alumni representatives are members on the board of studies and their views are considered during framing of the syllabus and curriculum.
 - Corporate Relations Manager collects feedback from the employers. In keeping with the spirit of consultation with the industry, the department developed the entire curriculum for the new IT specialization.

31. List the distinguished alumni of the department (maximum 10)

Sl. No.	Name	Company
1.	Ryan Deepak Mendonca	Associate Vice President, Axis Bank
2.	Raghuram Rao	Sr. Manager, HR – Lumax Ltd, Chennai
3.	Vikram Nayak	Sr. Analyst, Goldman Sachs, Bangalore
4.	Nidhin P.M	Manager HR, Volvo Pvt. Ltd., Bangalore
5.	Athmaram Shetty	Manager, Vijaya Bank, Abu Dhabi
6.	Moshin	Director, ABCO/ABF group of companies, Mangalore and Dubai
7.	Avina Mendonza	Pursuing Fellowship at IIM Ahmedabad
8.	Badrinarayana	Sales Head, Southern Region, Tally, Bangalore
9.	Santhosh Prabhu	Project Manager, Amba Research, Bangalore
10.	Shishir	Associate Vice President, Credit Suisse, Bangalore

32. Give details of student enrichment programs (special lectures/ workshops / seminar) with external experts.**Guest Lectures: 48 (Since 2011)**

1. Brahmacharini, Vasumana Chaitanya, Chinmaya Mission Centre, Mangalore delivered a talk on Managing the Minds on 4th February 2011.
2. S.Sarvanan, Devi Prasad Nilaya, Kukupadi Road, Jeppu, Marnami Katta, Mangalore delivered lecture on Insurance Scenerio in India on 5th February, 2011.

3. Mrs. Preethi D'Souza, Asst. Professor, Dept. of Post Graduate Studies and Research in Commerce, Mangalore University, Mangalagangothri, Konaje. Delivered a lecture on the topic Competency for Professionals on 1st March 2011.
4. Mr. Prakash, Lecturer, Srinivas Institute of Management, Mangalore delivered a talk on Promotion Management on 26th March, 2011.
5. Fr.Oswald A.J.Mascharenness, Father, Department of Post Graduate Studies & Research in Commerce, Mangalore University, Mangalore delivered a guest lecture on Learning to Learn on 29th March, 2011.
6. Sri. B.S.Baliga, Chief Executive, Lamina Suspension Products Pvt. Ltd., Mangalore delivered guest lecture on the topic Working Capital Management on 2nd April 2011.
7. Sri Alok Mohan, IPS, Inspector General of Police, West Range, Mangalore delivered a expert lecture on Management of Public Administration on 8th April 2011.
8. Sri. T.V.Bhat, Retd. General Manager, Syndicate Bank, Udupi delivered an expert lecture on the topic Issues relating to the Banking Sector in India on 19th April 2011.
9. Ms. Anne Begumisa, School Registrar, MUBS, Uganda delivered a guest lecture on the topic 'General Introduction to Management'.
10. Dr. Muhammed Ngoma, Associate Dean, MUBS, Uganda delivered a guest lecture on the topic 'General Introduction to Management'.
11. Prof. Radhakrishna Sharma, Professor of Finance and SEBI certified Resource Person, presented a Financial Education Workshop on 12th July, 2011 at 03.15 PM.
12. Dr. Rajesh Nayak, Director-Training at Central Bank of Oman's delivered an expert lecture on the topic Recent Trends in HR on 13th July, 2011.
13. Shri M.Giridhar Prabhu, Managing Director, Achal Industries, Mangalore delivered a guest lecture on the topic "Wealth from Waste" on 23rd July, 2011.
14. Expert Guest Lecture on the topic "Insurance Industry in India: Trends and Challenges" by Mr. Raviraj Nayak, Assistant Regional Manager, ICICI Prudential Life Insurance Company Limited, Mangalore on 1st August 2011.
15. Guest lecture on the topic "Role of MBAs in operations" by Mr. Sunil Kulkarni, General Manager (Production), MCF Ltd, Mangalore on 9th August, 2011.
16. Guest lecture by Shri. Jairam Sridharan, Senior Vice President (Consumer Lending and Payment) Axis Bank Ltd, Mumbai on the topic "Growth Opportunities in Retail Banks" on Tuesday 16th August, 2011.
17. Pravachan by Shri. Vidyavachastpathi Bannanje Govinda Acharya on the topic "Management Lessons in Bhagavathgeetha" on 18th August, 2011.
18. Guest lecture on the topic 'How to prepare yourself for the corporate world' by Mr.Mahesh Prabhu, CEO, Folk Co.in, Manipal on 26th August, 2011.
19. Expert Guest lecture on the topic "Issue Management" by Mr. Y. V.Balachandra, Assistant General Manager and Company Secretary, Karnataka Bank Limited, Mangalore on 29th August, 2011
20. Guest lecture on the topic "Managerial Effectiveness" by Dr. R.P.Raya, HOD, Department of Management Studies, Pondicherry University, on Monday 29th August, 2011.
21. Guest Lecture on the topic "Project Development Management" by Dr.N.S.Shetty, Professor Emeritus, JKSHIM, Nitte on 9.9.11
22. Guest Lecture on the topic "Entrepreneurship – Some corporate lessons" on 12.09.11 by Shri B. S. Baliga, Chief Executive, Lamina Suspensions Pvt. Ltd, Mangalore.
23. Guest lecture by Shri. Vincent Valerian Pinto, Chairman& Managing Director, Abibith Group of Industries, Mangalore on the topic "Entrepreneurship, startups and Government regulations" on 19.9.11.

24. Guest lecture by Shri Harish B, Business Associate-Motilal Oswal Securities Ltd, on the topic of “Technical Analysis”
25. Guest lecture by Dr. Guruj Karajagi, Chairma, Academy for Creative Teaching, Bangalore on the topic “Creativity-some lessons” on 22.11.2011
26. Guest lecture by Dr. Alyosius Sequeira, Professor, Department of Business Administration, NITK, Surathkal on the topic of “ How to become competent Managers?”.
27. Expert guest lecture by Ms. Supriya Ballal, Udupi on the topic “Break Even Analysis” on 21.12.2011
28. Guest lecture by Shri Sudhakar Mattu, Mangalore on the topic”Inquisitvie Leadership – Did You Ask the Right Question?” On 22.12.2011
29. Guest lecture by, Mr.Francis Passanha, Manager (Trg) Syndicate Institute of Bank Management, Manipal on the topic” Aspect of Foreign Exchange – an Overview” on 19.1.2012
30. Guest Lecture by Mr.Prashanth Nayak, Sales Manager (Karnataka) SBI Mutual Fund, Bangalore on the topic “Mutual Funds and Wealth Creation” on 17.05.2012
31. Expert Lecture by Dr. Mohan Alva, Alva’s Foundation, Moodabidri on the topic “Indian Value System” on 31st July 2012.
32. Expert Lecture by Shri Vekatesh Mahale, AGM, Syndicate Bank, Udupi on the topic “Emerging Trends in Banking Technology A Business Enabler” on 3rd August, 2012.
33. Investor Awareness Program (Organised by Udupi Chapter of ICAI) on 18-02-2013 “Demystifying Derivatives” by Dr. Sunil Kumar Parameswaran, Professor, TAPMI, Manipal.
34. Guest Lecture on 19-02-2013 at 2.00 PM by Mr. Prashanth B.K, Group Head – HR, Aditya Birla Nevo Ltd., Bangalore on a topic ”Developing Right Habits And Attitudes For a Successful Corporate Journey”.
35. Guest Lecture on “Banking-Yesterday, Today & Tomorrow” on 8.3.2013 by Mr.Krishna Rao, Faculty, Corp. Bank, SJC, Mangalore.
36. Expert lecture on the topic “A peek into the fascinating world of Mutual Funds” by Mr. Radhakrishna Rao, (Former AVP, Business Planning & Initiatives – National Distributors, Franklin Templeton Investments), Bangalore on 18.03.2013
37. Special lecture on the topic” International Skills for Negotiation and excellence in Leadership in Industry and Business” by Dr. N. D. Desai, Chairman, Apar Industries Limited, Mumbai on 22.03.2013
38. Guest Lecture on the topic ”Career Opportunities in the Pharmaceutical Industry ” on 15.04.2013 by Mr. Venkatesh Kedilaya, MD of Ramjay International, Bangalore.
39. Investor Awareness Program (Organised by Udupi Chapter of ICAI) on 18-02-2013 “Demystifying Derivatives” by Dr. Sunil Kumar Parameswaran, Professor,TAPMI, Manipal.
40. Guest Lecture on 19-02-2013 at 2.00 PM by Mr. Prashanth B.K, Group Head – HR, Aditya Birla Nevo Ltd., Bangalore on a topic ”Developing Right Habits And Attitudes For a Successful Corporate Journey”.
41. Special lecture by Mr.Ravindranath Shanbogue who runs the NGO named Balkedarara Vedike, Basrur, on 15-5-2013 on Human rights topic.
42. Guest Lecture on the topic ”Mind Body Relation ” on 25.05.2013 by Dr. Haricharan Shenoy Professor, Alva’s Homoeopathic Medical College, Moodabidri.
43. Shri. Chaitanya N. Desai, Joint Managing Director, Apar Industries Ltd, Mumbai delivered a lecture on Expert Lecture on Entrepreneurship on 10th January, 2014.

44. Dr. Shekhar S. Kaup, Executive Director, Walden Institute International, U.S.A. delivered an expert lecture on the topic “Culture: Preemptive Authority” to the MBA students and faculty members of the Institute on 28th March, 2014.
45. Mr. Balachandran, Mysore, delivered a lecture on the topic “Introduction of ERP using ERPLY and organic movement” on 29th October, 2014.
46. Dr. M.Govinda Rao, Former Director, IIPP, New Delhi, delivered a special lecture on the topic “Accelerating Economic Growth in India: Agenda for Reforms” on 17th February, 2015.
47. Mr.Chandrakanth Inna delivered an expert lecture on the topic “ Strategic Management” on 4th March, 2015.
48. Mr. Gautham Machaih delivered a special address on Media & technology in the month of March, 2016.

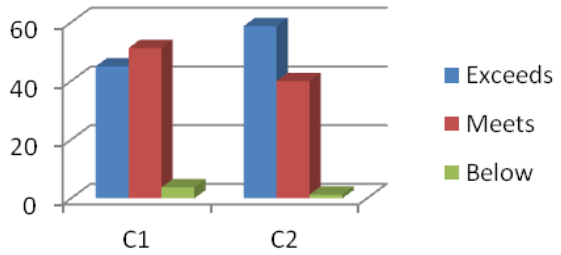
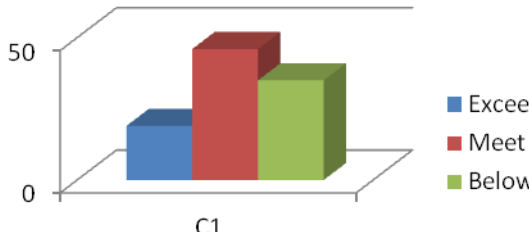
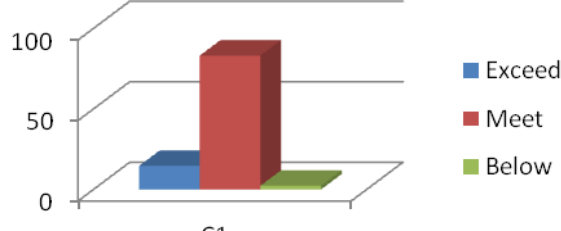
33. List the teaching methods adopted by the faculty for different programs

- The lesson plan prepared by each faculty before the commencement of the course gives a detailed account of teaching methods. Individual faculty member maintain course files for the courses that he/she handles.
- There are several innovations that are introduced by the faculty members to achieve not only subject learning but also to enhance aspects such as group processes, team learning, generating enquiring minds, challenging the status quo etc.
- In addition to lecture we also have case study method of teaching supported by Learning Management System, Work Book and simulation.
- We also ensure the industry interaction through Industry projects, Management-in-Actions and Final Internship.
- We have also started using Simulation games to train the students in holistic decision making process in functional areas like Strategy, Finance and Marketing.

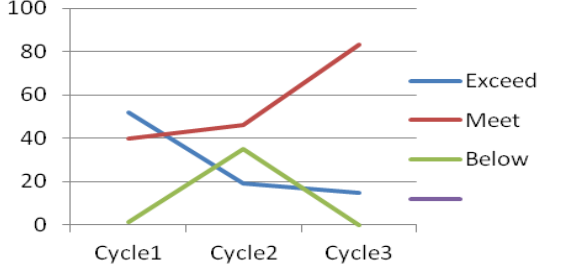
34. How does the department ensure that program objectives are constantly met and learning outcomes monitored?

- The program objectives are derived from department vision statement. The department believes in following a process driven approach. The core courses spanning first and second years measures the learning objectives using the course rubrics. The course objectives and program objectives so measured are compared over a period of time. This year Rubrics has been developed for all common courses.
- The following Charts represent the learning outcomes for different IDEELAC factors from different courses shown in the text given on the left column. The first column also gives the phase of the cycle, course name, when the course was offered. Here we also have shown the attribute (representing the IDEELAC factor) that the course measured. Each of the IDEELAC factors is a complex construct and cannot be easily decomposed to orthogonal dimensions. So we have chosen to represent each of the IDEELAC factors descriptively as shown earlier in the main text of Criterion 1.1. The descriptors are mentioned in the first column.
- The diagram on the right gives the trend analysis graphically. On the X-axis, C1, C2 etc. correspond to the measurement criteria (descriptor) mentioned in the course rubric. On the Y-axis is the % age responses. The conclusion from the trend analysis vis a vis the descriptor is also shown in the left column.
- At the end of the trend analysis for each of the IDEELAC factors, we have also provided a consolidated learning outcome for that IDEELAC factor.

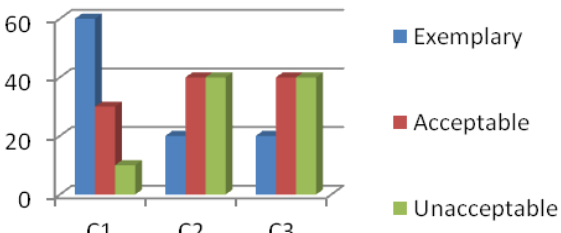
Learning Outcome of Inner Voice – Course wise

INNER VOICE: Cycle 1 Course: BUSINESS COMMUNICATION 2 2014-II Semester Conclusion: Individual autonomy and ability of reflection are well expressed	
INNER VOICE: Cycle 2 Course: ENTREPRENEURIAL DEVELOPMENT 2014-III Semester Conclusion: Compared to previous cycle, improvement required in expressing views and therefore encourage students to ask more questions	<i>Measuring Enterprise Potential in Young People</i> 
INNER VOICE: Cycle 3 Locus of control - Survey 2015-IV Semester Conclusion: Majority of students meet expectations on internal locus of control while nearly 15% exceed expectation on this.	

Learning Outcome of Inner Voice – Consolidated

It is evident that performance of inner voice in three cycles has a dip in second cycle and gradual improvement noticed in third cycle. The recommended corrective action for the next cycle is to encourage students to ask more questions in the classroom environment.	

Learning Outcome of Diversity – Course wise

DIVERSITY: Cycle 1 Course: BUSINESS ETHICS AND CORPORATE GOVERNANCE 2014- II Semester Conclusion: Cultural sensitivity is better than target set	

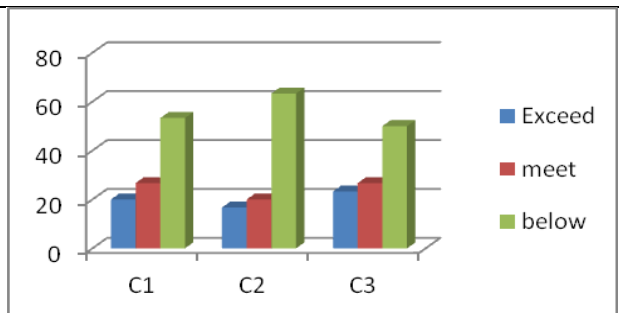
DIVERSITY:

Cycle 2

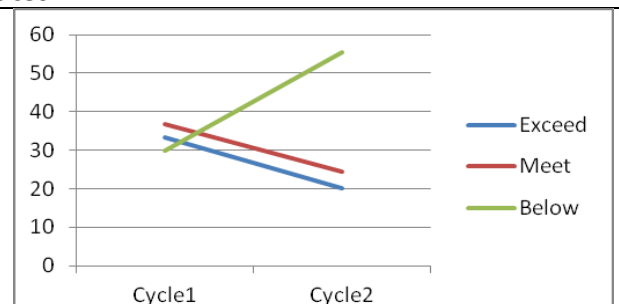
Course: MANAGEMENT IN ACTION

2014- III Semester

Conclusion: Improvement required in integrative learning compared to previous cycle

**Learning Outcome of Diversity – Consolidated**

In spite of better cultural sensitivity integrative learning is much less than desirable. Encourage more group activities in the class as well as in extra-curricular activities at the institute.

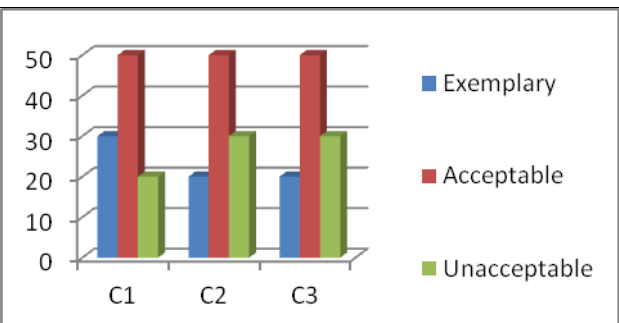
**Learning Outcome of Ethics – Course wise****ETHICS:**

Cycle 1

Course: Business Ethics and Corporate governance

2014- II Semester

Conclusion: Improvement required on all the criteria as unacceptable level should be zero and exemplarity should be 50 %.

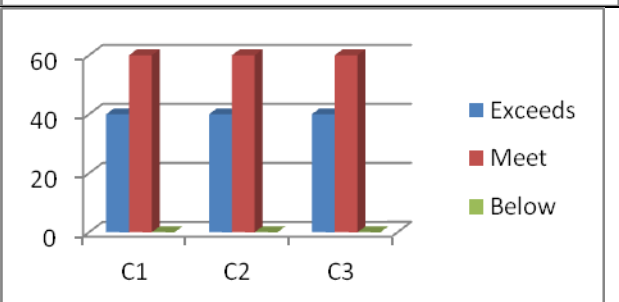
**ETHICS:**

Cycle 3

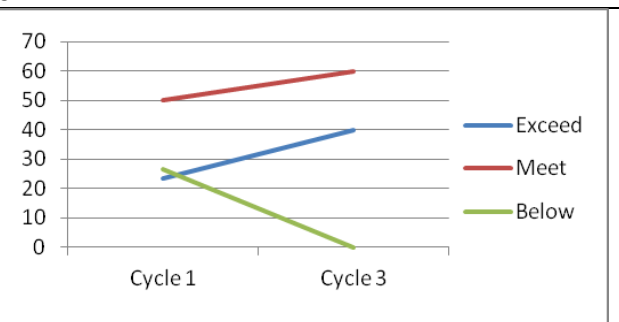
Course: Marketing of Services

2015- IV Semester

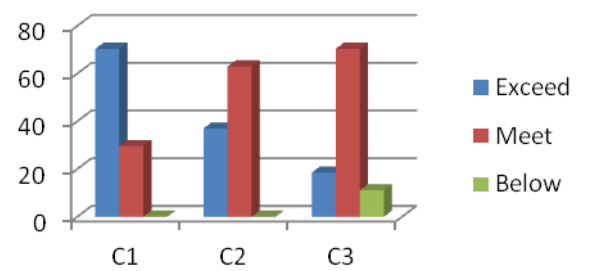
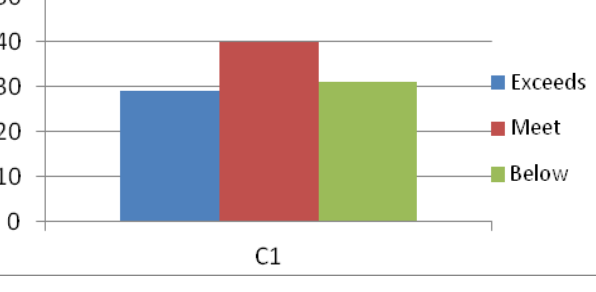
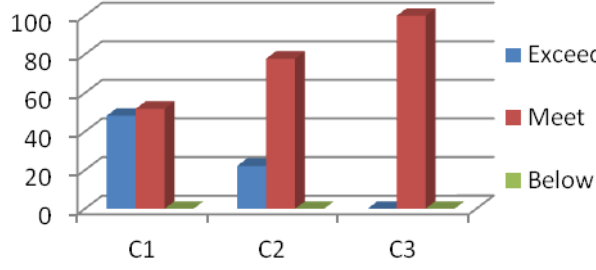
Conclusion: Improvement observed in equity compared to first cycle. Below expectation has dropped to zero.

**Learning Outcome of Ethics – Consolidated**

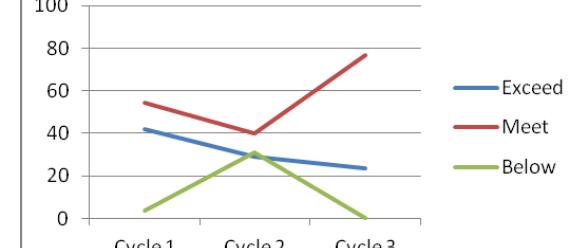
From the graph it is evident that there is a considerable improvement in understanding ethical practices. Exceed expectations is on the positive cycle and below expectations has dropped zero. This trend has to be consistently executed.



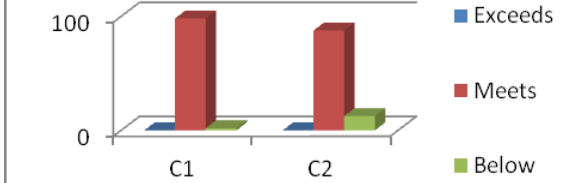
Learning Outcome of Enterprising Spirit – Course wise

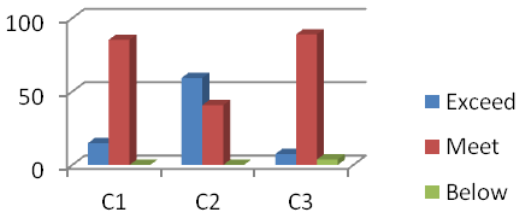
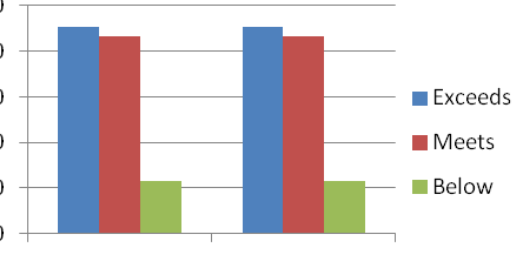
ENTERPRISING SPIRIT: Cycle1 Course: BUSINESS RESEARCH METHODS 2014-II Semester Conclusion: Improvement required in methodology, analysis and interpretation of the work (C2 & C3)	
ENTERPRISING SPIRIT: Cycle2 Course: ENTREPRENEURIAL DEVELOPMENT 2014-III Semester Conclusion: Needs improvement in confidence level that can lead to influencing peer. Below expectation has to drop to zero	
ENTERPRISING SPIRIT: Cycle3 Course: ENTREPRISE MANAGEMENT II 2015-IV Semester Conclusion: Improvement required in application of technology and documenting it. However, below expectation has dropped to zero.	

Learning Outcome of Enterprising Spirit – Consolidated

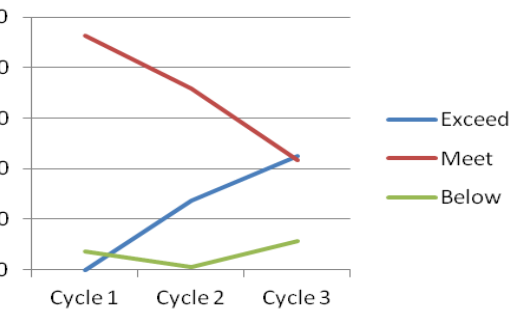
It is evident that lack of confidence among the students is the contributor for the oscillation in below expectation performance and therefore, exceed expectation is seeing a drop over three cycles period. However, considerable efforts put to meet expectation in the third cycle.	

Learning Outcome of Leadership – Course wise

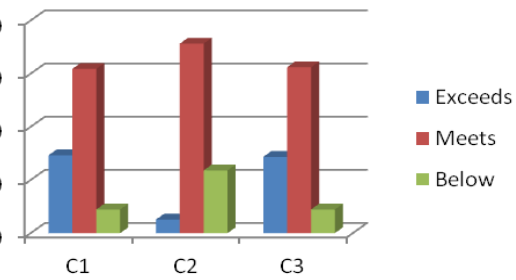
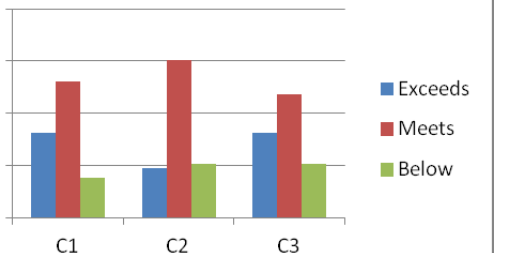
LEADERSHIP: Cycle 1 Course: BUSINESS COMMUNICATION 2 2014-II Semester Conclusion: Improvement required in initiative and appreciative mind	

LEADERSHIP: Cycle 2 Course: Enterprise Management I 2014-III Semester Conclusion: Beginning to improve; Improvement required on issue identification	
LEADERSHIP: Cycle 3 Course: Strategic Management 2015-IV Semester Conclusion: Considerable improvement observed compared to previous cycle. Below expectation to drop to zero	

Learning Outcome of Leadership – Consolidated

The trend analysis for leadership is showing progress from cycle 1 through cycle 3. While below expectation is significantly low the leadership qualities are moving from meet expectation to exceed expectation over three cycles period.	

Learning Outcome of Analytical Skills – Course wise

ANALYTICAL: Cycle 1 Course: FINANCIAL MANAGEMENT 2014-II Semester Conclusion: Improvement required on ability to respond to queries and team work	
ANALYTICAL: Cycle 2 Course: MANAGEMENT ACCOUNTING AND CONTROL SYSTEMS 2014-III Semester Conclusion: Improvement in all the criteria observed. However, below expectations has to drop to zero	

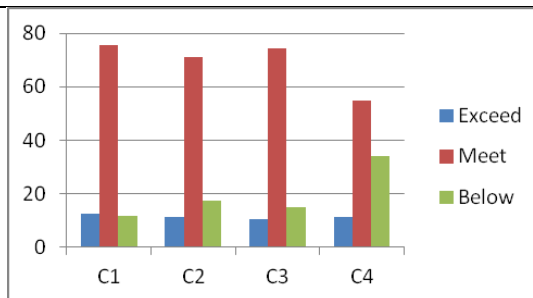
ANALYTICAL:

Cycle 3

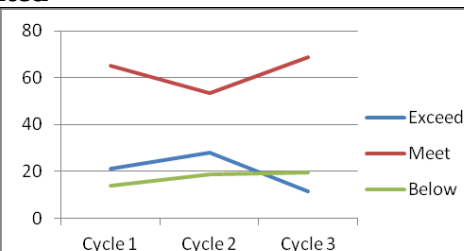
Course: PROJECT REPORT

2015-IV Semester

Conclusion: Analytical skills have met expectations in all the criteria. Below expectation has improved in the three criteria but needs some attention on referencing style for the project work. There is considerable improvement in analytical skills but below expectation has to drop to zero.

**Learning Outcome of Analytical Skills – Consolidated**

Analytical skills found a dip in second cycle but is compensated with some students performing above average and improved in third cycle. However, exceed expectation has dropped in third cycle and below expectation rose which needs to be addressed.

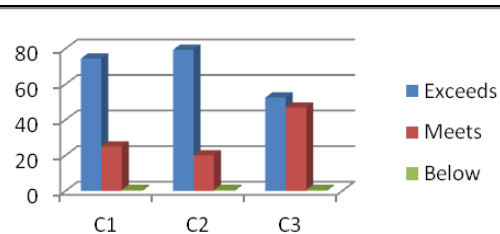
**Learning Outcome of Communication Skills – Course wise****COMMUNICATION:**

Cycle 1

Course: BUSINESS COMMUNICATION 2

2014-II Semester

Conclusion: Written and verbal communication has been on target

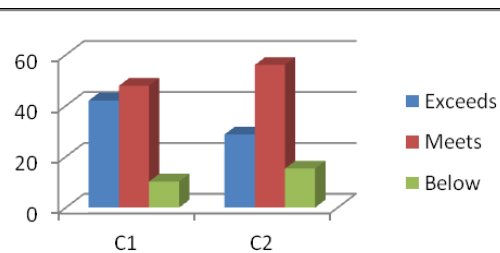
**COMMUNICATION:**

Cycle 2

Course: MANAGEMENT ACCOUNTING AND CONTROL SYSTEMS

2014- III Semester

Conclusion: Needs improvement in conceptualizing and then documenting

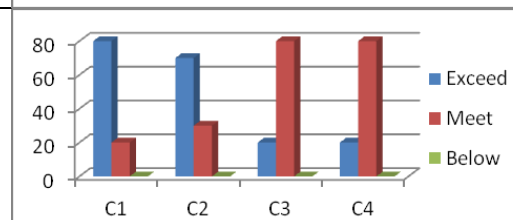
**COMMUNICATION:**

Cycle 3

Course: MARKETING OF SERVICES

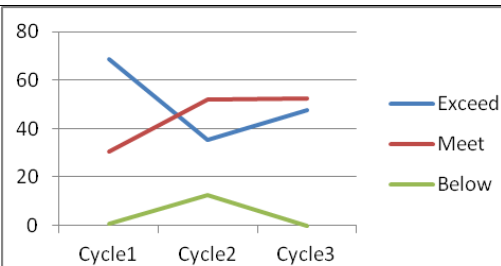
2015- IV Semester

Conclusion: Needs improvement in documenting the activities performed. However, below expectation has dropped to zero



Learning Outcome of Communication Skills – Consolidated

The communication skill tested independently yielded good results. However, skills to communicate information gathered from an activity needs improvement. This is observed while progressing from cycle 2 to cycle 3.



These trend analysis close the gaps existing in the system and helps in strengthening the course content/delivery.

35. Highlight the participation of students and faculty in extension activities.

We have several student associations such as Samvedana, Samvahana, Sr'jana etc. that enhance social sensitivity, inclusiveness and engagement of local community. Faculty members help students in these activities and organize several programs under its aegis Samvedana (Compassion) is a social work wing of the Justice K.S.Hegde Institute of management, Nitte. It mainly focuses on community development in and around Nitte. Under Samvedana students have generated funds to provide solar lamps to school-going students from economically weaker sections of the society in nearby locations, have conducted eye checkup camps, health checkup camps for the rural population, visited and met differently abled children in their schools with the idea of giving care. Samvahana encourages students to bring out their creative sides. Sr'jana is a cultural association that encourages students in taking part in plays and organizes cultural programs at the department.

Dr. Radhakrishna Sharma was appointed as a consultant for training the staff and students as well as for implementing leave trading system at Malik Deenar Institute of Management Studies, Seethangoli, Kasargod, Kerala during the Academic year 2014.

36. Give details of “beyond syllabus scholarly activities” of the department.

We encourage students to write research papers often co-authored by faculty, enthruse students to participate in B-school festivals, seminars, conferences etc. Encourage students to participate in Conferences, write research articles and FDPs at the department. There is also a student association that encourages students in these directions. Department also has literary club which encourages such activities.

37. State whether the program/ department is accredited/ graded by other agencies. Give details.

The department is accredited by NBA and AICTE in addition to approval from LIC committee of VTU. More details furnished below

1. Accredited by ACBSP in 2015
2. MBA Program accredited by NBA in 2015
3. Ranked as A3 level in Business School as per the Indian Management Survey 2010.
4. Business India Best B-School Survey 2010 has ranked as A+ +level Institute
5. Business India Best B-School Survey 2011 has ranked as A++ level Institute
6. Business India Best B-School Survey 2012 has ranked as 53rd Position
7. Ranked 45th position in ICMR-4Ps B & M B- School Survey 2010
8. Ranked 87th position in the Best B- Schools in The Week MaRS National Survey – 2011-2012.

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths • Pro-active Management • Location advantage • Faculty • Research culture • Technology support	Weaknesses • Limited diversity of students • International collaborations • Only one PG program
Opportunities • Strengthen research culture • International Accreditation • Enhance visibility • Attracting global mix of students • Twinning programs • More specialized programs in Management	Challenges • Pedagogical changes to meet up with market expectations • More diversity in student mix

39. Future plans of the department

1. Establishment of Bloomberg Finance Lab.
2. Introducing Simulation games for more number of courses
3. Routing majority of management quota admissions through CAT in place of MAT
4. Attract foreign students to take admissions
5. To establish Center for Executive Management Education
6. Actively involve in conducting EDP's, FDP's and MDP's
7. Enhance Industry – Institute Collaboration
8. Further strengthening of Research and Consultancy

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS**1. Name of the Department & its year of establishment:**

Master of Computer Applications – 1993

2. Names of Programmes/Courses offered:

PG: Master of Computer Applications (MCA)

3. Interdisciplinary courses and departments involved : Nil**4. Annual/ semester/choice based credit system :**

Semester Based Credit System

5. Participation of the department in the courses offered by other departments :**Course Code:** EC724**Subject:** Data Structures Using C++**6. Number of teaching posts sanctioned and filled Professors/Associate Professors/Asst. Professors)**

Grade	Sanctioned	Filled
Professor	02	03
Associate Professors	06	02
Asst. Professors	14	09

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./Ph.D. /M.Phil. etc.)

Sl. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience
1	Dr. K.M. Hegde	Ph.D.	Director	Applied Maths & computer Science	48
2	Dr. Karuna Pandit	M.Sc., M.Tech, Ph. D	Prof & Head	Pseudorandom number generation & Cryptography	29
3	Dr. Surendra Shetty	MCA, Ph.D.	Prof	Data Mining	12
4	Ms. Pallavi Shetty	MCA (Ph.D.)	Assoc. Prof		13
5	Ms. Mamatha Balipa	MCA (Ph.D.)	Assoc. Prof		12
6	Ms. Mangala A.G.	MCA (Ph.D.)	Asst. Prof		09
7	Ms. Spoorthi B. Shetty	MCA (Ph.D.)	Asst. Prof.		09
8	Mr. Anantha Murthy	MCA	Asst. Prof.		08
9	Ms. Saritha	M. Tech	Asst. Prof		05
10	Ms. Ramya	MCA	Asst. Prof.		04

11	Mr. Balachandra Rao	MCA	Asst. Prof		04
12	Mr. Arhath Kumar	B.E (M.Tech)	Asst. Prof		04
13	Mr. Puneeth B.R	MCA	Asst. Prof		03
14	Ms. Jyothi Shetty	M.Sc. (IT)	Asst. Prof		19

8. Percentage of classes taken by temporary faculty – programme-wise information:
Nil

9. Programme-wise Student Teacher Ratio: 20:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled:

Academic Support Staff

Technical	04
Administrative	03

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received:

	Funding Agency	No. of Students	Total
Student Project	HP, Bangalore	30	30000
	TTH, Ahmadabad	8	16000
	Prasanna Technology, Mangalore	30	30000

13. Research facility / Centre with state recognition :

VTU recognized Research Center available with CSE department, faculty of MCA have registered for Ph. D under CSE/ISE faculty.

National recognition:

- Thinking Telecom Hats, Ahmadabad
- Tech Verve Solutions, Bangalore
- Pinacple Media Solutions, Udupi
- Pinaka Informatics Private Limited, Bangalore
- Indygo Software Systems Private Limited, Bangalore
- RedHat, Bangalore

International recognition: Nil

14. Publications:

- number of papers published and presented in peer reviewed journals and conferences (national / international) Publications List(Faculty wise): 11

Year	Number
2012	02
2013	02

2014	02
2015	03
2016	02

Titles of Papers Published:

- Karuna Kamath K, B.R Shankar, Elliptic Curves and Multiplicative Congruential Generators, International journal of Computer Technology and Electronics Engineering, Vol 2, No 4, pp 84-89, ISSN:2249-6343, 2012.
- Roilet Noronha, 'Discovery of the Test Web Structure from the Usage Point of View', National Conference on Advances in Computer Applications NCACA-2012, Sri Siddhartha Institute of Technology, Tumkur.
- Sarika Hegde. K. K. Achary, Surendra Shetty., Analysis of Isolated Word Recognition for Kannada Language using Support Vector Machine, International Journal of Information Processing., Volume 7, No. 1, 2013
- Surendra Shetty, K. K. Achary and Sarika Hegde, Feature extraction computation an automatic raga identification for Carnatic ragas, International Journal of Information Processing, 7(2), 41-51, 2013
- Sarika Hegde, K. K. Achary, Surendra Shetty, Multiple Classifier System for Automatic Speech Recognition, International Journal of Computer Applications, 101 (Number 9), pp. 38-43, Sept 2014.
- Savitha G, An Approach for Object Detection in Android, Fifth International Conference on Signal and Image Processing, ICSIP-14, BNM Institute of Technology, Bangalore.
- Sarika Hegde, K. K. Achary, Surendra Shetty, Statistical Analysis of Feature Extraction and Classification of alphasyllabary sounds in Kannada language, International Journal of Speech Technology, Volume 18, Issue 1, pp 65-75, March 2015 .
- Sarika Hegde, K. K. Achary, Surendra Shetty, 'Feature Selection using Fisher's Ratio Technique for Automatic Speech Recognition', International Journal on Cybernetics & Informatics (IJCI) , Vol. 4, No. 2, pp 45-52, April 2015.
- Mamatha Balipa and Balasubramani R. 'Search Engine using Apache Lucene'. International Journal of Computer Applications 127(9):27-30, October 2015
- Surendra Shetty and Sarika Hegde, 'Clustering of Instruments in Carnatic Music for Content based Information Retrieval', 6th IEEE International Advanced Computing Conference, 27-28 Feb, 2016.
- Mangala A.G. and Balasubramani R., 'Efficient 2-D Structuring Element for Noise Removal of Gray scale Images using Morphological Operations , International Journal of Computer Applications (0975-8887) Volume 143-No.6, June 2016.

• **Monographs** : Nil

• **Chapter(s) in Books** : 01

Book Title: Engineering and Technology Recent Innovations and Research

Chapter 14: Machine Learning Approach for Carnatic Music Analysis

Authors: Dr. Surendra Shetty, Professor, Dept. of MCA

Editing Books: Nil

• **Books with ISBN numbers with details of publishers** : Nil

- **number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)** : Nil
- **Citation Index – range / average** : 0-43/2.15
- **h-index** :02
- **i10-index** :01
- **SNIP** :03
- **SJR** :03
- **Impact factor – range / average** :-- 0-1/0.05

15. Details of patents and income generated : Nil

16. Areas of consultancy and income generated:

A special concession of Rs 3,00,000/- in the procurement of HP Itanium server was received from HP, Bangalore for carrying out projects.

17. Faculty recharging strategies:

Deputing and encouraging to conduct Workshops, seminars, training programs, and conferences.

2012	
Number of Conferences/ Workshops Attended	25
Number of Conferences/ Workshops Conducted	-----
2013	
Number of Conferences/ Workshops Attended	39
Number of Conferences/ Workshops Conducted	2 UDAAN Research Conclave
2014	
Number of Conferences/ Workshops Attended	63
Number of Conferences/ Workshops Conducted	02 Spoken and written language processing NS3
2015	
Number of Conferences/ Workshops Attended	22
Number of Conferences/ Workshops Conducted	2 GlusterFs (Red Hat) Research Methodologies
2016	
Number of Conferences/ Workshops Attended	25
Number of Conferences/ Workshops Conducted	4 Responsive Web applications Open Source Conference (Red Hat) Latex Research aspects in Web Mining, IOT, Image Processing, Big Data.

18. Student projects

Type of project	Percentage of students who have done in house projects including interdepartmental	Percentage of students doing projects in collaboration with industries /institutes
Major project	10%	90%
Mini Project	80%	20%
Optional industry projects(from 3 rd semester onwards)	50%	50%

19. Awards / recognitions received at the national and international level by

Faculty: Nil

Doctoral / post-doctoral fellows: Nil

Students: Best project award during the PG project Expro.

20. Seminars/ Conferences/Workshops organized and the source of funding (national /international) with details of outstanding participants, if any.

Sl.No.	Date	Conference	No. of Participants	Resource Person	Source of Financial Support
1.	25 th -27 th July 2016	3day workshop on Latex	50	Mr. Manjunath Prasad, NMAMIT, Nitte	NMAMIT, Nitte
2	18 th &19 th March 2016.	Nitte Open Source International Conference	175	Niels De Vos, Red Hat, Amsterdam, Dan Lambrihgt, Red Hat, Westford, Kaleb leithley, Red Hat, Westford, Joseph Elvin Fernades, Red Hat , Bangalore	NMAMIT, Nitte
3	3 rd and 4 th Feb 2016.	Two day workshop on “Responsive Web Applications	40	I.Y.R. Sudhakar, BITES, Bangalore	BITES, Bangalore & NMAMIT, Nitte
4	2 nd -4 th Sept 2015.	Two day workshop on “Research Methodology	120	Dr. Mahanand, SJCE, Mysore , Dr. Dattathreya, VTU, Belagavi	VTU, Belagavi & NMAMIT, Nitte
5	11-4-2015.	One day workshop on “GlusterFS Conference	102	Niels De Vos, Red Hat, Amsterdam, Dan Lambrihgt, Red Hat, Westford, Kaleb leithley, Red Hat, Westford, Joseph Elvin Fernades, Red Hat ,Bangalore.	NMAMIT, Nitte

6	11 th and 12 th August, 2014	Two day FDP on “NS3	63	Dr. Mohith P Tahiliani, Assistant Professor CS&E Department, N ITK, Surathkal	NMAMIT, Nitte
7	18 th and 19 th July, 2014.	Two day FDP on “Spoken and Written Language Processing : A beginning of the Research Journey	43	Dr. Shashidhar Koolagudi, Assistant Professor CS&E Department, , N ITK, Surathkal	NMAMIT, Nitte
8	19 th and 20 th , 2013.	Two day workshop on UDAAN organized by HP, Bangalore in association with N.E.T	90	Mr. Mandar (HP, Bangalore) , Mr. Prasad S. G. (HP, Bangalore), Mr. Roopesh Kumar (HP, Bangalore)	NMAMIT, Nitte
8	8 th June, 2012.	One day workshop on Business Intelligence organized by Metis Consultancy Services, Japan in association with NET	60	Mr. Shinji Furusho, CEO Data Turbo Labs, Japan, Mr. Jahir Husain, CEO Metis Consultancy Services, Japan	NMAMIT, Nitte
9	12 th August, 2011	One day conference on Open Source Virtualisation organized by Dell R & D in association with NET	100	Mr. DiyanishuVerma (Linux Engineering Team, Dell R & D) Mr. Surya Prabhakar (Linux Engineering Team, Dell R & D)	NMAMIT, Nitte
10	July 22 nd - 24 th 2010.	Two day workshop on Image Audio and Video Processing organized by Nitte Education Trust	50	Dr. G. Hemanth Kumar (Professor and Chairman, Department of Studies in Computer Science University of Mysore, Mysore	NMAMIT, Nitte

21. Student profile course-wise:

Year	Applications received for Management Seats (50% of Intake)	Selected		Pass percentage	
		Male	Female	Male	Female
2016	71 (Seats: 600)	23	48	Yet to complete the course	
2015	83 (Seats : 60)	20	26	Yet to complete the course	
2014	75 (Seats : 60)	12	23	Yet to complete the course	
2013	120 (Seats : 60)	30	30	96%	88%
2012	104 (Seats :60)	33	27	100%	100%
2011	115(Seats :45)	20	25	100%	100%
2010	128(Seats :45)	18	27	100%	100%

22. Diversity of students

Year	Admitted	Karnataka			Other states
		South Canara	Udupi	Other districts	
2015	90	20	45	17	08
2014	90	28	32	25	05
2013	90	31	36	21	02
2012	120	33	38	39	10
2011	115	35	41	33	06

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations? : All students get placed.**24. Student progression**

PG to MS:	02
PG to Ph. D:	03
Entrepreneurs	03
Employed - Campus selection	40%
Employed - Other than campus recruitment	55%
PG to MS:	02

25. Diversity of staff

Percentage of faculty who are graduates	UG	PG	Ph.D.
of the same parent university	21%	63%	---
from other universities within the State	68%	15%	10%
from other universities from other States	11%	5%	5%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period. : Ph.D. : 02**27. Present details about infrastructural facilities:**

- a) **Central library and book bank facility** : Available
b) **Internet facilities for staff and students:** Available.
For Students : Wi-Fi, LAN enabled systems in lab (310 Mbps)
For Staff : Wi-Fi, LAN enabled machines (310 Mbps)

c) **Total number of class rooms** : 06

d) **Class rooms with ICT facility** : 06

e) **Students' laboratories** :
04 exclusive labs with 123 machines for the academic use.
03 project labs and one server lab.
All laboratories and class rooms are Air-conditioned.

f) Research laboratories :

Development centers of Pinaka Informatics Private Limited, Bangalore, Thinking Telecom Hats, Ahmadabad ,Tech Verve Solutions, Bangalore Pinaka Informatics Private Limited, Bangalore, Indygo Software Systems Private Limited, Bangalore and RedHat, Bangalore have been established in the department where student along with faculty carry out R & D projects.

28. Number of students of the department getting financial assistance from College:

Sl. No.	Year	No. of Students	Amount in Rs.
1.	2012	9	2,18,600
2.	2013	50	9,40,000
3.	2014	30	6,92,500
4.	2015	38	5,80,000

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology: NA**30. Does the department obtain feedback from**

- Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**
 - The departmental meetings are conducted on a regular basis (at least once in a month) and all academic and non-academic matters are discussed and appropriate suggestions are recorded in minutes of meeting for possible implementation.
 - In regular faculty meeting, HOD monitors the coverage of syllabus, teaching, learning and evaluation process.
 - At the end of the semester faculty members provide feedback about the courses s/he has handled and conveys any possible suggestions / improvements in the curriculum, teaching learning and evaluation process.
 - The suggestions for revision of curriculum if any, are deliberated in the departmental meeting by involving all faculty members and members of PAC. The collective suggestions are referred to BOS and deliberated in detail in BOS meeting involving external experts from Industry and Academia.
 - The revision of curriculum is finalized in BOS meeting to keep pace with the requirements of academia and industry from time to time.
- Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**
 - Class committee consisting of Head of the department, class advisors and student members from all semester meets twice in a semester to discuss about the coverage of syllabus, teaching, learning and evaluation process.
 - Class committee meeting and the feedback after MSE-I and MSE-II is taken from the students for the betterment of the teaching /learning process.
 - The students share their feedback on all the academic and non-academic issues. The consolidated feedback is deliberated with the concerned faculty by the HOD and he suggests the areas of teaching learning process that require refinements/ innovations to be incorporated in teaching in view of ensuring better student learning outcomes.
 - Mid Semester feedback is taken from each student which mainly focuses on the coverage of syllabus, teaching, learning and evaluation. The analysis of the same is done and the outcome of the analysis is discussed with the faculty members.
 - Based on the feedback, faculty members make use of additional e-learning to improve the teaching learning process.
 - Remedial classes are conducted for slow learners and are monitored by the student monitoring cell of the department.
 - Tutorial classes are conducted for the numerical/design oriented subjects to give more insight of the subject.
 - A common questionnaire containing questions related to teaching, learning, and

evaluation methods adopted by the faculty is used to take the feedback from students as per the ISO guidelines.

- Course Exit Survey is taken at the end of the semester and considered while evaluating the course outcomes of each course. The analysis of attainment of course outcome and action plan if any to be implemented in the next academic year for the improvement of CO attainments are discussed with faculty in departmental and PAC meetings. The faculty members do implement the proposed action plan in the teaching learning process in the subsequent academic year and the revision of syllabus is deliberated in the BOS.
- BOS recommendations are deliberated in Academic Council (AC) meetings for final approval.
- The Dean (Academics) also collects feedback from the students about the faculty, analyses and counsels the faculty along with HODs. The faculty members are deputed for pedagogical training, Subject specific trainings, FDPs and workshops etc.
- **Alumni and employers on the programmes and what is the response of the Department to the same?**
 - Alumni feedback is taken during the annual alumni meets and staff members meet the students whom they have taught during alumni meet. In addition to this, alumni keep visiting the institution and interact with faculty members and HODs.
 - The feedback mainly focuses on the improvements in curriculum as per the present industrial requirements/demands, and on Programme Educational Objectives. The suggestions for improvement of curriculum given by alumni are deliberated in BOS for possible implementation.
 - Alumni and employers are part of various committees in the institution including BOS and they actively participate and provide valuable suggestions for revision of curriculum.
 - Alumni are invited to address, interact and guide the students on their academics, co-curricular activities and career planning.
 - During faculty development programs, workshops and conferences the institution invites employers of reputed industry and they suggest on the latest trends in the industry and its opportunities. These suggestions are deliberated in the BOS meeting for revision of curriculum.
 - Feedback from alumni and employers helps to know how the students contribute to companies and to record the recent accomplishments of alumni and useful in computation of PEOs.

31. List the distinguished alumni of the department (maximum 10)

1. Mr. Natesh Pai (2009-2012), Technical Consultant, Prospecta Software, Sydney, Australia
2. Mr. Ajith Hegde (2006-2009), Senior Project Manager– HP, Australia
3. Mr. Joel Sequeria (2005-2008), CEO, Pinnacle Media Solutions, UDUPI
4. Mr Arunachala Shetty(2002-2005), President & CEO, Thought Grains, Udupi
5. Mr. Sampathraj Shetty (2001 – 2004), Sr. Software Engineer Tememos, the Banking Software Company, Belgium
6. Mr. Neel Antony Mascarenhas (2000 - 2003), Manager, Common wealth Bank of Australia, Sydney
7. Mr. Vinay (2000 - 2003), Business Analyst Tech Mahindra, New Zealand
8. Mr. Sreekumar (1993 – 1996) , Technical Director, Trivium Solutions, Bangalore

9. Ms. Sharath Ramaswamy (1993 – 1996), Director, Training and Development, Akamai Technologies, Bangalore
10. Mr. Raghavendra Pai, (1993 – 1996), Director, Key Stone Business solutions, Bangalore

32. Give details of student enrichment programmes (special lectures/ workshops / seminar) with external experts.

Year	Invited talk on	Resource Person	Name of Institution/Industry
22-10-2016	Latex	Ms. Mamatha Balipa	MCA Dept, NMAMIT
07-10-2016	Entrepreneurship awareness Camp	Mr. Abhay Sharma	3E Consulting Pvt. Ltd
03-09-2016	Power of Action	Dr. Vivek Modi	Vivekananda Institute of Human Excellence
29-08-2016	Security in the Digital Age	Mr. Nagaprasad Sathyanarayana,	Engineering Manager, RedHat, and Bangalore
20-08-2016	Current Web Technologies	Mr. Vivek Agarval	Engineering Manager, RedHat, Bangalore
12-02-2016	Challenges in IT industry	Mr. Deekshith Rai	CEO, Code Craft Technologies, Mangalore.
16-01-2016	Current trends in IT industry	Mr. Harsha Aithal	Senior software engineer, HP, Bangalore
13-10-2015	Latest Trends and Technologies – opportunities for rural India	Mr. A. Kottai	TCS, Bangalore
10-12-2014	Corporate life VS Higher Studies	Mr. Natesh Pai	Prospecta Softwares, Australia
14-12-2014	How to become Successful	Ms. Shalini K Sharma	NMAMIT, Nitte
12-12-2014	Depression and coping Strategies	Dr. Shrinivasa Bhat	KHSEMA, Mangalore
10-10-2013	Application of Telecommunication	Ms. Vijaya Kamath	TTH, Ahmadabad
22-03-2013	Project Management	Ms. Surekha Shetty	PK4 Software Technology, Bangalore
12-10-2012 & 13-10-2012	Virtualization Tools	Mr. Harish Kamath Mr. Mandar Jagannath	H.P., Bangalore
28-09-2012	Android Application Development	Mr. Rajaneesh Acharya	NMAM.I.T, Nitte
16-03-2012	Development of Customized Firewall	Mr. Shivadas Wagle	Sonic Wall, Bangalore
30-09-2011	Data Mining and Warehousing	Mr. Padmanabha P. N.	H.P., Bangalore
18-03-2011	Contribution to Open Source Community	Mr. Rathan Kumar	Tayana, Bangalore

33. List the teaching methods adopted by the faculty for different programmes

- Didactic lecture
- Videos & multimedia presentations
- Seminar / Viva-voce
- Quiz / Assignments/Tests
- Mini Projects
- Industry Projects
- Remedial Teaching for slow learners.
- Course materials are available on Moodle
- Need assessment exercise before the introduction of new course(s)

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

At NMAMIT, Outcome Based Education is practiced. Departmental Vision, Mission and Program Educational Objectives (PEOs) are framed. The Program Outcomes (POs) are formulated as per NBA graduate attributes. To ensure Program Outcomes (POs) and PEOs, the students' learning outcomes are monitored by evaluating Course Outcomes (COs). The following methodology is adapted from NBA guidelines.

- Departmental meetings are conducted regularly, thrice in a semester, where issues related to attainment of PEO and monitoring of learning outcomes is carried out.
- Continuous Internal Evaluation (CIE) is a means to achieve learning outcomes and also provides a mechanism to monitor the same. This includes two compulsory mid semester examinations and tasks (which include surprise tests, assignments, case studies and quizzes).
- Tutorial classes are conducted in a design/ numerical oriented courses every week better understanding of application of theory to solve analytical problems and provide additional inputs to the students.
- Class committee meetings are held including class advisors and student representatives with the Head of the Department for analyzing the effectiveness of implementation of teaching learning process, syllabus coverage and analysis of Mid Semester Examination (MSE) marks. HOD discusses the ways and suggest along with class advisors, the measures/action plans for achieving course outcomes.
- The suggestion includes solving of additional numerical problems from exercise, other university question papers/competitive tests and/or Industry standard papers etc. are being implemented as the case may be to improve students' learning capability.
- Technical Skill Building: Students are encouraged to do mini projects.
- Participation of students in departmental research projects (if any) is highly encouraged.
- Department encourages internship programs to provide industrial exposure to students, which generally happen during summer vacation.
- Audit courses, skill development programmes and/or value added courses are offered to students during the summer vacation.
- Summer research internships are offered to students.
- **Course Exit Survey** is collected from all students at the end of each semester for each course. The analysis of survey is being discussed in departmental meeting given to the individual teaching faculty to know the analysis of course outcomes. This feedback gives the relevant importance of the individual subjects being handled and propose action plans in view of improving CO attainment and implemented in the next academic year

- **Programme Exit Survey** is also being collected from every student at the end of 8th semester. The necessary details also administer the department in dealing with the subjects offered at different levels.
- The MSE marks, SEE marks, course exit survey and program exit surveys are suitably incorporated in the computation of attainment of COs and POs. The analysis of attainment of COs and POs is carried out.
- Based on the attainment of COs and POs, action plans are chalked out for the next academic year. The innovations in teaching, revision of curriculum, addition of courses, electives, audit courses, skill development programmes and/or value added courses are taken up in support of achieving continuous improvement in attainment of COs and POs.
- Feedback from alumni and employers are also taken to know how the students contribute to companies and to record the recent accomplishments of alumni. These feedbacks help in computation of PEOs.

35. Highlight the participation of students and faculty in extension activities:

- Nere-kare Kshema Software for Nitte Grama.
- Panchayath Account Software System for Nitte Gram Panchayath.
- Quiz conducted for High School students.
- Software developed for Psychiatric Hospital.
- iMiners – Data Entry for local people.

36. Give details of “beyond syllabus scholarly activities” of the department.

The department regularly conducts aptitude/soft skill training program for students during vacation period. Students are encouraged to attend seminars/talks in other departments/institutions/industries. Our students are also exposed to latest technologies regularly by organizing talks from industry/academic experts. We also urge students to take in-house projects (team wise) to improve their technical/ management skills and teamwork capability. Students are encouraged to participate in Inter-collegiate Technical fests organized by different colleges.

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

IAO, ISO, DEKRA Netherlands

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

➤ **Strengths:**

- Collaborative Industry academic projects.
- Focus on Research and Publications.
- Consultancy work for community development.
- In spite of students coming from different streams there is excellent placements.
- Dedicated young faculty, ICT facility, Updated syllabi, and good atmosphere.

➤ **Weaknesses:**

- Student research activity.
- External funding.
- International faculty/student exchange programme.
- Lack of opportunities for higher studies.

➤ **Opportunities:**

- Training and consultancy.
- Ample opportunities to carry out research work.
- Opportunity to create incubation centre.
- Innovative learning & teaching by using latest technology.
- Collaborative Research & Development activities with industries.

➤ **Challenges:**

- Receiving funds for research activities.
- Maintaining excellent placement record.
- Training students from diverse stream.
- International Academic collaboration/exposure for the faculty.
- Encouraging students to become entrepreneurs.

39. Future plans of the department.

- To establish centre of excellence in the field of Data Mining and Knowledge Discovery, Speech recognition.
- Establishment of additional Industry development cells for project and employment opportunities
- Inculcate entrepreneur bent of mind among students.

SECTION E

APPENDIX

SECTION E

APPENDIX

E.1: UGC Recognition u/s 2 (f) and 12 (B) of the UGC Act

Ph. 23236351, 23232701, 23237721, 23234116
23235733, 23232317, 23236735, 23239437
UGC Website: www.ugc.ac.in



विश्वविद्यालय अनुदान आयोग
बहादुरशाह जफर मार्ग
नई दिल्ली-110 002
UNIVERSITY GRANTS COMMISSION
BAHADURSHAH ZAFAR MARG
NEW DELHI-110 002

April, 2008

F.8-8/2008 (CPP-I)

The Registrar,
Visvesvaraya Technological University,
"Jnana Sangama",
Belgaum-590 014 (Karnataka).

5 MAY 2008

Sub:- List of Colleges prepared under Section 2 (f) of the UGC Act, 1956-Inclusion of New College-

Sir,

I am directed to refer to the letter No. NMAMIT/SYK/UGC/5/08/5449 dated 04.04.2008 received from the Principal, Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte on the subject cited above and to say that the name of the following College has been included in the list of Colleges prepared under Section 2 (f) of the UGC Act, 1956 under the head Non-Government Colleges teaching upto Bachelor's Degree:-

Name of the College	Year of Establishment	Remarks
Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte-574 110 (Karkala), Taluk, Udupi District (Karnataka). (On permanent affiliation)	1986	The College is not eligible to receive Central assistance in terms of rules framed under Section 12 (B) of the UGC Act, 1956, as the UGC has not yet finalized the details to provide financial assistance to "Self Financed Colleges".

The Indemnity Bond and other documents submitted in respect of the above College have been accepted by the Commission.

Yours faithfully

(P.K. Sharma)
Under Secretary

Copy to:-

1. The Principal, Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte-574 110 (Karkala), Taluk, Udupi District (Karnataka).
2. The Secretary, Government of India, Ministry of Human Resource Development, Department of Secondary & Higher Education, Shastri Bhawan, New Delhi-110 001.
3. The Principal Secretary, (Higher Education), M.S. Building, 5th Floor, Dr. B.R. Ambedkar Road, Bangalore (Karnataka).
4. The Deputy Secretary, UGC, South-Western Regional Office, Prasanna Kumar Block, Palace Road, Bangalore-560 009.
5. Publication Officer, UGC-Website, New Delhi.
6. Section Officer, FD-III Section, UGC, New Delhi.
7. All Sections, UGC, New Delhi.
8. Guard file.

(Mrs. Sunita Gulati)
Section Officer



डॉ. मंजू सिंह
संयुक्त सचिव

Dr. Manju Singh
Joint Secretary



राष्ट्रध्वज

विश्वविद्यालय अनुदान आयोग
University Grants Commission
(मानव संसाधन विकास मंत्रालय, भारत सरकार)
(Ministry of Human Resource Development, Govt. of India)
बहादुरशाह ज़फ़र मार्ग, नई दिल्ली-110002
Bahadur Shah Zafar Marg, New Delhi-110002
दूरभाष Phone : कार्यालय Off : 011-23238876
Fax : 011-23232297 E-mail : manjusingh.ugc@nic.in

BY SPEED POST

No.F. 22-1/2017(AC)

February, 2017

The Registrar,
Visvesvaraya Technological University,
Jnana Sangama Santibastawad Road,
Macche Belgaum-590 018
(Karnataka)

28 FEB 2017

Sub: - Grant of Extension of Autonomous Status to NMAM Institute of Technology, Nitte, Karkala-574 110 (Karnataka) affiliated to Visvesvaraya Technological University, Jnana Sangama Santibastawad Road, Macche Belgaum-590 018 (Karnataka)

Sir/Madam,

This is with reference to the proposal submitted by your college for extension of autonomous status.

On the basis of the report of the UGC Expert Committee and on the basis of the recommendations of the Standing Committee, the Commission at its meeting held on 22.02.2017 decided to grant extension of autonomous status to NMAM Institute of Technology, Nitte, Karkala-574 110 (Karnataka) affiliated to Visvesvaraya Technological University, Jnana Sangama Santibastawad Road, Macche Belgaum-590 018 (Karnataka) under the UGC scheme for autonomous colleges for a period of six years w.e.f. 2016-2017 to 2021-2022 including ex-post-facto approval from the period 2015-2016.

Visvesvaraya Technological University, Jnana Sangama Santibastawad Road, Macche Belgaum-590 018 (Karnataka) may now go ahead and issue necessary orders in this regard by endorsing a copy of the same to this office for our records. The admissible grant under this scheme will be released to the College as per its eligibility, according to the norms as laid down as per applicable Guidelines for Autonomous Colleges by the Joint Secretary, UGC, South Western Regional Office, Prasanna Kumar Block, Palace Road, Bangalore – 560 009 (Karnataka),.

Yours faithfully

Manju Singh
(MANJU SINGH)

Cont....

: 2 :

Copy to:-

1. The Principal Secretary,
Department of Hr. & Tech. Education,
Govt. of Karnataka,
K.G.S. 6th Floor, M.S. Building,
R.No. 645, Dr. B.R. Ambedkar Road,
Bangalore – 560 001.
2. The Joint Secretary,
UGC, South Western Regional Office,
Prasanna Kumar Block, Palace Road,
Bangalore – 560 009 (Karnataka),
3. The Principal,
NMAM Institute of Technology,
Nitte, Karkala-574 110 (Karnataka)

(A copy of the Expert Committee report is also enclosed for your information and guidance.)

4. Meeting Cell.
5. Concerned file
6. Guard File.

Manj Singh
(MANJU SINGH)

E.2: AICTE Approval for 2016-17



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

F.No. South-West/1-2811986452/2016/EOA

Date: 25-Apr-2016

To,

The Principal Secretary (Hr. & Tech Education)
Govt. of Karnataka, K. G.S., 6th Floor,
M.S. Building, R. N. 645, Dr. B. R. Ambedkar Road,
Bangalore-560001

Sub: Extension of approval for the academic year 2016-17

Ref: Application of the Institution for Extension of approval for the academic year 2016-17

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F.No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	South-West	Application Id	1-2811986452
Name of the Institute	NMAM INSTITUTE OF TECHNOLOGY, NITTE	Permanent Id	1-5795381
Name of the Society/Trust	NITTE EDUCATION TRUST ®	Institute Address	NMAM INSTITUTE OF TECHNOLOGY NITTE, NITTE POST & VILLAGE - 574110 KARKALA TALUK UDUPI DISTRICT KARNATAKA STATE, NITTE, UDUPI, Karnataka, 574110
Institute Type	Unaided - Private	Society/Trust Address	NITTE EDUCATION TRUST ® 6TH FLOOR, UNIVERSITY ENCLAVE, MEDICAL SCIENCES COMPLEX, DERALAKATTE, MANGALORE, MANGALORE, D KANNADA(DK), Karnataka, 575018

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2016-17

Application Id: 1-2811986452			Course	Full/Part Time	Affiliating Body	Intake 2015-16	Intake Approved for 2016-17	NRI Approval status	PIO / FN / Gulf quota Approval status	Foreign Collaboration/Twinning Program Approval status
Program	Shift	Level								

Application Number: 1-2811986452
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Letter Printed On: 3 May 2016

Printed By : ae3039831



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7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMPUTER NETWORKING	FULL TIME	Vesveswaraiah Technological University, Belgaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	25	25	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	CONSTRUCTION TECHNOLOGY	FULL TIME	Vesveswaraiah Technological University, Belgaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	DIGITAL ELECTRONICS AND COMMUNICATION ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	25	25	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	ENERGY SYSTEMS ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	INDUSTRIAL BIOTECHNOLOGY	FULL TIME	Visvesvaraya Technological University, Belgaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	MACHINE DESIGN	FULL TIME	Vesveswaraiah Technological University, Belgaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	POWER ELECTRONICS	FULL TIME	Visvesvaraya Technological University, Belgaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	SOFTWARE ENGINEERING	FULL TIME	Visvesvaraya Technological University, Belgaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	STRUCTURAL ENGINEERING	FULL TIME	Visvesvaraya Technological University, Belgaum	0	24	NA	NA	NA

Application Number: 1-2811986452
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Letter Printed On:3 May 2016



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PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	VLSI AND EMBEDDED SYSTEMS DESIGN	FULL TIME	Vesveswaraiah Technological University, Belgaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	BIOTECHNOLOGY	FULL TIME	Vesveswaraiah Technological University, Belgaum	69	69	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CIVIL ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	120	120	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	180	180	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	60	60	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS & COMMUNICATION ENGG	FULL TIME	Vesveswaraiah Technological University, Belgaum	180	180	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	INFORMATION SCIENCE AND ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	69	120	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	180	180	NA	Yes	NA
MANAGEMENT	1st Shift	POST GRADUATE	MASTERS IN BUSINESS ADMINISTRATION	FULL TIME	Vesveswaraiah Technological University, Belgaum	180	180	NA	NA	NA
MCA	1st Shift	POST GRADUATE	MASTERS IN COMPUTER APPLICATIONS	FULL TIME	Vesveswaraiah Technological University, Belgaum	120	120	NA	NA	NA



All India Council for Technical Education
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7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

The above mentioned approval is subject to the condition that NMAM INSTITUTE OF TECHNOLOGY, NITTE shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Note: Validity of the course details may be verified at www.aicte-india.org

Dr. Avinash S Pant
Vice - Chairman, AICTE

Copy to:

1. **The Regional Officer,**
All India Council for Technical Education
Health Centre Building
Bangalore University Campus
Bangalore - 560 009, Karnataka
2. **The Director Of Technical Education,**
Karnataka
3. **The Registrar,**
Visvesvaraya Technological University, Belagum
4. **The Principal / Director,**
NMAM INSTITUTE OF TECHNOLOGY, NITTE
NMAM INSTITUTE OF TECHNOLOGY
NITTE,
NITTE POST & VILLAGE - 574110
KARKALA TALUK
UDUPI DISTRICT
KARNATAKA STATE,
NITTE,UDUPI,
Karnataka,574110
5. **The Secretary / Chairman,**
NITTE EDUCATION TRUST @
NITTE EDUCATION TRUST @
6TH FLOOR, UNIVERSITY ENCLAVE, MEDICAL SCIENCES COMPLEX, DERALAKATTE, MANGALORE,
MANGALORE, D KANNADA(DK),
Karnataka,575018
6. **Guard File(AICTE)**

Application Number: 1-2811986452
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Printed By : ae3039831

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Letter Printed On:3 May 2016

E.3: VTU Belagavi Affiliation Details

	VISVESVARAYA TECHNOLOGICAL UNIVERSITY ವಿಶ್ವವರಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ "Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA		Phone : (0831) 2405468 Fax : (0831) 2405467 Email : registrar@vtu.ac.in website : www.vtu.ac.in	
	Dr. H. N. Jagannatha Reddy B.E., M.E., Ph.D. Registrar			
Ref: VTU/Aca/2016-17/A-11/ 10001		Date: 20 MAR 2017		
<u>TO WHOM IT MAY CONCERN</u>				
This is to certify that NMAM Institute of Technology, Nitte is affiliated to the Visvesvaraya Technological University, Belagavi Karnataka, since 1998-99 and the following Courses/ Subjects are taught in the said college as per approval.				
SL.No	Name of the Course(s) and Duration	Affiliation		Period of Validity for the year(s) (Upto)
		Permanent	Temporary	
UG Courses				
1	B.E. in Mechanical Engg	Permanent		2013-2014 To 2017-2018
2	B.E. in Information Science & Engg.	Permanent		2013-2014 To 2017-2018
3	B.E. in Biotechnology	Permanent		2013-2014 To 2017-2018
4	B.E. in Civil Engg.	Permanent		2013-2014 To 2017-2018
5	B.E. in Electrical & Electronics Engg.	Permanent		2013-2014 To 2017-2018
6	E.E. in Computer Science & Engg.	Permanent		2013-2014 To 2017-2018
7	B.E. in Electronics & Communication Engg.	Permanent		2014-2015 To 2018-2019
PG Courses				
1	MBA	Permanent		2013-2014 To 2017-2018
2	MCA	Permanent		2013-2014 To 2017-2018
3	M.Tech in Digital Electronics & Communication	Permanent		2013-2014 To 2017-2018



VISVESVARAYA TECHNOLOGICAL UNIVERSITY

ವಿಶ್ವವರಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

"Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA

Phone : (0831) 2405468
Fax : (0831) 2405467
Email : registrar@vtu.ac.in
website : www.vtu.ac.in

Dr. H. N. Jagannatha Reddy B.E., M.E., Ph.D.

Registrar

4	M.Tech in Computer Science & Engg	Permanent	2013-2014 To 2017-2018
5	M.Tech in Energy Systems Engg	Permanent	2014-2015 To 2018-2019
6	M.Tech in Construction Technology	Permanent	2015-2016 To 2020-2021
7	M.Tech in VLSI Design & Embedded Systems	Temporary	2016-2017
8	M.Tech in Machine Design	Temporary	2016-2017
9	M.Tech in Computer Networking	Temporary	2016-2017
10	M.Tech in Power Electronics	Temporary	2016-2017
11	M.Tech in Industrial Biotechnology	Temporary	2016-2017
12	M.Tech in Software Engg	Temporary	2016-2017
13	M.Tech in Structural Engg	Temporary	2016-2017

REGISTRAR
VTU Belagavi

E.4: Provisional Accredited by NBA**NATIONAL BOARD OF ACCREDITATION**

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg,
Pragati Vihar, New Delhi-110 003
Tel: +91 11 2436 0620-22, 2436 0654 Telefax: +91 11 2436 0682
Website: www.nbaiind.org



F.No.25-88-2010-NBA

Dated: 18-12-2015

To,

The Director
NMAM Institute of Technology Nitte,
Karkala Taluk,
Nitte-574 110, (UDUPI DIST.)
Karnataka

Subject: Accreditation status of programs applied by NMAM Institute of Technology Nitte, Karkala Taluk,
Nitte-574 110, Karnataka.

Sir,

This has reference to your applications dated 04.1.2013 and 04.05.2013 in Tier I format seeking accreditation of National Board of Accreditation to the UG/ PG Engineering programmes offered by NMAM Institute of Technology Nitte, Karkala Taluk, Nitte-574 110, Karnataka.

2. An Expert Team conducted on-site evaluation of the programs during 09th to 11th October, 2015. The Report submitted by the Expert Team was considered by the concerned Committees constituted for the purpose in NBA. The competent authority in NBA has approved the accreditation status to the following programs as given in the table below:

Sl. No.	Name of the Programs	Level	Basis of Evaluation	Accreditation Status	Period of validity w.e.f. 01.07.2015	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Information Science & Engineering	UG	Tier I Document	Provisionally Accredited	2 years	Accreditation status granted is valid for the period indicated in col.5 or till the program has the approval of the competent authority, whichever is earlier
2.	Computer Science & Engineering	UG		Provisionally Accredited	2 years	
3.	Digital Electronics & Communication Engineering	PG		Provisionally Accredited	2 years	
4.	Energy System Engineering	PG		Provisionally Accredited	2 years	

3. It may be noted that only students who graduate during the validity period of accreditation, will be deemed to have graduated with an NBA accredited degree.

4. The above programmes have been granted provisional accreditation for 2 years. As such, NMAM Institute of Technology Nitte, Karkala Taluk, Nitte-574 110, Karnataka should submit the Self-Assessment Report alongwith a Compliance Report at least after one year to be considered by the Engineering Evaluation and Accreditation Committee (EEAC) to formulate a view whether compliance report is enough to recommend for accreditation or a visit to the Institute is necessary. The recommendations of the EEAC will be considered by the Sub-Committee of Academic Advisory Committee of Engineering for a decision.

Contd/....

Copy To

- P
- HOD, CSE
- HOD, ISE
- HOD, Mech
- HOD, E&C

29/12/15

-2-

5. The accreditation status awarded to the programs as indicated in the above table does not imply that the accreditation has been granted to NMAM Institute of Technology Nitte, Karkala Taluk, Nitte-574 110, Karnataka as a whole. As such, the Institute should nowhere along with its name including on its letter head etc. write that it is accredited by NBA because it is program accreditation and not Institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously. Complete name of the program(s) accredited, level of programs and the period of validity of accreditation, as well as the date from which the accreditation is effective, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

6. The accreditation status of the above programs is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited programs as indicated in the table in paragraph 2, appears on the website and information bulletin of your Institute.

7. The accreditation status awarded to the programs as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.

8. Copies of Report of Chairman of the Visiting Team and Evaluators' Reports in respect of the above programmes are also enclosed.

9. If the Institute is not satisfied with the decision of NBA, it may appeal within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,


(Dr. Anil Kumar Nassa)
Member Secretary

- Encls: 1. Copy of Report of Chairman of the Visiting Team.
2. Copies of Expert Reports of the Visiting Team.

Copy to:

1. Director of Technical Education
Tantrik Shikshak Bhavan,
Palace Road, Bangalore,
560 001, Karnataka
2. Accreditation file
3. Master Accreditation file of the State

NATIONAL BOARD OF ACCREDITATION

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg,
Pragati Vihar, New Delhi-110 003
Tel: +91 11 2436 0620-22, 2436 0654 Telefax: +91 11 2436 0682
Website: www.nbaind.org



F.No.25-88-2010-NBA

To,

The Principal
NMAM Institute of Technology
Nitte Village & P.O.
Karkala Taluk, Udupi Dist. -574 110,
Karnataka



Dated: 07-12-2015

Subject: Accreditation status of program applied by NMAM Institute of Technology, Nitte Village & P.O., Karkala Taluk, Udupi Dist. -574 110, Karnataka.

Sir,

This has reference to your application dated 04.01.2013 seeking accreditation of National Board of Accreditation for Masters in Business Administration program offered by your Institute.

2. An Expert Team conducted an on-site evaluation of the program during 9th to 11th October, 2015. Report of the Expert Team was considered by the concerned Committees constituted for the purpose in NBA. The competent authority in NBA has approved the accreditation status to the following program as given in the table below:

Sl. No.	Name of the Program	Basis of Evaluation	Accreditation Status	Period of validity w.e.f. 01.07.2015	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1.	Master in Business Administration	November 2012 format	Provisionally Accredited	2 years	Accreditation status granted is valid for the period indicated in col.5 or till the program has the approval of the competent authority, whichever is earlier

3. It may be noted that only students who graduate during the validity period of accreditation, will be deemed to have graduated with an NBA accredited degree.

4. The accreditation status awarded to the program as indicated in the above Table does not imply that the accreditation has been granted to NMAM Institute of Technology, Nitte Village & P.O., Karkala Taluk, Udupi Dist. -574 110, Karnataka as a whole. As such the Institution should nowhere along with its name including on its letter head etc. write that it is accredited by NBA because it is program accreditation and not Institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously. Complete name of the program accredited, level of program and the period of validity of accreditation, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

5. The accreditation status of the above program is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited program as indicated in the table in paragraph 2, appears on the website and information bulletin of your Institute.

6. The accreditation status awarded to the program as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.

Copy To
- Director JKSHIM
15/12/15

Signature

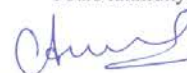
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7. Copies of the Comprehensive Report submitted by the Chairman of the Expert team along with the detailed report submitted by the Expert Team which visited your Institute for the program evaluated are enclosed for reference and to take necessary action to overcome the shortcomings, if any, pointed out by the Expert Team.

8. If the Institute is not satisfied with the decision of NBA, it may appeal within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,



(Dr. Anil Kumar Nassa)
Member Secretary

Encls: Copies of Comprehensive Report of Chairman and Expert Report of the Visiting Team.

Copy to:

1. Director of Technical Education
Tantrik Shikshak Bhavan,
Palace Road, Bangalore
560 001, Karnataka
2. Accreditation file
3. Master Accreditation file of the State

E.5: Accreditation by NBA**NATIONAL BOARD OF ACCREDITATION**

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg
Pragati Vihar, New Delhi-110 003
Tel: +91 11 2436 0619 – 22, 2436 0654 Telefax: +91 11 2436 0683



Dr. D.K. Paliwal
Member Secretary, NBA

F. No 25-88/2010/NBA

Date: 09-04-2012

To,

The Principal
NMAM Institute of Technology
Nithee Post
Nithee – 574 110
Karkala Taluk, Udupi District
Karnataka State.

Subject - Accreditation status of programmes offered by – NMAM Institute of Technology, Nithee Post, Nithee – 574 110, Karkala Taluk, Udupi District, Karnataka.

Dear Sir/ Madam,

This has reference to your application dated 18-08-2008 seeking accreditation of National Board of Accreditation to various programmes.

2. An Expert Committee conducted an on-site evaluation of the programmes. The report submitted by the Expert Committee was considered by the Engineering & Technology Accreditation Evaluation Committee (EAEC) for the concerned programmes. The Executive Committee (EC) of the National Board of Accreditation considered the recommendations of the Engineering & Technology Accreditation Evaluation Committee for the programmes on 15-03-2012. The Executive Committee has approved the accreditation status of the programmes applied by your institution which is as under:

S. No.	Name of the Programmes	Accreditation status	Period of validity w.e.f 15-03-2012
1.	BE Biotechnology	Accredited	5 Years
2.	BE Civil Engineering	Accredited	3 Years
3.	BE Electronics & Communication Engg	Accredited	3 Years
4.	BE Electrical & Electronics Engineering	Accredited	3 Years
5.	BE Mechanical Engineering	Accredited	3 Years

3. The accreditation status awarded to the programmes as indicated in the above paragraph does not imply that the accreditation has been granted to the NMAM Institute of Technology, Nithee Post, Nithee – 574 110, Karkala Taluk, Udupi District, Karnataka as a whole. The complete name of the programmes accredited, level of programmes (UG or PG as the case may be) and the period of validity of accreditation, as well as the date from which the accreditation is effective, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

D.K. Paliwal

Contd.. /-

-:2:-

4. The accreditation status of the above programmes is subject to change on periodic review by the NBA Secretariat if major deficiencies are noticed. It is desired to comply with the mandatory disclosure of pertinent information in respect of accredited programmes indicated in table in paragraph 2 above in proforma prescribed on the website of the National Board of Accreditation. The same information is also required to appear on the website and information bulletin of your institution.
5. The accreditation status awarded to the programmes as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.
6. A copy of the comprehensive Report submitted by the Chairman of the Expert Committee which visited your institution is enclosed for reference and taking necessary action to overcome the shortcomings, if any, observed by the Expert Team.
7. If the institution is not satisfied with the decision of NBA, appeal may be filed within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,

D.K. Paliwal

(Dr. D.K. Paliwal)
Member Secretary

Encl: Copy of Report of Chairman of the Visiting Team

Copy to:

1. The Vice Chancellor
Visvesvaraya Technological University
"Jnana Sangama", Belgaum - 590018,
Karnataka State
2. The Principal Secretary,
Dept. of Higher & Technical Education
Govt. of Karnataka
K.G.S., 6th Floor, M.S. Building, R. No. 645,
Dr. B.R. Ambedkar Road,
Bangalore - 560 001
3. The Director,
Directorate of Technical Education,
Govt. of Karnataka, Palace Road,
Bangalore - 560 001
4. Member Secretary,
AICTE, Chandralok Building, Janpath,
New Delhi.
5. Accreditation File
6. Master accreditation file of the State

E.6: Format of Calendar of academic activities for Academic Year 2016-17**NMAM INSTITUTE OF TECHNOLOGY**

(An Autonomous Institution affiliated to VTU, Belagavi)

(ISO 9001:2008 Certified)

Nitte – 574110, Karkala, Udupi District, Karnataka, India



☎: 08258 – 281039 (O)

(EPBAX) 281263, 281461, 281248, 281349, 281462

Fax: 08258 – 281265

Date: 8-7-2016

ACADEMIC CALENDAR for B.E. 2016 – 2017 - ODD Semester

S.No.	Event	I, III, V, VII Semester B.E.
1	REOPENING OF ODD SEMESTER	July 28, 2016
2	Registration of Courses	July 28 - August 1, 2016
3	Commencement of Classes	August 1, 2016
4	MSE I	September 7 - 9, 2016
5	Last day for dropping the course	September 21, 2016
6	MSE II	October 17 - 19, 2016
7	Last day for withdrawal	November 2, 2016
8	Additional MSE	November 3 - 5, 2016
9	Last Working Day	November 16, 2016
10	Practical Examination	November 21 - 29, 2016
11	Theory Examination	November 30 - December 19, 2016
12	REOPENING OF EVEN SEMESTER *	December 28, 2016
13	Registration of Courses	December 28, 2016 - January 2, 2017
14	Announcement of Result	December 31, 2016
15	Commencement of classes	January 2, 2017
16	Last Date for applying for Revaluation	January 2, 2017
17	Last Date for registration of Make up Examination	January 3, 2017
18	DUGC Valuation & Paper Seeing	January 10, 2017
19	Revaluation Result	January 14, 2017
20	Make up Examination	January 20 - 28, 2017
21	Announcement of Make up Result	February 10, 2017
22	Last Working Day of Even Semester	April 17, 2017

* Reopening may be advanced by 10 days for Final Year students based on internship opportunities.

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CONTROLLER OF EXAMINATIONSSd/-
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*Dpl-

email: coe.nmamit@nitte.edu.in



NMAM INSTITUTE OF TECHNOLOGY

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Nitte – 574110, Karkala, Udupi District, Karnataka, India



☎: 08258 – 281039 (O)

(EPBAX) 281263, 281461, 281248, 281349, 281462

Fax: 08258 – 281265

Date: 9-12-2016

ACADEMIC CALENDAR for B.E. 2016 – 2017 - Even Semester

S.No.	Event	II, IV, VI, VIII Semester B.E.
1	REOPENING OF EVEN SEMESTER	December 28, 2016
2	Registration of courses	Dec. 28, 2016 – Jan. 2, 2017
3	Commencement of classes	January 2, 2017
4	MSE I	February 6 - 8, 2017
5	Last day for dropping the course	February 18, 2017
6	MSE II	March 20 - 22, 2017
7	Last day for withdrawal	April 1, 2017
8	Additional MSE	April 3 - 5, 2017
9	Project Exhibition (Final Year)	April 7, 2017
10	Last Working Day	April 18, 2017
11	Practical Examination / Project Viva voce	On or before April 26, 2017
12	Theory Examination	April 27 - May 15, 2017
13	Vacation Break	May 15 - July 27, 2017
14	Announcement of Result	May 23, 2017
15	Supplementary Semester (7 th and 8 th Sem. Lab with exam)	May 11 - 20, 2017
16	Supplementary Semester	May 24 - June 30, 2017
17	Last Date for Registration of Make up Examination / Supplementary Semester	May 25, 2017
18	Last date for applying for Revaluation	May 26, 2017
19	Commencement of Supplementary Semester Classes	May 26, 2017
20	DUGC Valuation & Paper seeing	June 3, 2017
21	Revaluation Result	June 8, 2017
22	Make up / Supplementary Examination	Theory July 1 - 20, 2017 Lab July 19 - 24, 2017
23	Reopening of ODD Semester (2017-2018)	July 28, 2017
24	Registration of Courses	July 28 - August 1, 2017
25	Commencement of Classes	August 1, 2017

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*Dp/-

email: coe.nmamit@nitte.edu.in

E.7: MSE Time table for Academic Year 2016-17

NMAM Institute of Technology, Nitte
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(ISO 9001:2008 Certified)
Nitte – 574110, Karkala, Udupi District, Karnataka, India

**FIRST YEAR B.E.****Time Table – MID SEMESTER EXAMINATION – I & II - ODD Semester 2016 - 17 - (I - Semester)**

Date: 8.7.2016

MSE - I	MSE - II	Time	A,B,C,D,E,F & G Sections	H,I,J,K,L,M,N & P Sections
7 - 9 - 2016	17 - 10 - 2016	10.30 – 11.30	16EC112 (BE)	16EE105 (BEE)
		2.10 – 3.10	16MA101 (MATHS)	16CV103 (ECE)
8 - 9 - 2016	18 - 10 - 2016	10.30 – 11.30	16CS111 (CCP)	16MA101 (MATHS)
		12.00 – 2.15	16CV113 (ENVIRON)	
		2.15 – 4.30		16HU107 (CIPE)
9 - 9 - 2016	19 - 10 - 2016	10.30 – 11.30	16CY110 (CHEMISTRY)	16PH102 (PHYSICS)
		2.10 – 3.10	16HU114 (ENGLISH)	16ME104 (EME)

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Nitte – 574110, Karkala, Udupi District, Karnataka, India

**Time Table – MID SEMESTER EXAMINATION – I & II - ODD Semester 2016 - 17 - (III & V Semester)**

Date: 8.7.2016

MSE - I	MSE - II	III Semester B.E.		V Semester B.E.	
		Time	Course Code	Time	Course Code
7 - 9 - 2016	17 - 10 - 2016	9.15 – 10.15	301	10.30 – 11.30	501
		1.00 – 2.00	302	2.10 – 3.10	502
8 - 9 - 2016	18 - 10 - 2016	9.15 – 10.15	303	10.30 – 11.30	503
		1.00 – 2.00	304	2.10 – 3.10	504
9 - 9 - 2016	19 - 10 - 2016	9.15 – 10.15	305	10.30 – 11.30	505
		1.00 – 2.00	306	2.10 – 3.10	51X

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Time Table – MID SEMESTER EXAMINATION – I & II - ODD Semester 2016 - 17 - (VII Semester – B.E.)

Date: 8.7.2016

MSE - I	MSE - II	Time	Course Code
7 - 9 - 2016	17 - 10 - 2016	11.45 – 12.45	701
		3.20 – 4.20	702
8 - 9 - 2016	18 - 10 - 2016	11.45 – 12.45	703
		3.20 – 4.20	704
9 - 9 - 2016	19 - 10 - 2016	11.45 – 12.45	71X
		3.20 – 4.20	72X

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Nitte – 574110, Karkala, Udupi District, Karnataka, India



I Semester – P.G. - M.Tech. / MCA

Time Table – Continuous Internal Evaluation I to VI – Odd Semester 2016 - 17 - 9.00 a.m. – 10.50 a.m.

Date: 1.9.2016

Date	M.Tech. CCT	M.Tech. CST	M.Tech. ESE	M.Tech. MMD	M.Tech. EPE	M.Tech. DEC	M.Tech. VDE	M.Tech. CSE	M.Tech. CNE	MCA
20-9-2016										
4-10-2016	16CCT101	16CST101	16ESE101	16MMD101	16EPE101	16DEC101	16VDE101	16CSE101	16CNE101	16MCA101
18-10-2016	16CCT102	16CST102	16ESE102	16MMD102	16EPE102	16DEC102	16VDE102	16CSE102	16CNE102	16MCA102
8-11-2016	16CCT103	16CST103	16ESE103	16MMD103	16EPE103	16DEC103	16VDE103	16CSE103	16CNE103	16MCA103
22-11-2016										
6-12-2016										
27-9-2016										
14-10-2016	16CCT111	16CST111	16ESE111/		16EPE112					
25-10-2016	16CCT122	16CST124	16ESE116	16MMD111	16EPE104	16DEC113	16VDE111	16CSE115	16CNE111	16MCA104
15-11-2016	16CCT104	16CST104	16ESE123/	16MMD123	16EPE105	16DEC124	16VDE121	16CSE126	16CNE121	16MCA105
29-11-2016			16ESE125							
13-12-2016										

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NMAM Institute of Technology, Nitte
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(ISO 9001:2008 Certified)
Nitte – 574110, Karkala, Udupi District, Karnataka, India



FIRST YEAR B.E.

Time Table – MID SEMESTER EXAMINATION – I & II - EVEN Semester 2016 - 17 - (II - Semester)

Date: 9.12.2016

MSE - I	MSE - II	Time	A,B,C,D,E,F & G Sections	H,I,J,K,L,M,N & P Sections
6 - 2 - 2017	20 - 3 - 2017	10.30 – 11.30	16EE105 (BEE)	16EC112 (BE)
		2.10 – 3.10	16CV103 (ECE)	16MA201 (MATHS)
7 - 2 - 2017	21 - 3 - 2017	10.30 – 11.30	16MA201 (MATHS)	16CS111 (CCP)
		12.00 – 2.15	16HU107 (CIPE)	-----
		2.15 – 4.30	-----	16CV113 (ENVIRON)
8 - 2 - 2017	22 - 3 - 2017	10.30 – 11.30	16PH102 (PHYSICS)	16CY110 (CHEMISTRY)
		2.10 – 3.10	16ME104 (EME)	16HU114 (ENGLISH)

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NMAM Institute of Technology, Nitte
(An Autonomous Institution affiliated to VTU, Belagavi)
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Nitte – 574110, Karkala, Udupi District, Karnataka, India



Time Table – MID SEMESTER EXAMINATION – I & II - EVEN Semester 2016 - 17 - (IV & VI Semester)

Date: 9.12.2016

MSE - I	MSE - II	IV Semester B.E.		VI Semester B.E.	
		Time	Course Code	Time	Course Code
6 - 2 - 2017	20 - 3 - 2017	9.15 – 10.15	401	10.30 – 11.30	601
		1.00 – 2.00	402	2.10 – 3.10	602
7 - 2 - 2017	21 - 3 - 2017	9.15 – 10.15	403	10.30 – 11.30	603
		1.00 – 2.00	404	2.10 – 3.10	604
8 - 2 - 2017	22 - 3 - 2017	9.15 – 10.15	405	10.30 – 11.30	61X
		1.00 – 2.00	406	2.10 – 3.10	62X

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Nitte – 574110, Karkala, Udupi District, Karnataka, India



Time Table – MID SEMESTER EXAMINATION – I & II - EVEN Semester 2016 - 17 - (VIII Semester – B.E.)

Date: 9.12.2016

MSE - I	MSE - II	Time	Course Code
7 - 2 - 2017	21 - 3 - 2017	11.45 a.m. – 12.45 p.m.	801
		3.20 p.m. – 4.20 p.m.	81X
8 - 2 - 2017	22 - 3 - 2017	11.45 a.m. – 12.45 p.m.	82X
		3.20 p.m. – 4.20 p.m.	Open Elective

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Nitte – 574110, Karkala, Udupi District, Karnataka, India



II Semester – M.Tech.

Time Table – Continuous Internal Evaluation I to VI – Even Semester 2016 - 17 - 9.00 a.m. – 9.55 a.m.

Date: 9.12.2016

Course Code	16__201	16__202	16__203	16__21X	16__22X	16__204
CIE Test - I	6-2-2017	8-2-2017	10-2-2017	13-2-2017	15-2-2017	17-2-2017
CIE Test - II	20-2-2017	22-2-2017	24-2-2017	27-2-2017	1-3-2017	3-3-2017
CIE Test - III	6-3-2017	8-3-2017	10-3-2017	13-3-2017	15-3-2017	17-3-2017
CIE Test - IV	20-3-2017	22-3-2017	24-3-2017	27-3-2017	30-3-2017	31-3-2017
CIE Test - V	3-4-2017	5-4-2017	7-4-2017	10-4-2017	12-4-2017	15-4-2017
CIE Test - VI	17-4-2017	19-4-2017	21-4-2017	24-4-2017	26-4-2017	28-4-2017

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Controller of Examinations

Sd/-
PRINCIPAL

E.8: SEE Time table for Academic Year 2016-17

NMAM Institute of Technology, Nitte
(An Autonomous Institution affiliated to VTU, Belagavi)
(ISO 9001:2008 Certified)
Nitte – 574110, Karkala, Udupi District, Karnataka, India

**Time Table : SEMESTER END EXAMINATIONS – December 2016 - I, III, V & VII Semesters - B.E.****9.15 a.m. – 12.15 p.m. & 1.00 p.m. – 4.00 p.m.**

Date: 8.7.2016

Date	Day	9.15 a.m. – 12.15 p.m.		1.00 p.m. – 4.00 p.m.	
		I Sem	VII Sem	III Sem	V Sem
30 – 11 – 2016	Wednesday	16MA101			501
1 – 12 – 2016	Thursday		701	301	
2 – 12 – 2016	Friday	16CY110 / 16HU107 (Online)			502
5 – 12 – 2016	Monday	16CV103	702	302	
6 – 12 – 2016	Tuesday	16CS111			503
7 – 12 – 2016	Wednesday	16ME104	703	303	
8 – 12 – 2016	Thursday	16EC112			504
9 – 12 – 2016	Friday	16EE105	704	304	
10 – 12 – 2016	Saturday	16CV113 (Online)			
13 – 12 – 2016	Tuesday	16PH102 / 16HU114			505
14 – 12 – 2016	Wednesday		71X	305	
15 – 12 – 2016	Thursday				51X
16 – 12 – 2016	Friday		72X	306	
19 – 12 – 2016	Monday			MATDIP301	

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NMAM Institute of Technology, Nitte
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**Time Table – SEMESTER END EXAMINATION – January 2017 - I Semester – P.G. - 1.00 P.M. – 4.00 P.M.**

Date: 15.9.2016

Date	M.Tech. CCT	M.Tech. CST	M.Tech. ESE	M.Tech. MMD	M.Tech. EPE	M.Tech. DEC	M.Tech. VDE	M.Tech. CSE	M.Tech. CNE	MBA	MCA
30.12.2016	16CCT101 Quantitative Methods in Construction	16CST101 Computational Structural Mechanics	16ESE101 Alternative Energy Systems	16MMD101 Dynamics & Mechanism Design	16EPE101 Applied Mathematics	16DEC101 Advanced Embedded Systems	16VDE101 Advanced Embedded Systems	16CSE101 Parallel Computing Architecture	16CNE101 Wireless Networks	16MBA11 Individuals & Organization	16MCA101 Unix Concepts & Programming
2.1.2017	16CCT102 Construction Planning and Control	16CST102 Advanced Design of RCC Structures	16ESE102 Applied Numerical Analysis	16MMD102 Finite Element Methods	16EPE102 Power Semiconductor Devices	16DEC102 Advanced Signal Processing	16VDE102 CMOS VLSI Design	16CSE102 Advanced Algorithms	16CNE102 Cryptography and Network Security	16MBA12 Managerial Economics	16MCA102 Object Oriented Programming with C++
4.1.2017	16CCT103 Advances in Construction Materials	16CST103 Mechanics of Deformable Bodies	16ESE103 Combustion Engineering	16MMD103 Theory of Elasticity and Plasticity	16EPE103 Advanced Control Systems	16DEC103 Advanced Digital Communication	16VDE103 VLSI Design Verification	16CSE103 Wireless Networks	16CNE103 Network Programming	16MBA13 Business Statistics	16MCA103 Data Structures
6.1.2017	16CCT111 Repair & Restoration of Structures	16CST111 Repair & Restoration of Structures	16ESE111 Wind Energy Conversion Systems 16ESE116 / 16EPE104 Solid State Power Controllers	16MMD111 Experimental Stress Analysis	16EPE116 / 16EPE104 Solid State Power Controllers	16DEC113 Optical Communication & Networking	16VDE111 Modelling of Digital Systems Using VHDL	16CSE115 VLSI & CAD	16CNE111 Cloud Infrastructure & Services	16MBA14 Financial Accounting	16MCA104 Discrete Mathematical Structures
9.1.2017	16CCT122 Pavement Design and Construction	16CST124 Green Building Design	16ESE123 Advanced IC Engines 16ESE125 / 16EPE105 Switched Mode Power Supply	16MMD123 Mechatronics System Design	16EPE125 / 16EPE105 Switched Mode Power Supply	16DEC124 RF & Microwave Design	16VDE121 Advanced Digital System Design	16CSE126 Cellular Networks	16CNE121 Web Technologies	16MBA15 Marketing Management	16MCA105 Professional Communication & Ethics
11.1.2017	16CCT104 Organizational Behaviour	16CST104 Structural Dynamics	-----	-----	16EPE112 Soft Computing	-----	-----	-----	-----	16MBA16 Business Law & Practice	-----

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DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

Time Table - SEMESTER END EXAMINATION - November - December 2016 - (III & V - Semester) - 1.00 p.m. – 4.00 p.m.

Date: 21.9.2016

Date / Time	III Semester - MCA	V Semester - MCA
30 - 11 - 2016	-----	14MCA501 – Object Oriented Analysis and Design
1 - 12 - 2016	15MCA301 – .Net Framework and C# 15MCA202 – Database Systems	-----
2 - 12 - 2016	-----	14MCA502 – Web 2.0 and Rich Internet Applications
5 - 12 - 2016	15MCA302 – Operating Systems	-----
6 - 12 - 2016	-----	14MCA503 – Software Practice and Testing 13MCA503 – Design and Analysis of Algorithms
7 - 12 - 2016	15MCA303 – Data Communication and Computer Networks	-----
8 - 12 - 2016	-----	14MCA511 – Data Mining
9 - 12 - 2016	15MCA304 – Management Information Systems	-----
13 - 12 - 2016	-----	14MCA521 – Cloud Computing
14 - 12 - 2016	15MCA312 – Systems Software	-----

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TENTATIVE

DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATIONS

Time Table – SEMESTER END EXAMINATION – November 2016 - (III - Semester)

Date: 1.8.2016

Date / Time	1.00 P.M. – 4.00 P.M.	
18 - 11 - 2016	15MBA31	Management Accounting and Control Systems
21 - 11 - 2016	15MBA32	Entrepreneurial Development
23 - 11 - 2016	15MBAMM313	Consumer Behaviour
	15MBAFM321	Advanced Financial Management
	15MBAHR331	Global Human Resource Management
	15MBABF341	Banking Theory and Practice
	15MBAIT352	E – Business
25 - 11 - 2016	15MBAMM314	Integrated Marketing Communications
	15MBAFM322	Project Management
	15MBAHR332	Interpersonal and Group Processes
	15MBABF342	Insurance Products and Services
	15MBAIT353	Business Analysis
28 - 11 - 2016	15MBAMM311	Industrial Marketing
	15MBAFM323	Portfolio Management
	15MBAHR333	Compensation Management
30 - 11 - 2016	15MBAMM312	Sales and Channel Management
	15MBAFM324	Financial Markets and Services
	15MBAHR334	Industrial Legislations

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Time Table : SEMESTER END EXAMINATIONS – April - May 2017 - II, IV, VI & VIII Semesters - B.E.

9.15 a.m. – 12.15 p.m. & 1.00 p.m. – 4.00 p.m.

Date: 9.12.2016

Date	Day	9.15 a.m. – 12.15 p.m.		1.00 p.m. – 4.00 p.m.	
		II Sem	VIII Sem	IV Sem	VI Sem
27-4-2017	Thursday	16MA201		CS41X	601
28-4-2017	Friday		801	401	
2-5-2017	Tuesday	16PH102			602
3-5-2017	Wednesday	16CY110	81X	402	
4-5-2017	Thursday	16CV103			603
5-5-2017	Friday	16CS111	82X	403	
6-5-2017	Saturday	16ME104			604
8-5-2017	Monday	16EC112	OPEN ELECTIVE	404	
9-5-2017	Tuesday				61X
10-5-2017	Wednesday	16EE105	CV802	405	
11-5-2017	Thursday	16HU114 / 16HU107 (Online)			62X
12-5-2017	Friday	16CV113 (Online)		406	
15-5-2017	Monday			MATDIP401	

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Time Table : MAKE UP / SUPPLEMENTARY EXAMINATIONS – July 2017 - I, II, III, IV, V, VI, VII & VIII Semesters - B.E.

9.15 a.m. – 12.15 p.m. & 1.00 p.m. – 4.00 p.m.

Date: 9.12.2016

Date	Day	9.15 a.m. – 12.15 p.m.			1.00 p.m. – 4.00 p.m.			
		I / II Sem	V Sem	VI Sem	III Sem	VII Sem	IV Sem	VIII Sem
1 – 7 – 2017	Saturday	MATDIP301						
3 – 7 – 2017	Monday	16MA101	501		301	701		
4 – 7 – 2017	Tuesday	16PH102		601			401	801
5 – 7 – 2017	Wednesday	16CY110	502		302	702		
6 – 7 – 2017	Thursday	16CV103		602			402	81X
7 – 7 – 2017	Friday	16CS111	503		303	703		
10 – 7 – 2017	Monday	16ME104		603			403	82X
11 – 7 – 2017	Tuesday	16EC112	504		304	704		
12 – 7 – 2017	Wednesday	16EE105		604			404	OPEN ELECTIVE
13 – 7 – 2017	Thursday	16HU114	505		305	71X		
14 – 7 – 2017	Friday	16MA201		61X			405	CV802
17 – 7 – 2017	Monday		51X		306	72X		
18 – 7 – 2017	Tuesday			62X			406	
19 – 7 – 2017	Wednesday	MATDIP401			CS31X			
20 – 7 – 2017	Thursday						CS41X	

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E.9: Research Papers of Dr. Krishna Shenai during 2016**Journal Papers Published:**

- K. Shenai, A. Jhunjhunwala and P. K. Kaur, “Using solar DC microgrids,” *IEEE Power Electronics Magazine*, pp. 42-48, Dec. 2016 (invited paper).
- K. Shenai, “WBG power converters for hybrid & EV applications,” *AutoTechReview*, vol. 5, issue 12, pp. 42-46, Dec. 2016 (invited paper).
- K. Shenai, S. Bekal and K. Sankaran, “Developin India – Role of engineering education,” submitted to *ASEE J. Advances in Engineering Education* (under consideration).

Papers Published in Conference Digests:

- K. Varghese, K. Sankaran and K. Shenai, “Green energy for a sustainable economy,” *Proc. 2nd Int. Conf. Inclusive Economic Growth and Sustainable Development (SDMIMD)*, Nov. 18-19, 2016, Mysuru, India, ISBN 978-93-83302-18-5, pp. 1-7.
- K. Shenai, S. Bekal and K. Sankaran, “Transforming engineering education in India,” accepted for publication in *Proc. Fourth Int. Conf. Transformations in Engineering Education (ICTIEE)*, Jan. 6-7, 2016, Hyderabad, India.
- K. Shenai, “Advanced power converters for increased energy efficiency in microgrids,” in *Proc. First IEEE Int. Conf. Sustainable Green Buildings and Communities (SGBC)*, IITM Research Park, Chennai, India, Dec. 18-20, 2016 (invited paper) – to be published on *IEEE Xplore Digital Library*.

E.10: Researchers of Eminence Interacted with Teachers and Students

Sl. No	Event/ Organized By	Guest Lecture	Topic	Duration / Date
1	KSCST Guest Lecture Series 2011 by Phoenix, Students' Association of Biotechnology	Dr. K. R. Sridhar, Professor, Mangalore University.	Microbial Polysaccharides and Applications	27 th August 2011
2	Technical talk / Biotechnology	P. K. Sinha, Head Brewer, United Breweries, Mangalore	Technological Aspects of Brewing Industry	12th March 2013
3	Technical talk / Biotechnology	Mr. Ritesh Chiplunkar, Section Head, United Breweries, Mangalore	Problem solving in Brewing industry	12th March 2013
4	A Lecture on Stem Cells and its applications by Phoenix - Students' Association of Biotechnology Department	Dr. NS Raviraja, Senior Principal Scientist - Business Development at Stempeutics Research Pvt. Ltd., Manipal	Recent field in Biomedicine – Stem cells	28 th September, 2013
5	Lecture Series / Phoenix, Students' Association of Biotechnology and IE(I) Biotechnology Students' Chapter of NMAMIT	Mr. Raghu, Vice President, Schrodinger Inc., USA	Success stories of drug designing using Computational Biology tools	29 th December 2014
6	Lecture Series / Institute of Engineers, Biotechnology Engineering Chapter	Dr. S. Santosh Kumar, Head, Free Radical Biology Section, Radiation Biology & Health Sciences Division, BARC, Trombay, Mumbai	Nrf-2: its role in radio-protection, radio-resistance and inflammation	25 th March 2015
7	A technical talk / IE(I) Students' Chapter of Biotechnology in association with Wenamitaa, Alumni association of NMAMIT	Mr. Lakshmeesha Upadhyaya (Alumnus BTE – 2009 batch), Erasmus Mundus Doctoral Fellow, University of Montpellier, France	Fundamentals of membrane engineering, its application and advances including Project River Ganga	5 th August 2015
8	Technical talk / Biotechnology	Dr. Sandeep Prabhu, Professor, Dept. of Molecular Toxicology and Immunology, Penn	Endogenous Bioactive Lipids and their Role in Inflammation and	11th August 2016

		State University	Cancer	
9	Technical talk / Biotechnology	Dr. Santhosh Karanth, Assistant Professor, Dept. of PG studies and Research in Biotechnology and Bioinformatics, Kuvempu University, Shivamogga	Role, Significance and Applications of Bioinformatics in Biotechnology	19th September 2016
10	Technical talk / Biotechnology	Dr. Ajith Kamath, Assistant Professor, Dept. of Agada Tantra, Alva's Ayurvedic Medical College, Moodbidri	Farm to fork- Mysteries within	19th September 2016
11	Technical talk / E&E	Dr. Krishna Shenai, Ph.D. President, LoPel Corporation	Next generation Telecom system opportunities and challenges	31/12/2015
12	NCAEE-13 / E&E	Mr. D T Barki, NEST Hyderabad, Nobel green awardee.	Renewable energy application	12-04-2013
13	Technical talk in FDP / E&E	Dr. R Thirumalaivasan VIT, Vellore	Mathematic modeling of UPFC and IPFC	23-07-2014
14	Technical talk in FDP / E&E	Dr. M Janaki , VIT, Vellore	Modelling of VSC, based HVDC	23-07-2014
15	Full bright scholar visit	Dr. Tung-Zong (Donald) Chang, Professor of Marketing from Metropolitan State University, of Denver, USA	Visited Department of MBA participated in FDP on research methodology.	Nov 2012 – Dec 2012
16	MBA Department	Dr. Femida Handy, Professor, School of Social Science of Pennsylvania University	conducted research work on various subjects including Jasmine cultivation and culture	Dec 2013
17	Keynote address in the International Conference/ MBA Department	Dr. Satinder Dhiman, Associate Dean, Woodbury University, U.S.A	keynote address	29-30th Dec, 2014
18	ICPEDS- 2014	Dr. Sripad T Revankar, Professor of nuclear engineering, Purdue University, School of Nuclear Engineering, USA	Topic on power electronics and renewable energy. Fuel cell system engineering theory and modeling	10-11 April 2014
		Dr. Ashoka KS Bhat,	Role of power	

		Professor, Dept. of E&C Engg, University of Victoria Canada	electronics in alternative energy applications	
		Dr. B.G. Fernandes, Professor, Dept. of E&E Engg, IIT Mumbai	Power electronics and drives	
		Dr. Udaya Kumar RY, NITK Surathkal	V2G in smart grid environment	

- Niels De Vos, Dan Lambriht, Joseph Evin Fernades, Kaleb Keithley of Gluster FS Development had visited our Institution and conducted a workshop in MCA section
- Hinji Furusho, CEO, Turbo data lab, Jahir Husain , CEO, Metis consultancy services, Padmanabha, CEO, Sun Technologies had visited NMAMIT and conducted workshops and seminars.
- Surya Prabhakar, Paniraj Koppa, Divanshu Verma, Charles Rose of Dell India, had visited NMAMIT for conducting workshop.
- Dr. M.C Narasimhan, NITK Surathkal, Dr.V.Ramachandra, Ultratech Company Limited, Dr. Suresh S N, NITK Surathkal, Dr. K. S. Babunarayan and Rajendra Kalabhavi (during engineer's day techno week) visited Civil Engineering Department of the institution.
- Being a part of India Platform (based in Belgium) the institution organized two meetings (in 2015 and 2016) with faculty from Antwerp University, University of Hasselt, Ghent University, and from universities in Switzerland, Netherlands etc.

E.11: List of faculty who are on the review panel of various International Journals

- **Dr. Sudesh Bekal – Mechanical**
 - Energy (Elsevier)
 - Arabian Journal Science &Tech(Springer)
 - Scientific Research & Essays (Academic Journal)
 - Green Processing and synthesis (DeGreeytern)
 - Tribology International (Elsevier)
 - International Journal of Ambient Energy (Taylor & Francis)
- **Dr. K. V. SSSS Sairam – E&C**
 - IEEE Journal of light wave & Technology (IEEE)
 - International Journal of Microwave and optical Technology (-)
 - Ubiquitous computing and communication Journal (-)
- **Dr. Shivaprakasha K S- E&C**
 - Journal of Wireless Communication and Mobile Computing (John Wiley & Sons)
 - Journal of Cogent Engineering (Taylor and Francis)
 - Journal of Wireless Networks (Springer)
- **Dr. Vidya – BT**
 - Medicinal Chemistry Research (Springer)
 - Natural products Research (Taylor & Francis)
 - British Journal of Pharmaceutical Research (Science domain International)
 - African Journal of Biotechnology (Academic journals)
 - The Scientific World Journal (Hindawi)
 - Advances in Pharmaceutics (Hindawi)
 - Biotechnology Reports (Elsevier)
 - Pharmaceutical Biology (Taylor and Francis)
 - Journal of Radiation Research and Applied Sciences (Elsevier)
- **Dr. Vaman Rao-BT**
 - Environmental Engineering and Management Journal (Technical University of Lasi, Romania)
 - Annual Review & Research in Biology (Science Domain International publication)
 - Bioremediation Journal (Taylor & Francis)
 - Toxin Reviews (Elsevier)
 - Waste and Biomass Valorization (Elsevier)
 - Biomass Conversion and Biorefinery (Elsevier)
 - Human and Experimental Toxicology (Sage publication)
 - China, Chemosphere (Elsevier)
 - Journal of Nanoparticle Research (Springer)
 - South African Journal of Science (Springer)
 - Medicinal Chemistry Research (Springer)
 - Biofuels (Taylor & Francis)
- **Dr. Bharth- BT**
 - Medicinal Chemistry Research (Springer)
 - STAR (Wollega publisher)
- **Dr. Sinivasa Pai - Mechanical**
 - Journal of Bio and Tribo-Corrosion(Springer)
 - Journal of STEM Education: Innovations and Research(JSTEM. ISSN: 1557-5284)

- o Mechanical Systems & Signal Processing(Elsevier)
- o International Journal of Computer Integrated Manufacturing(Taylor & Francis)
- o Measurement, Journal of the International Measurement Confederation (IMEKO)(Elsevier)
- **Dr. Nagesh Prabhu- E&E Engg**
 - o International Journal of Power and Energy Systems (Elsevier)
 - o International Journal of Electric Power System Research (Elsevier)
 - o Ain Shams Engineering Journal (Elsevier)
 - o IEEE Transactions on Power Delivery (IEEE)
 - o IEEE Transactions on Power Systems (IEEE)
 - o International journal of IET – Generation Transmission & Distribution
 - o Journal of Power Electronics, Korea
 - o International Journal of control, Singapore
 - o International Journal of Mechanical Systems and Signal Processing (Elsevier)
- **Dr. Uaya Kumar G. - Civil Engg**
 - o Journal of The Institution of Engineers (India): Series A.(Springer)
 - o Journal of Computational Water, Energy, and Environmental Engineering (CWEEE)(Editorial Board and Scientific Research Publishing)
- **Dr. Akshatha Shetty – Civil Engg**
 - o International Journal of Constructive Research in Civil Engineering(Academicians’ Research Centre (A centre for quality, education and research excellence)
- **Dr. Neelima B. - CSE**
 - o Cluster Computing The Journal of Networks, Software Tools and Applications (Springer)
 - o Concurrency and Computation: Practice & Experience (John Wiley & Sons Ltd)
 - o Program committee member, 14th International Symposium on Parallel and Distributed Computing, held in Limassol, Cyprus, 29th June – 2nd July 2015
 - o Organizing member of the 29th IEEE International Parallel & Distributed Processing Symposium to be held during May 25-29, 2015 at Hyderabad, INDIA (www.ipdps.org)
 - o Organizing member of annual IEEE International Conference on High Performance Computing (HiPC), India Since 2012 to till date. (www.hipc.org)
- **Dr.D.K.Sreekantha - CSE**
 - o International Journal of Uncertainty, Fuzziness and Knowledgebase Systems (World Scientific Publishing)
 - o Applied Soft Computing International Journal (World Federation on Soft Computing and Applied Soft Computing of Elsevier Publications USA)
 - o Member of Editorial Board of International Journal of Engineering Science Invention Research & Development, MPACT FACTOR=2.215 index by Google Scholar, Acadmia.edu, Cite Factor and Research Gate
- **Dr. Mohammed Javed- CSE**
 - o Editorial Board Member- Journal of Control Science and Engineering, David Publishing, USA
- **Dr. Balasubramani R – ISE**
 - o International Invention Journal of Engineering Science and Technology (IJEST)(International Invention Journals)

- o International Research Journal of Computer Science and Information Systems (IRJCSIS)(International Research Journals, New Jersey, USA)
- o National Journal of System and Information Technology (NJSIT)(Shrimad Rajchandra Institute of Management and Computer Applications, Surat, Gujarat)
- o International Journal of Embedded Systems (IJES)(Inderscience Publishers, UK)
- **Dr. Mallikappa – (Mechanical)**
 - o British Journal of Applied Science Technology (BJAST - Science domain international)
 - o AsiaPacific Journal of Chemical Engineering (Wiley online library -Asia Pacific Journal)
- **Dr. K. Sankaran(MBA)**
 - o International Marketing Review Business and Law Journal of Consumer Marketing Anveshana Anzmac
- **Dr. Vanishree Joseph(MBA)**
 - o Indian Journal of Public Administration
 - o Singapore Journal of Tropical Geography
 - o International Journal of Public Policy
- **Mr. Krishna Prasad(MBA)**
 - o Procedia Economics and Finance

E.12: Placement details for 2015-16, 2016-17**Placement details for the year 2016-17 as on 01-03-2017**

Sl. No.	Company Name	No. of positions offered
1	VMware	05 (2 for internship)
2	Oracle Cloud Services	10
3	Siemens Technology & Services Pvt. Ltd.	06
4	Analytics Quotient	05
5	Odessa Technologies	04
6	Nutanix (selected for internship)	01
7	Infosys Limited	217
8	Wipro Technologies	75
9	Accenture	221
10	Aavishk	2 internship
11	Sony India	09
12	Seagate Technologies (for M.Tech)	-
13	Robosoft Technologies	25
14	Global Delight Technologies	-
15	MindTree	-
16	Ymedia Labs	12
17	Societe Generale Global Solution Center	-
18	Techjini	01
19	HP Enterprise India	07
20	Indian Navy	-
21	Robert Bosch	13
22	Amazon	-
23	99 Games Online Pvt .Ltd.	04
24	Juego Studio	-
25	IBM GBS	21
26	Mangalore infotech	
27	ACT (Atria Convergence Technologies)	02
28	Walmart Labs	04 (2 for internship)
29	Promac Engineering Industries Limited	02
30	FACE (Focus Academy for Career Enhancement)	08 (1 for internship)
31	Summit Technodyne	02
32	EMC	06
33	Accord Software & Systems	05
34	SLV Construction	01
35	Laurus Infosystems (Internship)	01 (Internship)
36	Toyota Kirloskar Motor Private Limited	Results awaited
37	Almanaratain	Results awaited
38	SmartDV	02
39	L&T Technologies	12
40	Anglo Eastern	53
	TOTAL	727+9 internship

Placement details for the year 2015-16

Sl.No.	Company Name	No. of positions offered
1	Crowdfire	-
2	Allegion India Private Limited	06
3	VMware	08
4	Informatica	05
5	Global Delight Technologies	03
6	Robosoft Technologies	24
7	Maventic (Internship)	01
8	Laurus Infosystems (India) Pvt. Ltd.	05
9	Walmart Global Technology Services	-
10	Sony India	08
11	Indian Navy	01
12	DELL R&D	06
13	Infosys Technologies	269
14	Wipro Technologies	22
15	Accenture	105
16	MindTree	07
17	UST Global	03
18	Span Infotech	25
19	Accord Software	08
20	PEOL Technologies	-
21	Techjini	02
22	Persistent Systems	-
23	Oracle Cloud Services	15
24	Polycab Wires	01
25	IBM India	-
26	L&T Infotech	01
27	Trivium	02
28	Tech Mahindra	14
29	Manipal Group (Zeta Cyber)	-
30	Seventh Sense	01
31	DELL Sonicwall Security (Internship)	04
32	Anthem Bioscience Private Limited	02
33	Aavishk (Internship)	02
34	Karmic Semiconductor	05
35	Intech DMLS	05
36	IMS Health	-
37	MuSigma	-
38	Wipro GIS (Internship)	01
39	Cadence	-
40	Juego Studio	01
41	Societe Generale Global Solution Center	03
42	HP	03
43	Cognizant	01
44	Alpha 9 Marine Services	08
45	Mangalore Infotech	01
46	IQSS	03

47	Teach for India	01
48	SAP Labs	05
49	Anglo Eastern	01
50	Toyota Kirloskar Motor Private Ltd.	11
51	Pinaca Information Solutions	06
52	Pinacle Imaging & Media Services	08
53	Indyago, Bangalore	02
54	Sunplus Solutions, Bangalore	02
55	Red Hat	01
56	Next Novity	03
57	Exabit Solutions, Udupi	07
58	Semnox Solutions	03
59	Robert Bosch	06
60	FACE (Focus Academy for Career Enhancement)	01
61	Ninestars Information Technologies Ltd.	04
62	TCS	01
63	Firmnxt	-
64	HP Enterprise India Sales Pvt. Ltd.	-
65	Sonata Software	-
66	Amazon	-
67	PRDC	-
68	PBS (Harsha Group) Pvt. Ltd.	-
69	Manhattan Associates	-
70	TDPS	02
71	Bosch Limited	05
72	LM Wind Power	02
73	Krisam Automation	02
74	TVS Group (Dealers of Ashok Leyland & Renault India Ltd)	01
75	Trigent Software	01
76	Hexmoto Controls Pvt. Ltd.	02
77	Seagate Technology HDD (India) Pvt. Ltd.	01
78	Mectongroup	03
	TOTAL	663

E.13: Sports, Games and Cultural Achievements.**Achievements of Sports and Games for the Year 2015 – 2016**

1. The college women team won the Championship Trophy in the VTU Inter Collegiate Mangaluru Zone and Third place in Inter Zone Badminton tournament conducted by NMAM Institute of Technology, Nitte from 22nd to 28th August 2015.
2. The college men team won the Runner Up Trophy in the VTU Inter Collegiate Mangaluru Zone Badminton tournament conducted by NMAM Institute of Technology, Nitte from 22nd to 23rd August 2015.
3. The college men Chess team won the Runner Up Trophy in the VTU Inter Collegiate Rest of Bangalore Zone Chess competitions conducted at SJM Institute of Technology, Chitradurga from 30th August to 5th September 2015.
4. The college women Table Tennis team secured the Championship Trophy in the VTU Inter Collegiate Mangaluru Zone Table Tennis competitions' conducted by SD Institute of Technology, Mangaluru on 7th and 8th September 2015.
5. The college men Yogasana team won the Runner Up Trophy in the VTU Inter Collegiate Yogasana competitions conducted at GIT, Balagavi on 19th and 20th September 2015. The women Yogasana team won the 4th place in this competition.
6. Mr. Sweekar Shetty, Ms. Rakshith K.G., Ms. Sowmya S.M. and Mr. Mohd. Riyas P.T., students of NMAMIT secured the VTU Cash awards which was conducted at VTU Regional Centre, Doddaballapur for participation of successive 2 years All India Inter University competitions in Hand Ball, Cross Country and Athletics in the year 2014 and 2015.
7. The following Basket Ball players of NMAMIT represented VTU team and participated in the South Zone Inter University Basket Ball women competitions conducted at SRM University, Chennai from 25th to 29th September 2015.
 1. Ms. Lavanya B.P. - 1st year, MBA
 2. Ms. Salma Belliappa A., - 1st year, MBA
 3. Ms. Maduri K., - 1st year, MBA
8. Mr. Anirudh Bhat, IV Sem, C.S. has participated in the South Zone Inter University Badminton Men competitions which was conducted at SRM University, Chennai from 1st to 5th October 2015.
9. Ms. Rakshith K.G., Mr. Harshavardhan and Mr. Sudheer Kotian students of NMAMIT were selected to VTU Cross Country team for participation of All India Inter University Cross Country Championship which will be conducted at Alva's Education Foundation, Moodabidri on 10th and 11th October 2015.
10. College Wrestling and Judo men teams won the 3rd place and fourth place respectively in the VTU Inter Collegiate Judo and Wrestling competitions conducted at MVJ College of Engg., Bangalore on 19th and 20th October 2015.
11. VTU Inter Collegiate Weight lifting, Power lifting and Best physique competitions held at Global Academy of Technology, Bangalore, from 29th to 31st October 2015. The team consists of 14 members has won over all championship with 54 points and won the team Championship in the Weight Lifting and Power Lifting competitions. The Best Physique men team also won the 3rd position in the competition. The team achieved this for 11th time with 07 gold, 05 silver and 04 bronze medals. The Weight Lifting team has won the Championship with 17 points.
 - i. Mr. Nithin Kumar M. Naik VII Sem Mech, has secured **"BEST LIFTER"** Title.
 - ii. The Power Lifting team has won the championship with 30 points.
 - iii. Mr. Lalithraj K.M V Sem E&C has created new meet record in squat with 156 kgs and also secured **"STRONG MAN"** title.

- iv. Mr. Sohil S. Anchan III Sem, E&E has created new meet record in Bench Press with 115 kgs.
12. College Basket Ball men team won the Championship Trophy and women team won the Runner Up trophies in the Yen Cup Inter Collegiate invitational Basket Ball competitions conducted by Yenepoya University, Mangaluru from 19th to 21st November 2015.
13. The following students of our college represented VTU team and participated in the All India Inter University Weight Lifting and Power Lifting competitions conducted at Acharaya Nagarjuna University, Guntur (AP) from 11th to 14th January 2016.
- | | | |
|----------------------------|---|--------------------------------|
| 1. Mr. Nithin Kumar Naik | – | Weight Lifting & Power Lifting |
| 2. Mr. Sohil S. Anchan | – | Weight Lifting & Power Lifting |
| 3. Mr. Lalithraj K.M. | – | Power Lifting |
| 4. Mr. Prajwal Syam Shetty | – | Power Lifting |
| 5. T. Kumaraswamy | – | Power Lifting |
14. The following Soft Ball players of NMAMIT represented VTU team and participated in the All India Inter University Soft Ball women competitions conducted at Lovely Professional University, Punjab from 5th to 10th February 2016.
- | | | |
|--------------------------|---|----------------------------|
| 1. Ms. Ashwija G. Shetty | – | 4 th sem, E & C |
| 2. Ms. Vandana Nayak | – | 4 th sem, CS |
15. College Basket Ball team women won the Championship trophy in the Udupi District Inter Collegiate Basket Ball competitions conducted at Manipal on 10th February 2016.
16. Ms. Prathima, VI Sem, IS represented VTU Volley Ball team and participated in South Zone Inter University Volley Ball Women Competitions conducted at Krishna University, Machali Patna from 10th to 15th February 2016.
17. The 30th College Annual Sports Day was held on 15th January 2016 at NET Campus Athletics Ground, Nitte. Sri Ashok Adyanthaya, Vice President, Udupi Dist. Athletic Association was the Chief Guest and inaugurated Meet. Dr. Niranjan Chiplunkar, Principal NMAMIT, Nitte presided over the function.

Individual Championship in Athletics

In Men section: -

1. Mr. Sudeer Kotian	–	IV Sem, Civil	-	10 points
2. Mr. Riyas Mohd.	–	VI Sem, Civil	-	10 points
3. Mr. Vignesh Shenoy	–	IV Sem, Civil	-	10 points
4. Mr. Susheel	–	VI Sem, Civil	-	10 points

In Women Section:

1. Ms. Rakshith K.G.	–	VIII Sem, B.T	-	15 points

18. College Volley Ball Women team won the Runner Up Trophies in both Rest of Bangaluru Zone and Inter Zone Competitions conducted at GSSS Inst. Of Technology for Women, Mysuru, & Acharya IT, Bangaluru from 22nd February to 25th February 2016
19. The following teams of NMAMIT secured the prizes in the Nitte Kreedotsava 2016, an Inter-collegiate game competitions conducted by Nitte Gulabi Shetty Memorial Pharmaceutical Sciences, Deralakatte, Mangaluru on 23rd and 24th February 2016.
- | | | |
|-----------------------|---|---------|
| 1) Badminton Women | - | Winners |
| 2) Table Tennis Men | - | Winners |
| 3) Table Tennis Women | - | Winners |

4) Basket Ball Men	-	Winners
5) Basket Ball Women	-	Winners
6) Throw Ball Women	-	Runners
7) Tennis Men	-	Runners
8) Badminton Staff Men doubles	-	Winners
(Mr. Akshay & Mr.Roshan – Department of Civil Engg.)		
9) Badminton Staff Women doubles	-	Winners
(Mrs. Akshatha Shetty, Civil & Ms. Chinmay Shetty, I.S)		
10) Table Tennis Staff Singles	-	Winners
(Mr. Ganesh Poojary, Phy. Edu. Dept.)		
11) Table Tennis Staff Singles	-	Runners
(Mrs. Keerthana, CS Dept.)		
20. College Volley Ball men team won the Runner Up Trophy in the Yen Cup Volley Ball tournament conducted by Yenepoya University, Deralakatte, Mangaluru from 17th to 20th February 2016.
 21. College Kho Kho men team won the 4th position in the VTU Inter Collegiate Mangaluru Zone Kho Kho competitions conducted at SIT, Valachil, Mangaluru on 3rd March 2016.
 22. College Cross Country men team won the Championship Trophy in the VTU Inter Collegiate Cross Country men competitions conducted at Dr. TT Institute of Technology, KGF, Kolar on 5th and 6th March 2016. **Mr. Sudeer S. Kotian, IV Sem, Civil and Mr. Harshavardhan K., VI Sem, Civil** selected to participate in the All India Inter University Cross Country competition 2016-17.
 23. College Cross Country women team won the 3rd place in the VTU Inter Collegiate Cross Country competitions conducted at Dr. TT Institute of Technology, KGF, Kolar on 5th and 6th March 2016. **Ms. Rakshith K.G., VIII Sem, Bio Tech.,** selected to participate in the All India Inter University Cross Country competition for the year 2016-17.
 24. Ms. Rakshith K.G., VIII Sem, Bio.Tech. has secured 1st place with a timings of 26.12 min., and also won **Individual Champion** in the VTU Inter Collegiate Cross Country women competitions conducted at Dr. TT Institute of Technology, KGF, Kolar on 5th and 6th March 2016.
 25. College Men Hand Ball team won the Championship Trophy in the VTU Mangaluru Zone Hand Ball competitions conducted at NMAMIT, Nitte on 15th and 16th March 2016 and also won the 4th position in the VTU Inter Zone hand ball competitions conducted at JNN College of Engg., Shivamogga.
 26. College Athletic Men team won the Championship Trophy in the VTU Inter Collegiate Athletic competitions conducted at Sir M.V. Institute of Technology, Bangaluru from 23rd to 27th March 2016. College women athletic team won the 2nd runner up and march past team secured the 1st runner up in the tournament.
 27. Ms. Rakshith K.G., VIII Sem, Bio Technology has secured the gold medals in 5,000 mts run, 10,000 mts run (created a new meet record with a timing of 44.36.12 min.,) and Half marathon run (New meet Record with a timing of 1 hr. 44.22 sec.,) in the VTU Inter Collegiate Athletic competitions conducted at Sir M.V. Institute of Technology, Bangaluru from 23rd to 27th March 2016.
 28. College Staff cricket men team won the Championship Trophy in the Karavali Staff Inter Collegiate Cricket tournament conducted by NMAM Institute of Technology, Nitte from 8th April to 23rd April 2016.

Achievements of Sports and Games for the Year 2014-15

SL No	Discipline	Number of students participated	Level of Competitions			Total Medals won		
			National	State/ VTU	District/ Zonal/ Division	Gold	Silver	Bronze
1	Chess (M)	6	-	VTU	Zonal – Runner up	-	-	-
2	Chess (W)	5	-	VTU		Participation		
3	Discuss Throw(M)	1	-	-	District	1	-	-
4	Cross County (M&W)	5	National	-	-	Participation		
5	Athletics(M)	1	National	-	-	Participation		
6	Judo(M)	1	National	-	-	Participation		
7	Table Tennis W)	5			Zonal	Participation		
8	Chess(M)	5	-	-	Champion/ Zonal	-	-	-
9	Table Tennis (M)	5	-	-	Champion/ Zonal	-	-	-
10	Yogasana (M)	6	-	II-Runner up/VTU	-	-	5	-
11	WL, PL (M)	13	-	Champion /VTU	-	6	5	4
12	Judo(M)	12	-	Champion /VTU	-	2	3	3
13	Wrestling (M)	14	-	Runner up/VTU	-	1	3	3
14	Badminton (M)	5	-	-	Champion /Zonal	-	-	-
15	Badminton(W)	5	-	-	Champion /Zonal	-	-	-
16	Athletics (M&W)	24	-	Champion /VTU	-	15	7	4
17	Cross Country (M)	9	-	Champion /VTU	-	9	-	-
18	Cross Country (W)	6	-	3 rd place - VTU	-	-	-	-
Total Participants		128			Total Medals won	34	23	14

Staff Achievements of Sports and Games for the Year 2014-15

SL No	Discipline	Number of participants	Level of Competitions			Total Medals won		
			National	State/VTU	District/Zonal / Division	Gold	Silver	Bronze
1	Power Lifting (W)	1	-	State	-	-	1	-
2	Badminton (W) single	1	-	-	-	1	-	-
3	Badminton (W)	4	-	-	Nitte Kreedostava	-	1	-
4	Table Tennis (W)	3	-	-	Nitte Kreedostava	-	1	-
5	Table Tennis (M)	1	-	-	Nitte Kreedostava	1	-	-
6	Table Tennis (M)	1	-	-	Karavali Staff Tournament	-	1	-
7	Cricket (M)	16			District	16		
Total		27	-	-		18	4	-
Mr. Ganesh Poojary -1. Participation in Prajna value orientation programme for College lecturers conducted at Ramakrishna Matt, Mangalore								
2. Presented a Scientific paper titled "Comparison of three different parameters of Physical Fitness conducted between college long distance runners, Basketball players and weight lifters/power lifters" at the International conference on "Health Related Physical Fitness and Wellness" conducted at Poornaprajna College, Udupi on 22 nd and 23 rd August 2014.								

E.14: UGC approval letter

UGC autonomous review committee's recommendations and its compliance:

REPORT
OF
EXPERT COMMITTEE

FOR

CONFERMENT OF AUTONOMOUS STATUS

TO

NMAM INSTITUTE OF TECHNOLOGY, NITTE
(KARNATAKA)

**UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI**

REPORT OF THE EXPERTS COMMITTEE FOR THE CONFERMENT OF
AUTONOMOUS STATUS TO:

NMAM Institute of Technology, NITTE-574110 (Karnataka)

DATE OF VISIT TO THE COLLEGE: 6th to 7th October, 2008

Name of the College/Address/Pin code/Fax	Date of the visit	Venue	Grant of fresh Autonomous Status
NMAM Institute of Technology, NITTE, Karkala Taluk, UDUPI-574 110	6 th and 7 th October, 2008	NMAM Institute of Technology, NITTE, Karkala Taluk, UDUPI-574 110	Yes

(Name of the affiliating University) to Which the College concerned is affiliated to:

Visvesvaraya Technological University (VTU), Belgaum
Karnataka State
(Copy of the Notification enclosed as Annexure-I)



Names of the Expert Visiting Committee Members and UGC Officer present:

1. Prof.R.P.Kaushik,
Former Professor J.N.U, Delhi
G-19/19,
DLF.Phase-I,
Gurgaon-120022 (Haryana)
Mobile No.9810091311
2. Prof. Ranjit Singh
Director,
Netaji Subhas Institute of Technology
Sector-3,Dwarka
New Delhi-110045
Mobile No. 9868280019
3. Prof .S.K. Jain
Dean, Faculty of science
Jamia Hamdard
New Delhi-110062
Mobile No. 9818608273
4. Dr. Shakeel Ahmad
Deputy Secretary
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi-110002
Mobile No. 9717974038

1. Name of the Principal; Dr. S. Y. Kulkarni

2. a. Year in which the College was Established 1986

Mission: The mission of the Institute is to develop as a Centre of Excellence by imparting Quality Education to generate competent, skilled and humane manpower to face emerging scientific, technological, managerial and social challenges with credibility, integrity, ethics and social concern.

b. Date when the College was declared fit under Section 2(f) and 12(B) of UGC Act 1956 (attach a copy of UGC letter in this regard).

The College has been declared fit only under Section 2(f) of the UGC Act 1956 on 5th May, 2008 (A copy of the UGC letter enclosed as Annexure-II).



3. College applied for

Fresh Autonomous Status

4. Category under which the college falls as per XI Plan guidelines.

It is a Co-education Institute and is being run on self-financing basis. It was established in 1986 and therefore, it has completed the requirement of 10 years as per the UGC Norms.

5. Type of College

Engineering

(I) Infrastructure Facilities available with appropriate covered area in sq. feet.

(a) Class Room 43, 200 Sq. ft.

(b) Laboratories 52, 500 Sq. ft.

(c) Library 21,000 Sq. ft.

(d) Hostels (Men and Women Separately) - Boys – 960 Girls – 680
(Three and Two bedded rooms for both boys & girls)

(e) Others like: Administrative block / Principals office / Staff room / Common room/ Canteen / Sports facilities (indoor) / Auditorium etc. – Enclosed Annexure- III

(f) Total (buildings) covered area in Sq. ft. 5, 59, 500 Sq. ft

(g) Total land area owned by the college in its name: 102.12 Acres

Don't sign 880
R.P. Pooe

(II) Academic Activities (wherever required, annexures be annexed for giving details)

Sl. No.	Name of the College	Total No. of teaching Staff Strength				Total No. of Research Publications/ Project during the last 5 years		Total No. of Conferences /Seminar /Symposim during the last 5 years		NAAC
		Ph. D	M. Phill/ M.Tech	Ot her	To tal	Rese arch Publication	Project	Atte nde d	Con ducted	
1.	NMAM INSTITUTE OF TECHNOLOGY, NITTE, KARKALA TALUK, UDUPI – 574 110	Enclosed Annexure-IV				110	Completed – 16 On-going – 20 Sponsored Research Project – 18 Details enclosed as Annexure-V	241	64	All the undergraduate programmes have been accredited by the National Board of Accreditation. (NBA)

6. Whether the committee is satisfied with the present mode of the teaching method adopted by the college, Yes/No (Specific comments in details may be given as to the shortcomings observed if any).

Yes, the Committee is satisfied with the present mode and method of teaching adopted by the College. The College is having all the required teaching aids like audio-visual equipments, overhead projectors, LCD Projectors, DVD writers, interactive smart boards etc. The College has a good library having a collection of over 57867 volumes and 21143 titles as well as subscription for over 169 technical journals (Indian - 102 and International - 67). The digital library subscription is 240 e-journals through INDEST. The other facilities are such as e-campus, wireless connectivity, Wi Fi campus and campus wide networking over 1100 state of the art computers, 110 laptop, internet connection of 8 mbps leased line. Apart from this, seminars, symposia and workshops are organized to supplement class room teaching. Group discussions are also held on regular basis. (A list of seminars/workshops organized in the last three years is enclosed as Annexure-VI).

Don't list 


7. Academic achievements of the students during the last 5 years in detail such as various ranks obtained by its students in the University's Exams.

The details of the academic achievements of the students during the last 5 years have been enclosed as Annexure-VII.

8. Whether the committee is satisfied with the type of courses being offered by the college, Yes/No (specific comments in details with regard to any particular course may given/withdrawn as the case may be).

Yes, the Committee is satisfied with the type of courses offered by the College. At present, the College is having Undergraduate Programmes in Civil Engineering, Mechanical Engineering, Electronics & Communication Engineering, Electrical and Electronics Engineering, Computer Science & Engineering, Information Science & Engineering and Biotechnology; Post graduate Programmes in MCA, MBA, M.Tech. in Digital Electronics & Communication, M.Tech in Computer Science & Engineering, M.Tech. in Microelectronics and Control Systems- University PG Centre, M.Tech. in Energy Systems Engineering and Part-time (QIP) M.Tech. Programme in EC and C.Sc. Environment Engineering. In addition, the College also offers Ph.D. Programme in five disciplines such as Electronics and Communication Engineering, Computer Science and Engineering, Electrical and Electronic Engineering, Mechanical Engineering and Management Students.

9. Whether all the Teachers are in favour of getting autonomous status to the college, Yes/No (give reasons in detail as to whether the Committee interacted with the teachers separately so as to ascertain their views for and against, if any)

Yes, the committee interacted with the teachers separately to know their views if the College gets autonomy. All the teachers unanimously agreed for the grant of autonomy to the College. It was found that there was complete awareness among the teachers on the subject. Therefore, there was overwhelming response in favour of autonomy to the College.

10. Any other information which the Committee feel will help UGC in taking decision to grant autonomy or continuation of autonomous status to this college:

NMAM Institute of Technology was founded in 1986 in memory of Nitte Mahalinga Adyanthaya, a distinguished engineer of the district. The Institute is located at NET Campus at Nitte, 53 kilometers from Mangalore. The campus has a sprawling area of over 100 acres of land. It has good infrastructure and experienced teachers.

Handwritten signatures:
 1. *Santhosh*
 2. *R. P. Rao*

All graduate programmes of the Institute have been accredited by the National Board of Accreditation (NBA).

This institution secured ISO 9001-2000 certification for quality education. KEMA Netherlands is the certifying agency.

The Institution has been recognized as the "Lead Institution" under MHRD – TEQIP Scheme along with NITK, Surathkal. This enables institution to avail funding upto 20 crores from World Bank to develop infrastructure, specialized centres of excellence etc.

The Institution has the collaboration with the following:

Collaboration with Bedfordshire University, UK

- Faculty and student exchange programme
- Collaborative research programmes.

Collaboration with University of Pennsylvania (UPEN), USA

- Faculty and student exchange programmes
- Collaborative research programmes

Collaborative research programme with Nanyang Technological University, Singapore.

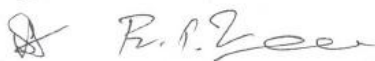
(III) Examinations Reforms

- (a) Whether the committee is satisfied with the present mode of the examination being conducted by the college? Any specific method of evaluation which the committee would like to suggest to them may be indicated.

Yes, the Committee is satisfied with the present mode of examination being conducted by the College. All courses are offered in the semester system as per the regulations of the affiliating University. The syllabi of the courses have been revised as per the norms of the regulating agencies. Evaluation is done through Continuous Internal Examination (CIE) and Semester End Examination (SEE) with equal weightages.

- (b) Interaction with students/Teachers/Non teaching staff, give specific comments in detail for such interaction undertaken.

The Committee interacted with the students, teachers and non-teaching staff.

Interaction with the students.

The Committee asked the students whether they are aware about the benefits of autonomy to the College and if they are in favour of autonomy. There was overwhelming response from the students and all were unanimously in favour of autonomy to the College. The Committee also tried to know their problems in the Campus. Some of the good suggestions such as internet facility in the hostel and improvement in the food served in the hostel were made by the students and the same were conveyed to the authorities of the College. College authorities agreed to take necessary initiatives in these areas.

Interaction with the teachers:

The Committee interacted with the teachers and tried to know their opinion about the Institute. The Committee asked the teachers if they were satisfied with the College authorities in providing them proper scale of pay as per rules and other facilities. The Committee members also apprised the teachers of the benefits of autonomy to the College and also asked the teachers if they have any doubt regarding autonomy and asked for any suggestion from their side. The response of the teachers was in favour of autonomy and all teachers supported granting autonomy to the College.

Interaction with the non-teaching staff:

The Committee interacted with the non-teaching staff of the Institute. The Committee members asked the staff what benefits they are going to get or otherwise what they are going to lose if the College gets autonomy. It was observed that all the non-teaching staff members were satisfied with the College authorities and they supported the step of granting autonomy to the College.

(IV) Administrative Activities (for review of Autonomous Status College only)

Not applicable

(V) Financial utilization of UGC funds : specific comments be given:-
(give details of Autonomy Grant/General Development grant, if any received by the college for the last five years separately.)

Not applicable

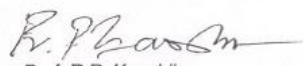
Sanjiv Singh

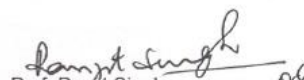
B. L. J.

(VI) Recommendations of the Committee

Based on the observations brought out in the Report and verification of physical infrastructure available in various departments/central common facilities in the College and on the basis of the interaction of the Committee with the students, teachers and non-teaching staff of the college, the Committee unanimously recommends Autonomous Status to be conferred to NMAM Institute of Technology, Nitte, Udupi District, Karnataka for a period of six years with effect from the academic year 2009-10 to 2014-15 as per the norms laid down in the 11th Plan Guidelines of the University Grants Commission on Autonomous Colleges.

SIGNATURE OF THE EXPERS WITH THEIR FULL NAMES:


Prof. R.P. Kaushik
Chairman 7/10/08


Prof. Ranjit Singh
Member 7-10-08


7/10/08
Prof. S.K. Jain
Member


7-10-2008
Dr. Shakeel Ahmad
Member Secretary

10

Madras, Chennai, (7) Bharathidasan University, Tiruchirappalli (8) Dr. H.S. Gaur University, Sagar and (9) Jiwaji University Gwalior respectively.

The Commission considered the recommendations of the Expert Committee and agreed for conferment of fresh autonomous status to ten colleges and extension of autonomous status to six colleges as under:

S. NO.	Name of the College	Autonomy tenure approved by the Commission
FRESH AUTONOMOUS STATUS		
1.	National P.G. College, 2, Rana Pratap Marg, Lucknow, UP	2009-2010 to 2014-2015
2.	Pt.LMS Govt. PG College, Rishikesh District Dehradun (Uttarakhand)	2008-2009 to 2013-2014
3.	NMAM Institute of Technology, Nitte, Dupi	2009-2010 to 2014-2015
4.	PDA College of Engineering, Gulbarga	2009-2010 to 2014-2015
5.	R.V. College of Engineering Bangalore	2007-2008 to 2012-2013
6.	Jamshedpur Women's College, Jamshedpur	2008-2009 to 2013-2014
7.	The Graduate School College for Women, Sakchi, Jamshedpur	Not recommended
8.	Ranchi College, Ranchi	2009-2010 to 2014-2015
9.	Marwari College, Ranchi	2009-2010 to 2014-2015
10.	College of Engineering, Amravati	2008-2009 to 2013-2014

EXTENSION OF AUTONOMY		
1	Women's Christian College, Chennai	2002-03 to 2007-2008 ex-post facto approval & further extension 2008-09 to 2013-14.
2	Stella Maris College, Chennai	2002-03 to 2007-08 ex-post-facto approval & further extension 2008-09 to 2013-14.
3	N.K. Thirumalachariar National College of Education for Women Chennai	2003-04 to 2007-08 ex-post facto approval & further extension from 2008-09 to 2013-2014.
4	A Veeriyar Vandayar Memorial Sri Pushpam College (Autonomous) Poondi, Thanjavur District, TN	2003-2004 to 2007-2008 ex-post-facto approval & further extension from 2008-09 to 2013-14.
5	Govt. (Autonomous) Girls PG College of Excellence, Sagar	2007-2008 ex-post-facto approval & further extension from 2008-09 to 2013-14.
6	Ambah Postgraduate College, Ambah, MP	2007-2008 ex-post-facto approval & further extension from 2008-09 to 2013-14.

Action : JS(CPP-I/AC)

E.15: Audited income and expenditure statement For Academic and Administrative Activities

AUDITOR'S REPORT

I have audited the attached Balance Sheet of "Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala", as at 31-03-2016 as also the Income and Expenditure Account for the year ended on that date annexed thereto. These financial statements are the responsibility of the management. My responsibility is to express an opinion on these financial statements based on my audit.

I have conducted my audit in accordance with the auditing standards generally accepted in India. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management as well as evaluating the overall financial statement presentation. I believe my audit provided a reasonable basis for my opinion. I report that:

1. I have obtained all the information and explanations which to the best of my knowledge and belief were necessary for the purpose of my audit.
2. The Balance Sheet and Income & Expenditure Account dealt by this Report are in agreement with the books of account.
3. In my opinion and to the best of my information and according to the explanations given to me, the accounts read together with the notes given thereon, give a true and fair view in conformity with the accounting principles generally accepted in India.

i. in the case of the Balance Sheet of the state of affairs of the "Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala", as at 31st March, 2016 and

ii. in the case of the Income and Expenditure Account of the Excess of Income over Expenditure of the "Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala", for the year ended 31st March, 2016.

Place: Mangalore
Date: 15.09.2016




M.R.Kamath
Chartered Accountant
Temple Square, Mangalore
Membership No. 10489

N.M.A.M. INSTITUTE OF TECHNOLOGY, NITTE



BALANCE SHEET AS ON 31.03.2016

	SCH	AS AT 31.03.2016		AS AT 31.03.2015	
		Rupees		Rupees	
SOURCES OF FUND					
CAPITAL GRANTS			2,27,66,813		2,27,66,813
EXCESS OF INCOME OVER EXPENDITURE			97,71,20,125		83,82,31,224
TOTAL			99,98,86,938		86,09,98,038
APPLICATION OF FUNDS					
FIXED ASSETS					
Gross Block	1	1,04,97,54,074		91,75,83,943	
Less: Depreciation		24,19,04,779		21,00,84,943	
Net Block			80,78,49,295		70,74,99,000
CURRENT ASSETS, LOANS AND ADVANCES					
Cash and bank balances		3,57,78,977		7,89,69,454	
Deposits with banks		2,81,99,305		4,23,65,149	
Other deposits		44,94,001		41,34,831	
Advance to suppliers-Capital		97,02,587		69,95,352	
Advance to suppliers-Others		5,12,091		1,53,186	
Loans, advances and receivables		1,14,62,484		1,20,86,096	
Fees receivable		4,09,67,622		40,84,491	
		13,11,17,067		14,87,88,579	
Less: CURRENT LIABILITIES AND PROVISIONS					
Sundry Creditors		25,35,503		40,78,362	
Liability for Expenses		72,75,236		56,49,963	
Other Liabilities		2,02,63,737		2,65,27,721	
Caution and other deposits		17,21,969		17,16,179	
Advance fees		72,81,280		1,93,37,960	
		3,90,77,725	9,20,39,342	5,73,10,185	9,14,78,394
NITTE EDUCATION TRUST			9,99,98,301		6,20,20,644
TOTAL			99,98,86,938		86,09,98,038

AS PER MY REPORT ATTACHED

For and on behalf of
N.M.A.M. Institute of Technology
NitteM. R Kamath, B. Com., F.C.A
Chartered AccountantPlace : Mangalore
Date: 15.09.2016

Principal

Principal
N.M.A.M. INSTITUTE OF TECHNOLOGY
NITTE - 574 110

N.M.A.M. INSTITUTE OF TECHNOLOGY, NITTE



INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDING 31.03.2016

	SCH	31.03.2016 Rupees	31.03.2015 Rupees
INCOME			
Fee collection		63,90,16,793	54,48,55,698
Bank interest		60,93,793	72,69,001
Other income		36,31,249	29,32,255
Research grants		87,00,133	1,56,34,708
Total Income		65,74,41,968	57,06,91,662
EXPENDITURE			
Employee Cost	2	27,80,40,860	24,45,00,127
Finance Charges		1,48,467	13,68,275
Operating and Administrative Cost	3	18,21,07,465	17,61,93,439
Research expenditure		88,65,857	1,57,41,886
Repairs and Maintenance	4	1,75,70,584	2,15,73,504
Depreciation		3,18,19,836	2,83,44,511
Total Expenditure		51,85,53,069	48,77,21,742
Surplus/(Deficit) Transferred to Balance Sheet		13,88,88,899	8,29,69,920

AS PER MY REPORT ATTACHED

For and on behalf of
N.M.A.M. Institute of Technology
Nitte

M. R Kamath, B. Com., F.C.A
Chartered Accountant

Place : Mangalore
Date: 15.09.2016



Principal

Principal
N.M.A.M. INSTITUTE OF TECHNOLOGY
NITTE - 574 110



N.M.A.M. INSTITUTE OF TECHNOLOGY, NITTE

NITTE

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDING 31.03.2015

	SCH	31.03.2015 Rupees	31.03.2014 Rupees
INCOME			
Fee collection		54,48,55,698	49,96,27,483
Bank interest		72,69,001	68,04,324
Other income		29,32,255	51,85,247
Research grants		1,56,34,708	1,22,64,871
Total Income		57,06,91,662	52,38,81,925
EXPENDITURE			
Employee Cost	2	24,45,00,127	19,55,50,959
Finance Charges		13,68,275	42,77,412
Operating and Administrative Cost	3	17,62,35,293	16,29,38,775
Research expenditure		1,57,41,886	1,42,77,467
Repairs and Maintenance	4	2,15,73,504	1,31,52,053
Depreciation		2,83,44,511	2,09,60,919
Total Expenditure		48,77,63,597	41,11,57,585
Surplus/(Deficit) Transferred to Balance Sheet		8,29,28,065	11,27,24,340

AS PER MY REPORT ATTACHED

For and on behalf of

N.M.A.M. Institute of Technology
NitteM. R Kamath, B. Com, F.C.A.
Chartered Accountant

Principal

Principal
N.M.A.M. INSTITUTE OF TECHNOLOGY
NITTE - 574 110

Place : Mangalore

Date : 31.08.2015

N.M.A.M. INSTITUTE OF TECHNOLOGY, NITTE

BALANCE SHEET AS ON 31.03.2015



	SCH	AS AT 31.03.2015		AS AT 31.03.2014	
		Rupees		Rupees	
SOURCES OF FUND					
CORPUS FUND					
CAPITAL GRANTS			2,27,66,813		2,18,07,833
LOAN FUNDS			-		4,24,24,522
EXPENDITURE			83,82,31,225		75,53,03,160
TOTAL			86,09,98,038		81,95,35,515
APPLICATION OF FUNDS					
FIXED ASSETS					
Gross Block	1	91,75,83,943		66,19,55,183	
Less: Depreciation		21,00,84,943		18,20,52,888	
Net Block			70,74,99,000		47,99,02,295
CAPITAL WORK IN PROGRESS					9,06,44,621
CURRENT ASSETS, LOANS AND ADVANCES					
Cash and bank balances		7,89,69,454		5,12,88,644	
Deposits with banks		4,23,65,149		5,19,26,253	
Other deposits		41,34,851		41,26,851	
Advance for suppliers-Capital		71,48,538		-	
Loans, advances and receivables		1,61,70,587		1,52,67,972	
		14,87,88,579		12,26,09,720	
Less: CURRENT LIABILITIES AND PROVISIONS					
Sundry Creditors		40,78,362		19,30,031	
Liability for Expenses		56,49,963		59,30,790	
Other Liabilities		2,65,27,721		2,97,66,133	
Caution and other deposits		17,16,179		-	
Advance fees		1,93,37,960		2,35,24,375	
		5,73,10,185	9,14,78,394	6,11,51,329	6,14,58,391
NITTE EDUCATION TRUST			6,20,20,644		18,75,30,208
TOTAL			86,09,98,038		81,95,35,515

AS PER MY REPORT ATTACHED

M. R Kamath, B. Com., F.C.A.
Chartered Accountant



Place : Mangalore
Date : 31.08.2015

For and on behalf of
N.M.A.M. Institute of Technology
Nitte

Principal

Principal
N.M.A.M. INSTITUTE OF TECHNOLOGY
NITTE - 574 110

M. R. KAMATH, B.Com., F.C.A.
CHARTERED ACCOUNTANT

PHONE : OFFICE : 2427182
RES. : 2456802
TEMPLE SQUARE
MANGALORE - 575 001

31
Date :

AUDITOR'S REPORT

I have audited the attached Balance Sheet of "Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala", as at 31-03-2014 as also the Income and Expenditure Account for the year ended on that date annexed thereto. These financial statements are the responsibility of the management. My responsibility is to express an opinion on these financial statements based on my audit.

I have conducted my audit in accordance with the auditing standards generally accepted in India. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management as well as evaluating the overall financial statement presentation. I believe my audit provided a reasonable basis for my opinion. I report that:

1. I have obtained all the information and explanations which to the best of my knowledge and belief were necessary for the purpose of my audit.
2. The Balance Sheet and Income & Expenditure Account dealt by this Report are in agreement with the books of account.
3. In my opinion and to the best of my information and according to the explanations given to me, the accounts read together with the notes given thereon, give a true and fair view in conformity with the accounting principles generally accepted in India.
 - i. in the case of the Balance Sheet of the state of affairs of the "Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala", as at 31st March, 2014 and
 - ii. in the case of the Income and Expenditure Account of the Excess of Income over Expenditure of the "Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala", for the year ended 31st March, 2014.

Place: Mangalore
Date: 07-08-2014


M.R.Kamath
Chartered Accountant



N. M. A. M. INSTITUTE OF TECHNOLOGY, NITTE.
BALANCE SHEET AS ON 31ST MARCH, 2014



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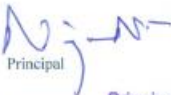
	SCH. NO.	₹	AS ON 31/03/2014 ₹	₹	AS ON 31/03/2013 ₹
SOURCES OF FUNDS					
TRUST FUND					
Surplus as per previous Balance Sheet		560560322		463422023	
Add: Excess of Income over Expenditure during the Year		111055251	671615573	97138299	560560322
GRANT – Capital			21807833		19449833
LOAN FUNDS					
Secured Loans from Banks			38824522		51740166
CURRENT AND OTHER LIABILITIES					
Sundry Creditors		1930031		4947692	
Liability for Expenses		5930790		6122724	
Other Liabilities		26097495		19239483	
Advance Fees		22245500		10305000	
Caution and other Deposits		1643199	57847015	1468449	42083348
TOTAL			790094943		673833669
APPLICATION OF FUNDS					
FIXED ASSETS					
Gross Block	I	623957796		555700170	
Less: Depreciation		170730061		151375409	
Net Block			453227735		404324761
Capital Work-In-Progress			90644621		61089929
CURRENT ASSETS, LOANS AND ADVANCES					
Cash and Cheques on Hand		73061		108907	
Bank Balances		48355097		32834522	
Deposits with Banks		51926253		1686075	
Sundry Deposits		3988351		3631981	
Advance to Suppliers – Others		3345422		2721307	
Sundry Advances and Receivables		9853370	117541554	8216092	49198884
Nitte Education Trust			128681033		159220095
TOTAL			790094943		673833669
Principal I certify that I have audited the books of account of N. M. A. M. Institute of Technology, NITTE for the Year 2013-14 and in my opinion and to the best of my information and according to the information given to me, the said Account read with notes thereon, give a true and fair view. Principal N.M.A.M. INSTITUTE OF TECHNOLOGY NITTE - 574 110 M.R.Kamath, B.Com., F.C.A. Chartered Accountant Place: Nitte Date: 07.08.2014					



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N. M. A. M. INSTITUTE OF TECHNOLOGY, NITTE.
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31ST MARCH, 2014

	SCH. NO.	FOR THE YEAR ENDED	
		31/03/2014 ₹	31/03/2013 ₹
INCOME			
Fee Collection		451796077	384296236
Bank Interest		6444793	4900403
Other Income		4593647	2886682
Other Grant		12264871	
Total Income		475099388	392083321
EXPENDITURE			
Employee Cost	2	176565313	148016258
Finance Charges		3581961	5289845
Operating and Administrative Cost	3	137572887	112083100
Research and Development		14277467	
Affiliation and Inspection Charges	4	151551	2368433
Repairs and Maintenance	5	12540306	10265718
Depreciation		19354652	16921668
Total Expenditure		364044137	294945022
Surplus transferred to Balance Sheet		111055251	97138299



Principal

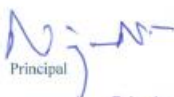


M.R.Kamath, B.Com., F.C.A.
Chartered Accountant

Place: Nitte
Date:07.08.2014

Principal

M.A.M. INSTITUTE OF TECHNOLOGY


Principal


M.R. Kamath, B.Com., F.C.A.
Chartered Accountant

Place: Nitte

Date: 07.08.2014

Principal
N.M.A.M. INSTITUTE OF TECHNOLOGY
NITTE - 574 110





M. R. KAMATH, B.COM., F.C.A.
CHARTERED ACCOUNTANT

PHONE : OFFICE : 2427182
RES. : 2456802

TEMPLE SQUARE
MANGALORE - 575 001

Date : 33.....

AUDITOR'S REPORT

I have audited the attached Balance Sheet of "**Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala**", as at 31-03-2013 as also the Income and Expenditure Account for the year ended on that date annexed thereto. These financial statements are the responsibility of the management. My responsibility is to express an opinion on these financial statements based on my audit.

I have conducted my audit in accordance with the auditing standards generally accepted in India. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management as well as evaluating the overall financial statement presentation. I believe my audit provided a reasonable basis for my opinion. I report that:

1. I have obtained all the information and explanations which to the best of my knowledge and belief were necessary for the purpose of my audit.
 2. The Balance Sheet and Income & Expenditure Account dealt by this Report are in agreement with the books of account.
 3. In my opinion and to the best of my information and according to the explanations given to me, the accounts read together with the notes given thereon, give a true and fair view in conformity with the accounting principles generally accepted in India.
- i. in the case of the Balance Sheet of the state of affairs of the "**Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala**", as at 31st March, 2013 and
 - ii. in the case of the Income and Expenditure Account of the Excess of Income over Expenditure of the "**Nitte Mahalinga Adyanthaya Memorial Institute of Technology, Nitte, Karkala**", for the year ended 31st March, 2013.

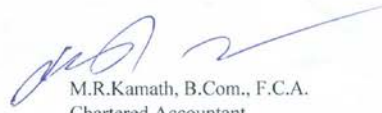
Place: Mangalore
Date: 31-08-2013


M.R. Kamath
Chartered Accountant

NITTE

N. M. A. M. INSTITUTE OF TECHNOLOGY, NITTE.
BALANCE SHEET AS AT 31ST MARCH, 2013

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	SCH. NO.	₹	AS AT 31/03/2013 ₹	₹	AS AT 31/03/2012 ₹
SOURCES OF FUNDS					
TRUST FUND					
Surplus as per previous Balance Sheet		463422023		391258589	
Add: Excess of Income over Expenditure during the Year		97138299	560560322	72163434	463422023
GRANT – Capital			19449833		16391831
LOAN FUNDS					
Secured Loans from Banks			51740166		63255536
CURRENT AND OTHER LIABILITIES					
Sundry Creditors		4947692		3121752	
Liability for Expenses		6122724		6261100	
Other Liabilities		19239483		8640980	
Advance Fees		10305000		3070000	
Caution and other Deposits		1468449	42083348	1285125	22378957
TOTAL			673833669		565448347
APPLICATION OF FUNDS					
FIXED ASSETS					
Gross Block	1	555700170		499392978	
Less: Depreciation		151375409	404324761	134453740	
Net Block					364939238
Capital Work-In-Progress			2227933		982562
CURRENT ASSETS, LOANS AND ADVANCES					
Cash and Cheques on Hand		108907		90022	
Bank Balances		32834522		34395826	
Deposits with Banks		1686075		41010575	
Sundry Deposits		3631981		3469331	
Advance to Suppliers – Capital		58861996		36747201	
Advance to Suppliers – Others		2721307		220284	
Sundry Advances and Receivables		8216092	108060880	8408135	124341374
Nitte Education Trust			159220095		75185173
TOTAL			673833669		565448347
 Principal N.M.A.M. INSTITUTE OF TECHNOLOGY NITTE - 574 110 I certify that I have audited the books of account of N. M. A. M. Institute of Technology, Nitte for the Year 2012-13 and in my opinion and to the best of my information and according to the information given to me, the said Account read with notes thereon, give a true and fair view.  M.R.Kamath, B.Com., F.C.A. Chartered Accountant Place: Nitte Date: 31.08.2013					



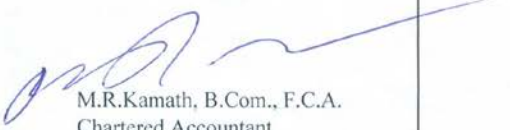
N. M. A. M. INSTITUTE OF TECHNOLOGY, NITTE.
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31ST MARCH, 2013

	SCH. NO.	FOR THE YEAR ENDED	
		31/03/2013 ₹	31/03/2012 ₹
INCOME			
Fee Collection	2	384296236	325660048
Bank Interest		4900403	3311957
Other Income		2886682	4857805
Total Income		392083321	333829810
EXPENDITURE			
Employee Cost	3	148016258	118773852
Finance Charges		5289845	7514119
Operating and Administrative Cost	4	112083100	109390912
Affiliation and Inspection Charges	5	2368433	2563421
Repairs and Maintenance	6	10265718	8160917
Loss on Sale of Vehicles			99972
Depreciation		16921668	15163183
Total Expenditure		294945022	261666376
Surplus transferred to Balance Sheet		97138299	72163434


 Principal
N.M.A.M. INSTITUTE OF TECHNOLOGY
NITTE - 574 110

Principal

Place: Nitte
 Date: 31.08.2013


 M.R. Kamath, B.Com., F.C.A.
 Chartered Accountant

