

## FOR

# 2<sup>nd</sup> CYCLE OF ACCREDITATION

# NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

POST BOX NO. 6429, YELAHANKA 560064 www.nmit.ac.in

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Submitted To

# NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

## BANGALORE

# June 2019

# **1. EXECUTIVE SUMMARY**

# **1.1 INTRODUCTION**

Nitte Meenakshi Institute of Technology(NMIT) was established in the year 2001 by Nitte Education Trust(NET). It is an Autonomous Institution affiliated to the Visvesvaraya Technological University(VTU), having approval by UGC under 2(f) and 12(B). It is accredited by the NAAC with Grade-A and National Board of Accreditation[NBA] under Tier-1 status(5 UG Programs) and . It is ranked 100 by National Institutional Ranking Framework(NIRF), Government of India–2018. NMIT is the youngest engineering college in the country to be conferred the prestigious Autonomous Status by UGC/Govt. of Karnataka, New-Delhi in the year 2007. It is the only unaided private engineering college in Karnataka State to be selected by the Govt. of India for World Bank Funding under TEQIP Phase II-Subcomponent 1.1 in the year 2011. It offers wide range of academic programs comprising of seven UG and eight PG programs in Engineering besides MBA and MCA.

Innovation and Entrepreneurship Development Centre was established in the year 2010 and funded with an amount of Rs.45 lakhs by the Department of Science and Technology(NSTEDB), New Delhi. Business Incubator is established with the support of MSME(Micro, Small and Medium Enterprises), Govt. of India. NMIT has established an Innovation Club supported by Visvesvaraya Technological University and Govt. of Karnataka with seed money of Rs. 5 Lakhs.

NMIT has several sponsored research projects amounting to Rs.12.83 Crores sanctioned by different reputed National Funding Agencies such as DST,DIT,ISRO,AICTE,DRDO Labs,VGST,IEEE,VTU,UNESCO-KSCST etc. The institute has established 6 multi-disciplinary Centers of Excellence(CoE) viz for Small Satellites, Robotics, Aerospace & IOT, Nanomaterials & MEMS, Computational Fluid Dynamics,Design Engineering & Process Simulation.It is recognised by ISRO as a Centre to undertake collaborative research on space technology and satellite development. It has led a consortium of 7 engineering colleges that designed and built STUDSAT-1, PICO category, launched by ISROs PSLV-C15 on 12th July 2010. This achievement is listed in the Limca book of records. The college has a ground station(NASTRAC) approved by ISRO to track the satellites, which has also been patented.

#### Vision

To provide India and the World, technical manpower of the highest academic excellence and World class by shaping our youth through holistic and integrated education of the highest quality.

#### Mission

To develop Nitte Meenakshi Institute of Technology through Quality, Innovative and State-of-art educational initiatives into a centre of academic excellence that will turn out youth with well balanced personality & commitment to rich cultural heritage of India and who will successfully face the Scientific and Technological challenges in the fast-evolving Global scenario with a high degree of credibility, integrity and ethical standards.

# **1.2 Strength, Weakness, Opportunity and Challenges(SWOC)**

### **Institutional Strength**

- Supportive management, committed faculty and staff members and motivated students.
- Strong focus on imparting quality Education, Research, Innovation and Promotion of Entrepreneurship.
- Youngest engineering college in country to be conferred the prestigious Autonomous Status by UGC, New Delhi in 2007.
- Accredited by NAAC for 5 years from 2014-15 with "A" Grade.
- NBA Accreditation of 6 UG Programs under Tier-1 scheme.
- Availability of highly qualified faculty comprising of 86 Ph.D holders, predominantly from IISc,IITs & NITs.
- 94 faculty members are pursuing Ph.D work in different Research Centers(RC) of NMIT and other Institutions of Eminence.
- Recognition of 11 Departments as RC by VTU, Belagavi as well as University of Mysore.
- Successful implementation of Out-come Based Education in UG and PG programs.
- Establishment of 6 Multi-Disciplinary Centres of Excellence in the field of Small Satellite Research, Robotics Research, Aerospace & IOT, Nanomaterials & MEMS, Computational Fluid Dynamics and Design Engineering & Process Simulation.
- Sponsored research Projects amounting to Rs.13.69 Crores sanctioned by reputed National Funding Agencies such as DST,DIT,AICTE,DRDO,VGST,IEEE,VTU etc.
- Innovation and Entrepreneurship Development Cell sponsored by DST and Business Incubator sponsored by MSME,Govt. of India are functioning in the institute.
- Active Collaboration with North Dakota State University, Fargo, USA, Indo-Korean Institute of Science & Technology, ISRO, IISc, NIT, Surathkal, Unisys, SUBEX Ltd., PTC, Dassault Systems, Universities of Indonesia, etc.
- Institute deputes UG/PG Students to reputed Industry/R&D Organizations for a minimum period of 6 weeks' Internship which qualifies for academic credits.
- Industry-Institute Interaction which has resulted in the placement of about 65% of the graduating students.
- Well maintained infrastructure for carrying out Curricular,Co-curricular and Extra-curricular activities including facilities for NCC/NSS/Rotract/Red Cross Society/Music Clubs/Sports/Cultural clubs etc.
- Well-equipped fully automated Library with adequate books and Journals as stipulated by AICTE/UGC requirements. Digital Library with subscription to e-Journals through VTU consortia and from Stanford,MIT,Berkeley,Purdue,NPTEL etc.
- Robust and scalable IT Infrastructure with 1700+computers, 400 Mbps(1:1) Internet connectivity with Wi-Fi.
- Facilities like Separate Girls, Boys Hostels for more than 1700 students with In-house Mess and also Quarters for the faculty members on the campus.
- Active participation of students in Co-curricular and extra-curricular activities at National and International Levels.

### **Institutional Weakness**

• Admissions based on certain State Government stipulations results in the admission of academically weak students.

- PG programs do not attract highly enthusiastic students.
- Ensuring financial viability of the Institution as the norms for admissions are regulated by the State Government.

### **Institutional Opportunity**

- To improve the quality of research through interaction with industries/ R&D organizations in and around Bangalore.
- Increasing interaction with reputed institutions by sharing resources and undertaking joint research projects.
- Strengthening interaction with Alumni to facilitate greater connection with the industries.
- Despite achieving placements more than 65% of the strength, institution is focusing on better placement with core companies.
- Creating training facilities to improve teaching capabilities of faculty members.
- Extending academic help to assist weaker students especially belonging to reserved community.
- Starting new P.G Programs in the emerging areas like Data Science, Aerospace Engineering etc.
- Accrediting a few non accredited eligible UG & PG Programs.

#### **Institutional Challenge**

- To enhance Faculty/ Student exchange programs with reputed National/ International Organizations.
- To offer placement for each and every student.
- To improve the interaction with reputed corporate sectors.
- To attract more research funding from DST/ DIT/ UGC/ AICTE/ DRDO/ ISRO etc.
- To attract GATE qualified students for PG programs.

## **1.3 CRITERIA WISE SUMMARY**

#### **Curricular Aspects**

- The curriculum is designed and developed based on the need of the hours considering the local/national/global trends. While developing an effective Program Curriculum the committees consider critical and innovative thinking skills among the students to enhance their employability.
- The program outcomes are defined as the statements that describe the student's expected ability on graduation as per the NBA. Program Specific Outcomes (PSO's) are defined by the department, which are supported by the curriculum and are unique to their department. The courses which form the curriculum are defined by its outcomes which are clear, observable, measurable statements which contribute to the assessment of program outcomes and program specific outcomes.
- All the 17 programmes have been revised within the last five years. The Minor Changes in the syllabus, which may include the addition of industry relevant topics, Introduction of new elective subjects, deletion of outdated topics, re-organizing the flow of topics etc. are carried out every year or whenever it is suggested by the stake holders. But Major Changes in Curriculum Structure/Scheme are carried out once in every three years. The adaptability of curriculum and implementation is according to the AICTE and VTU norms. Nearly 50% of the courses are revised within the last 5 years.
- Nearly 86% of the syllabus focuses on Employability/ Entrepreneurship/ Skill development. The

institute takes necessary steps to conduct numerous activities towards the same.

- Choice based Credit system is adopted as it gives a wide variety of choices for students to learn different core and multi-disciplinary subjects.
- The institution has introduced courses relevant Environment and Sustainability/Human Values/Professional from first year only.
- The institute offers a wider variety of value-added courses to the students to impart knowledge and skill. Nearly 74 courses were conducted within the last 5 years. Students are also encouraged to take MOOC-NPTEL courses.
- It has been made mandatory for the students to take up internship/field projects and it has been credited in the scheme.
- The feedback received from all the stakeholders are carefully analyzed, discussed and appropriate actions are initiated at departmental level as per the inputs from the Governing Council.

#### **Teaching-learning and Evaluation**

The admission of students in the institution is based on rules & regulations of Government of Karnataka. In the current academic year there are 294 students admitted from other states, 56 students from other countries and average number of students admitted from other states and other countries in the last five years is 24.99%. The demand ratio for the seats filled under CET quota is 1:141.57 and average percentage of seats filled against seats earmarked for reserved category is 90.07 in the last five years.

The institution is having effective methods to assess the learning levels of students, and has systematic process to address the needs of slow and fast learners. In Outcome Based Education (OBE) teaching learning process is the important parameter and teachers play a vital role in this process. The institution has 307 full time teachers on roll, follows 1:15.57 STR and 86 teachers are obtained their doctoral degree from premier academic institutions. Majority of the faculty are having experience more than 15 years and more than 14% of faculty recruited from other states.

The institution has adopted effective delivery methods in experiential learning, participative learning and problem solving methodologies to enhance learning experiences. Majority of the faculty have adopted various ICT tools for effective delivery. The academic and stress related issues are addresses by the mentor-mentee system and clinical Psychologist of the institute. The academic calendar and Teaching-plans are strictly followed and are audited regularly.

The institution has brought several reforms in the examination system which comprises of Continuous Internal Evolution and Semester End Examination. The system is efficacious and transparent. Results are declared within two weeks from the date of last examination. The examination section is completely automated. Students are educated on COs, POs, PSOs, PEOs by faculty and also displayed in website, Notice boards. The institution has a systematic process for assessing the outcomes and reviews the Teaching- Learning-strategies. On an average, more than 90% of students are graduated every year. Students provide feedback on all aspects of teaching-learning and corrective steps are taken wherever necessary.

#### **Research, Innovations and Extension**

• NMIT has well defined Policy for promoting research which encourages the Faculty & Students to involve actively in Research Programs.

- Institute has provided the Seed Money amounting to Rs 107.54 Lakhs for the faculty members to encourage them to pursue high-order research.
- Good amount of faculty members and students are able to get International Fellowship for research activities.
- NMIT has established six Multi-Disciplinary Research Centres viz Center for Small Satellite Research, Center for Robotics Research, Center for Aerospace & IOT, Center for Nanomaterial & MEMS, Center for Computational Fluid Dynamics and Center for Design Engineering & Process Simulation. Addition to this, every department has at least one research laboratory.
- NMIT has been granted 99 Sponsored research Projects amounting to Rs.12.83 Crores sanctioned by different reputed National Funding Agencies such as DST, DIT, AICTE, DRDO, VGST, IEEE,VTU etc.
- 13 Departments are recognized as Research Centres by VTU / Mysore University 64 Faculty members are recognized as research guides and 41 PhDs has been awarded.
- The institute has a strong eco system for Entrepreneurship & innovation by establishing Innovation and Entrepreneurship Development Cell (DST) ,Business Incubator( MSME) and Innovation Club to encourage the entrepreneurship & among the students & faculty resulted in good number of National Level awards for Innovation, 12 startups has been incubated , 3 patents has been granted and 36 patents has been published
- Institute has a strong policy for Code of Ethics to check malpractices and plagiarism in Research. Plagiarism check has been adopted for all levels of programs i.e Ph.D/PG/UG.
- Research culture at NMIT resulted in 580 research article in reputed Journals, 602 research articles in reputed conferences, 50 articles are WOS indexed and 267 articles are Scopus indexed
- Rs 49.19 Lakhs has been generated through consultancy and corporate trainings.
- The college has established from the inception Units of NSS/NCC/Youth wing of Red Cross Society/ Rotract club, etc. resulted in several extension activities and awards.
- NMIT has 831 collaborations /linkages with industries for internship/on-the-job training/project. The institute has 70 functional MoU's with reputed institutions of national and international importance

## Infrastructure and Learning Resources

NMIT campus is situated on a sprawling 22.3 acres of land in calm sylvan environs of North Bangalore. It houses 60,802 Sqm of built up area for teaching/learning facilities. NMIT has spacious and well-equipped Classrooms, Laboratories, Lecture capturing rooms, Seminar Halls, Auditoria, Library and Staff rooms. Institute has a total of 88 classrooms/tutorial rooms, 95 Laboratories. ICT facility such as LCD Projector, Computer, Audio Systems, Wi-fi, student management system etc. is available.

The Library & Information Centre is housed in a spacious area of about 1300 Sqm with seating capacity of about 300 people. The Library is fully automated using KOHA Library Management Software and Bar-coded technology. Library has total of 11,200 of Titles, 65,174 volumes, 130 National Journals and 9880 International Journals in various disciplines. Facilities for viewing e-content from NPTEL/SWAYAM etc, Membership of National Digital Library and Membership of VTU e-Consortium are available. Total amount of Rs 177.95 Lakhs has been spent on purchase of books and journals in the last five years.

Institution encourages co-curricular and extracurricular activities by providing dedicated facility for various sports, yoga, meditation and cultural activities. National level Annual Techno Cultural fest Anaadyanta is organized every year in the month of March to encourage budding talents. The institute has units of NCC, NSS, ROTRACT, Youth Wing of RED CROSS society etc. to promote social awareness among students.

Budget of Rs. 6180 Lakhs has been allotted for infrastructure augmentation over the last 5 years. The average expenditure incurred on maintenance of physical facilities and academic support facilities in the last five years excluding salary component is Rs. 333.571 Lakhs.

The Campus has BSNL leased line(1:1) connectivity of 400 Mbps and Wi-Fi enabled. Campus network is carefully planned and connects all major buildings. Sufficient number of computers with student computer ratio of 3.225:1 is available.

Institute maintained Lawns, Gardens, Temples, Sports facilities, Generators, Lifts, Fire safety aides, landline connections, Video surveillance system, Transport and Parking facilities, Cafeterias, ATM centres, Sewage treatment plant, Common rooms and rest rooms for girls and boys.

Predefined measures are implemented for maintenance of all these Physical and Academic support facilities.

### **Student Support and Progression**

- NMIT has always been student centric, encouraging the students to excel in all aspects of curricular, cocurricular and extracurricular activities. This has been proven through the various student chapters established like ISTE, IETE, Institution of Engineers, The Aeronautical Society of India, ACCE India), ICI, IEEE, ISHRAE, FPSI, SAE, ASME, NEN etc. and students are actively participating and achieving many awards.
- 27.71% of students are benefited by scholarships and freeships provided by the Government during the last five years
- Institute adopted different capability enhancement and development schemes for the benefit of the students. Workshops and seminars are conducted to train students for competitive examinations like GRE, GATE, TOEFL, IELTs etc.
- More than 50% of the students are benefited by guidance for competitive examinations ,career counselling and Vocational Education and Training offered by the institution during the last five years
- A grievance redressal cell is established to look into the grievances of students and it is addressing the issues if any.
- A Placement cell effectively organizes placement training to increase Reasoning ability, comprehension for students to enhance their employability skills resulted in above 60% placement and 5% Higher studies.
- NMIT is awarded 163 awards/medals for outstanding performance in sports/cultural activities at national/international level.
- NMIT has active Student Council which conducts several co-curricular/extra-curricular activities throughout the year, which includes social responsibility activities also . Students are the part of several academic & administrative bodies/committees of the institution
- 42 sports and cultural activities / competitions organized at the institution level during last 5 years
- Institution has got a strong Alumni network which gives feedback on all aspects ranging from academics to placement. Institute receives financial & non-financial support from the alumni.

#### **Governance, Leadership and Management**

• Institute has a well-structured governance system wherein the representation is a heterogenous from industry, R&D, Academia, institution faculty representation.

- The institution has various bodies at various levels for taking policy decisions and strategic plan of actions namely Governing council, Academic Council etc.
- GC is the authoritative body which approves the strategic Plan and budget based on the strategic plan and regularly monitors its implementation. The AC will look into various aspects for curriculum development and teaching learning process which is represented by various stake holders.
- The governance is carried out in a decentralized manner by various administrative positions nominated by GC for smooth functioning and implementation. Effective and participative decision-making process is adopted to achieve the vision, mission and the goals of the institution and in building an effective organizational culture. A well-established online feedback mechanism is in place. e-governance implemented in all aspects of administration.
- The Institution provides effective welfare measures to all staff. IQAC has significantly contributed to sustain and enhance quality in all the aspects of the institution.
- The institute has a formal Self appraisal form which is of 3600 in nature to identify the Strength, weakness, opportunities and Threats so that the faculty can be nurtured in an appropriate way to achieve his goals.
- Institution has developed a process system to look into the institutional financial aspects. Both internal and external audit is carried out at regular intervals.
- Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years is around 48.
- Average number of professional development / administrative training programs organized by the Institution for teaching and non-teaching staff during the last five years is around 20.
- Average percentage of teachers attending professional development Programmes viz., Orientation Programmes, Refresher Course, Short Term Course, Faculty Development Programmes during the last five years is around 50.
- Funds / Grants received from non-government bodies, individuals, philanthropes during the last five years is 962.13Lakhs.
- Average number of quality initiatives by IQAC for promoting quality culture per year is around 13.

## **Institutional Values and Best Practices**

- NMIT regularly conducts gender equity promotion Programmes, which resulted in 45 programs during the assessment years.
- The institute has a policy of zero tolerance towards discrimination on basis of caste, gender, religion, etc. Institute has Grievance cell for women to address issues faced by them. The campus is secure due to its well-maintained security system. The Institute has separate common rooms for Boys & Girls.
- Rooftop Solar Power Plant(SPP) with capacity of 382 KW is established. 80% of power requirement of the Institute is met by SPP; about 42% of annual lighting requirement is met by LED lighting sources.
- Liquid waste generated in campus is treated through Sewage Treatment Plant(STP) setup with a capacity of 240 KLD(Kilo Liters/Day). NMIT has entered into MoU with SOGO Synergy which buys damaged computers and non-reparable e-waste and issues a Recycling certificate. Rain Water Harvesting System is in place which recharges open wells.
- Well maintained gardens, fountains and parks provide a green environment. NMIT operates 35 buses from all around Bangalore and nearby cities which encourages students and staff to use shared transportation. Paper usage is reduced by implementing ERP software named My-Gurukul for academic and administration purposes. NMIT is declared as plastic free campus as all cafeterias/stationary shops use cloth/paper for packaging and serving needs. Total expenditure on green initiatives and waste management is Rs 80 Lakhs. 0.61% of total expenditure is spent on green initiatives.

- Institute provides special attention to differently abled students by providing facilities like Ramps,Rails,Lift,Rest Rooms,Special Skill Development,Wheel Chairs,additional time for examination, etc.
- 93 specific initiatives to address locational advantages/disadvantages during the assessment years. NMIT contributed to local community on social issues through 99 initiatives taken towards societal engagement.
- Institution celebrates national festivals, birth/death anniversaries of great Indian personalities to promote universal values.
- Transparency is maintained in all activities related to finance, academics and administration. 2 Best practices are Fusion of "Learner-centric Pedagogy Methods to achieve Graduate Attributes and Societal Empowerment through Student Projects". The institute philosophy-EPR, The Spectral Pyramid relating to all-round grooming, is by itself a distinctive feature making it the most preferred institute in education sector.

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# **2. PROFILE**

# **2.1 BASIC INFORMATION**

Name and Address of the College	
Name	NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
Address	Post Box No. 6429, Yelahanka
City	Bangalore
State	Karnataka
Pin	560064
Website	www.nmit.ac.in

Contacts for Communication						
Designation	Name	Telephone with STD Code	Mobile	Fax	Email	
Principal	H C Nagaraj	080-22167803	9845275240	080-2216780 5	principal@nmit.ac. in	
IQAC / CIQA coordinator	Sanjay H A	080-22167864	9342560303	080-2216790 1	sanjay.ha@nmit.ac .in	

Status of the Institution	
Institution Status	Self Financing and Private

Type of Institution	
By Gender	Co-education
By Shift	Regular

<b>Recognized Minority institution</b>	
If it is a recognized minroity institution	No

Establishment Details	
Date of Establishment, Prior to the Grant of	01-08-2001
'Autonomy'	

ate of grant of 'Au	utonomy' to the Co	ollege by UGC	03-07-2007	7		
University to wh	nich the college is	affiliated				
State		University na	me	Do	ocument	
Karnataka			isvesvaraya Technological <u>View</u>		ew Document	
Details of UGC	recognition					
Under Section	1	Date		View	Document	
2f of UGC	2	25-04-2008	4-2008 <u>V</u>		View Document	
12B of UGC	(	05-10-2018	View Doct		Document	
0	nition/approval b MCI,DCI,PCI,RC Recognition/A roval details I itution/Depar nt programm	CI etc(other that App Day,Mon Inst year(dd- tme yyyy)	n UGC) th and V	dies like Validity in nonths	Remarks	
AICTE	View Docume	<u>nt</u> 10-04-20	18 1	2	Received the approval of AICTE for the next academic year	

Recognitions	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	Yes
If yes, name of the agency	TEQIP Phase II Sub-component
Date of recognition	11-07-2011

Location and Area of Campus					
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.	
Main campus area	Post Box No. 6429, Yelahanka	Urban	22.4	60802.13	

# **2.2 ACADEMIC INFORMATION**

Details of Pro Programme Level	ogrammes Offe Name of Pr ogramme/C ourse	red by the Col Duration in Months	lege (Give Data Entry Qualificatio n	a for Current A Medium of Instruction	Academic year Sanctioned Strength	) No.of Students Admitted
UG	BE,Compute r Science And Engineering	48	PUC	English	180	180
UG	BE,Informati on Science And Engineering	48	PUC	English	180	180
UG	BE,Electroni cs And Com munication Engineering	48	PUC	English	180	180
UG	BE,Electrical And Electronics Engineering	48	PUC	English	60	60
UG	BE,Mechani cal Engineering	48	PUC	English	180	179
UG	BE,Civil Engineering	48	PUC	English	120	113
UG	BE,Aeronaut ical Engineering	48	PUC	English	60	60
PG	Mtech,Comp uter Science And	24	Bachelors degree in engineering	English	24	8

	Engineering		or technology inCSE or ISE or AMIE in appropriate branch			
PG	Mtech,Infor mation Science And Engineering	24	Bachelors degree in Engineering or Technology in ECE or electronics and telecom munication or CSE or ISE or AMIE in appropriate branch	English	18	4
PG	Mtech,Electr onics And C ommunicatio n Engineering	24	Bachelors degree in Engineering or Technology in ECE or Electronics and TE or TE or Electronics and Instrume ntation engineering or TE or IT or AMIE in appropriate branch	English	18	3
PG	Mtech,Electr onics And C ommunicatio n Engineering	24	Bachelors degree in ECE or electronics and TE or Electronics and Instrume ntation	English	18	10

			engineering or TE or IT or EEE or Biomedical or medical electronics or AMIE in appropriate branch			
PG	Mtech,Electr ical And Electronics Engineering	24	Bachelors degree in engineering and technology in ME or EEE or AMIE in appropriate branch	English	24	4
PG	Mtech,Mech anical Engineering	24	Bachelors degree in engg. or technology in ME or Industrial and production engg. or automobile engg. or tool engg. or AMIE in appropriate branch	English	24	5
PG	Mtech,Mech anical Engineering	24	Bachelors degree in engineering and technology in ME or Automobile engg. or automoation and robotics engg. or AMIE in	English	18	1

			appropriate branch			
PG	Mtech,Civil Engineering	24	Bachelors degree in engg. or tech. in Civil engg. or construction tech. and mgmt. or AMIE in appropriate branch	English	24	24
PG	MBA,Master Of Business Administrati on	24	Any Bachelors degree	English	120	114
PG	MCA,Master Of Computer Applications	36	Any Bachelors degree with mathematics or statistics or CS or computer programmin g or computer applications or business mathematics or business statistics	English	60	57
Doctoral (Ph.D)	PhD or DPhi l,Computer Science And Engineering	72	PG	English	4	4
Doctoral (Ph.D)	PhD or DPhi l,Information Science And Engineering	72	PG	English	2	2
Doctoral (Ph.D)	PhD or DPhi l,Electronics And Commu nication	72	PG	English	2	2

	Engineering					
Doctoral (Ph.D)	PhD or DPhi l,Electrical And Electronics Engineering	72	PG	English	1	0
Doctoral (Ph.D)	PhD or DPhi l,Mechanical Engineering	72	PG	English	3	3
Doctoral (Ph.D)	PhD or DPhil,Civil Engineering	72	PG	English	1	1
Doctoral (Ph.D)	PhD or DPhil,Master Of Business Administrati on	72	PG	English	1	1
Doctoral (Ph.D)	PhD or DPhil,Master Of Computer Applications	72	PG	English	1	1
Doctoral (Ph.D)	PhD or DPhil,Physic s	72	PG	English	2	2
Doctoral (Ph.D)	PhD or DPhi 1,Chemistry	72	PG	English	1	0
Doctoral (Ph.D)	PhD or DPhi l,Mathematic s	72	PG	English	2	2

Position Details of Faculty & Staff in the College

	Teaching Faculty											
	Profe	Professor			Asso	Associate Professor			Assis	stant Pro	ofessor	
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government		1	1	52		1		54		1		201
Recruited	40	12	0	52	25	29	0	54	92	109	0	201
Yet to Recruit				0				0				0
Sanctioned by the Management/Soci ety or Other Authorized Bodies				3				0	J			0
Recruited	3	0	0	3	0	0	0	0	0	0	0	0
Yet to Recruit		1	1	0				0			1	0
									1			

		Non-Teaching	Staff	
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	7			184
Recruited	98	86	0	184
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				0
Recruited	0	0	0	0
Yet to Recruit				0

		<b>Technical St</b>	aff	
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	46	23	0	69
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				0
Recruited	0	0	0	0
Yet to Recruit				0

# **Qualification Details of the Teaching Staff**

	Permanent Teachers										
Highest Qualificatio n	Professor			Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0	
Ph.D.	36	12	0	14	10	0	10	4	0	86	
M.Phil.	0	0	0	0	0	0	0	0	0	0	
PG	4	0	0	12	18	0	82	105	0	221	

	<b>Temporary Teachers</b>										
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0	
Ph.D.	0	0	0	0	0	0	0	0	0	0	
M.Phil.	0	0	0	0	0	0	0	0	0	0	
PG	0	0	0	0	0	0	0	0	0	0	

	Part Time Teachers											
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor						
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total		
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0		
Ph.D.	0	0	0	0	0	0	0	0	0	0		
M.Phil.	0	0	0	0	0	0	0	0	0	0		
PG	0	0	0	0	0	0	0	0	0	0		

Details of Visting/Guest Faculties						
Number of Visiting/Guest Faculty	Male	Female	Others	Total		
engaged with the college?	3	0	0	3		

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
Doctoral (Ph.D)	Male	6	1	0	0	7
	Female	11	0	0	0	11
	Others	0	0	0	0	0
PG	Male	82	2	0	9	93
	Female	80	3	0	2	85
	Others	0	0	0	0	0
UG	Male	507	231	6	41	785
	Female	183	49	2	9	243
	Others	0	0	0	0	0

Years		_			
Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	45	49	45	47
	Female	24	24	30	32
	Others	0	0	0	0
ST	Male	14	12	9	11
	Female	7	9	5	4
	Others	0	0	0	0
OBC	Male	197	229	208	226
	Female	90	109	96	106
	Others	0	0	0	0
General	Male	560	504	567	555
	Female	195	177	201	179
	Others	0	0	0	0
Others	Male	94	81	72	78
	Female	15	6	9	8
	Others	0	0	0	0
Total		1241	1200	1242	1246
		1	1		

Provide the Following Details of Students admitted to the College During the last four Academic Years

# **2.3 EVALUATIVE REPORT OF THE DEPARTMENTS**

Department Name	Upload Report
Aeronautical Engineering	View Document
Chemistry	View Document
Civil Engineering	View Document
Computer Science And Engineering	View Document
Electrical And Electronics Engineering	View Document
Electronics And Communication Engineering	View Document
Information Science And Engineering	View Document
Master Of Business Administration	View Document
Master Of Computer Applications	View Document
Mathematics	View Document
Mechanical Engineering	View Document
Physics	View Document

# **3. Extended Profile**

# 3.1 Program

## Number of programs offered year-wise for last five years

2017-18	2016-17	2015-16		2014-15	2013-14
17	17	17		16	16
File Description			Document		
Institutional Data in Prescribed Format			View	Document	

# **3.2 Students**

### Number of students year-wise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14
4641	4622	4496		4115	3610
File Description			Document		
Institutional Data in Prescribed Format			View Document		

## Number of outgoing / final year students year-wise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14	
1168	1182	1061		903	804	
File Description			Document			
Institutional Data in Prescribed Format			View	Document		

# Number of students appeared in the examination conducted by the Institution, year-wise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14	
4611	4591	4434		4058	3610	
File Description			Document			
Institutional Data in Prescribed Format			View Document			

### Number of revaluation applications year-wise during the last 5 years

2017-18	2016-17	2015-16	2014-15	2013-14
1335	1243	1156	944	999

## **3.3 Teachers**

### Number of courses in all programs year-wise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14
848	826	810		780	703
File Description			Document		
Institutional Data in Prescribed Format			View Document		

## Number of full time teachers year-wise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14
298	292	270		259	230
File Description			Document		
Institutional Data in Prescribed Format			View D	<u>ocument</u>	

## Number of sanctioned posts year-wise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14	
298	292	270		259	230	
File Description			Document			
Institutional Data in Prescribed Format			View	Document		

## **3.4 Institution**

Number of eligible applications received for admissions to all the programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
101517	101049	100650	100628	99019

File Description	Document
Institutional Data in Prescribed Format	View Document

# Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14
267	267	250		250	250
File Description			Document		
Institutional Data in Prescribed Format			View Document		

### Total number of classrooms and seminar halls

#### **Response: 93**

## Total number of computers in the campus for academic purpose

### Response: 1439

## Total Expenditure excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
2777	2098	2506	2289	2305

# 4. Quality Indicator Framework(QIF)

## **Criterion 1 - Curricular Aspects**

## **1.1 Curriculum Design and Development**

**1.1.1 Curricula developed /adopted have relevance to the local/ national / regional/global developmental needs with learning objectives including program outcomes, program specific outcomes and course outcomes of all the program offered by the Institution** 

### **Response:**

The processes of developing an effective programme Curricula is an Iterative process which should develop critical and innovative thinking skills among the students to enhance their employability. The curricula designed by NMIT are aligned with its Vision, Mission and Quality policy. The curricula developed have relevance to the regional/national/global developmental needs with well-defined Program Outcomes(POs) and Course Outcomes(COs). The context of depth versus breadth of the curricula is considered while designing the program curricula so that the courses are sufficiently diversified as required for the attainment of program outcomes, while at the same time maintaining the required amount of depth in the relevant courses to inculcate the subject expertise which are in-line with the program specific requirements.

Each programme has Vision and Mission aimed at producing skilled human resources to cater the needs of engineering industries/research organizations/to enable students to become successful entrepreneurs.

Each programme has its own Program Educational Objectives(PEOs), POs which are based on NBA/ABET and well-defined Program Specific Outcomes(PSOs).

Major review of the curricula takes place every three years and minor changes take place annually as per the changes in regulatory requirements, industry and societal demands. Some of the latest and trend setting courses are introduced immediately as core/open electives. Steps involved in developing the curricula are as follows:\*The Departmental Under Graduate Committee(DUGC) will consider the current Industry requirements/trends and program specific criteria as specified by professional bodies like IEEE,ASME,ACM,ASCE etc. Apart from these, curricula from various Institutes of National Importance such as IISc, IITs, NITs and other reputed foreign universities are considered as benchmark to identify the shortcomings in the existing curricula and improve upon them. Various guidelines from regulating bodies such as AICTE, UGC, VTU and feedback from various stake holders are also considered.\*Upon identification of the relevant courses by DUGC, the same is forwarded to the respective course coordinators.\*The course coordinators develop the required COs and its contents which are in-line with the POs and PSOs.\*The program coordinator will analyze, consolidate the draft curricula and propose the same to DUGC.\*The DUGC will verify the proposed curricula & recommends if any corrections required.\*BOS members will deliberate on proposed curriculum and forward its recommendations.\*The Academic Council(AC) will deliberate on the compliance of the proposed.\*The proposed syllabus is finally approved by AC.

For the next revision of the curriculum, CO,PO and PSO attainments are considered. Program/Course Coordinators analyze the gap and provide necessary counter measures to fill the gap. The gap analysis & counter measures will be tabled before the Program Assessment Committee(PAC),Department Advisory

Committee(DAC),DUGC, & BoS and the same is sent to AC for final approval. Qualitative measures such as Students,Faculty,Alumni,Employers and Parent feedback on curriculum,Exit surveys will help in revising the curriculum, teaching-learning processes.

File Description	Document
Any additional information	View Document

#### **1.1.2** Percentage of programs where syllabus revision was carried out during the last five years

#### Response: 94.12

1.1.2.1 How many programs were revised out of total number of programs offered during the last five years

#### Response: 16

1.1.2.2 Number of all programs offered by the institution during the last five years

#### Response: 17

File Description	Document
Minutes of relevant Academic Council/BOS meeting	View Document
Details of program syllabus revision in last 5 years	View Document
Any additional information	View Document

# **1.1.3** Average percentage of courses having focus on Employability/ Entrepreneurship/ Skill development during the last five years

#### **Response:** 86.49

1.1.3.1 Number of courses having focus on employability/ entrepreneurship/ skill development year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
748	722	701	668	595

File Description	Document
Program/ Curriculum/ Syllabus of the courses	View Document
MoU's with relevant organizations for these courses, if any	View Document
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View Document
Average percentage of courses having focus on employability/ entrepreneurship	View Document
Any additional information	View Document

## **1.2 Academic Flexibility**

**1.2.1** Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years

#### Response: 51.18

1.2.1.1 How many new courses are introduced within the last five years

Response: 434

1.2.1.2 Number of courses offered by the institution across all programs during the last five years

Response: 848

File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	View Document

# **1.2.2** Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented

#### Response: 100

1.2.2.1 Number of programmes in which CBCS/ Elective course system implemented.

Response: 17

File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

## **1.3 Curriculum Enrichment**

# **1.3.1** Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum

### **Response:**

The social relevance, sustainability, human values, and environmental issues in our present-day world need to be more clearly articulated. An understanding of these separately but closely linked concepts is necessary for the profession to effectively pursue the goal of making the world a just, humane, and sustainable. In this regard, this institute has taken necessary steps to include all these to make our students more responsible.

The institute has introduced ENVIRONMENTAL STUDIES course in the first year as a mandatory subject so that our students will know about the inter-relationship between the living organisms and their environments. The knowledge about their damage, the unsustainable development, improved standard of living. The course also imparts the importance of natural resources and its relationship with human activities, biogeochemical cycle. The course will discuss various types of pollution and their effects on the environment, its prevention method and the various social issues connected. It also correlates the exploitation and utilization of conventional and non-conventional resources. This course also creates an awareness among young engineers towards legal aspects, ACTS and organizations.

CONSTITUTION OF INDIA / PROFESSIONAL ETHICS course is one of the mandatory courses offered by the institute for first year. In this, students will be educated about their obligations, responsibilities, privileges rights and duties and get insights on administrative and the judicial setup of the country. It shares the knowledge about State and Central policies, the fundamental duties, electoral processes, amendment procedures and emergency provisions. Imparts the ethical values, responsibilities and obligations of the professional to the society and the nation. Educate the engineering students about the scope and aim of professional ethics, their responsibilities, virtues like honesty, integrity and reliability, the risk and liability in the engineering profession. The course also imparts knowledge on IT ACT and its jurisdictions.

Apart from the above mandatory subjects' departments also offer certain core courses and open electives

related towards Human Values, Ethics and environment and sustainability which has been attached as additional document.

File Description	Document
Any additional information	View Document

# **1.3.2** Number of value-added courses imparting transferable and life skills offered during the last five years

#### Response: 77

1.3.2.1 Number of value-added courses are added within the last five years

Response:	77
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File Description	Document
List of value added courses	View Document
Brochure or any other document relating to value added courses	View Document

### **1.3.3** Average percentage of students enrolled in the courses under 1.3.2 above

#### **Response:** 47.22

1.3.3.1 Number of students enrolled in value-added courses imparting transferable and life skills offered year-wise during the last five years

	2017-18	2016-17	2015-16	2014-15	2013-14
4	4575	1991	1954	1270	727

File Description	Document
Any additional information	View Document

### **1.3.4** Percentage of students undertaking field projects / internships

#### Response: 46.93

1.3.4.1 Number of students undertaking field projects or internships

#### Response: 2178

File Description	Document
List of programs and number of students undertaking field projects / internships	View Document
Any additional information	View Document

## **1.4 Feedback System**

<ul><li>1.4.1 Structured feedback received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni 5)</li><li>Parents for design and review of syllabus Semester wise /year-wise</li><li>A. Any 4 of above</li></ul>		
B. Any 3 of above		
C. Any 2 of above		
D. Any 1 of above		
Response: A. Any 4 of above		
File Description	Document	
Any additional information	View Document	
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	<u>View Document</u>	
URL for stakeholder feedback report	View Document	

# 1.4.2 Feedback processes of the institution may be classified as follows:A. Feedback collected, analysed and action taken and feedback available on website

**B.** Feedback collected, analysed and action has been taken

- C. Feedback collected and analysed
- **D. Feedback collected**

Response: A. Feedback collected, analysed and action taken and feedback available on website

File Description	Document
Any additional information	View Document
URL for feedback report	View Document



# **Criterion 2 - Teaching-learning and Evaluation**

## 2.1 Student Enrollment and Profile

## 2.1.1 Average percentage of students from other States and Countries during the last five years

### Response: 24.99

2.1.1.1 Number of students from other states and countries year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1157	1145	1114	1027	921

File Description	Document
List of students (other states and countries)	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

### 2.1.2 Demand Ratio(Average of last five years)

### **Response:** 141.57

2.1.2.1 Number of seats available year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
744	730	706	695	680

File Description	Document
Demand Ratio (Average of Last five years)	View Document
Any additional information	View Document

# **2.1.3** Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

### **Response:** 90.01

2.1.3.1 Number of actual students admitted from the reserved categories year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14	
242	228	225	233	227	
	· ·	·		· · · · ·	
	<i>,</i> •		D		
File Descrip	tion		Document		
-	tion centage of seats filled	against seats	Document       View Document		

## **2.2 Catering to Student Diversity**

**2.2.1** The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

#### **Response:**

Learning level Assessment of the students: At the institute/department level, students have been categorized into advanced and slow learners by adopting the following processes.

- Diagnostic test is conducted in Mathematics, Physics, Chemistry, English and C programming.
- Students are identified based on their CIE/ Previous semester Performance. The Outcome Based Education (OBE) tool is used to identify the learning levels of the students.
- Mentor Feedback

#### **Special Programs for the advanced Learners:**

- 1.Being an Autonomous Institution, the academic system facilitates advanced Learners to take maximum up to 30 credits per semester, and then pursue long term internships/immersion programs in the 8th semester which enriches the value of the U G degree.
- 2. Institution identifies emerging areas of research and development/ current industrial needs and establish several centers of excellence offering various value-added, skill development cum entrepreneurial program beyond curriculum to equip normal learners as well as advanced learners for their career progression.
- 3. Bright students are encouraged to take up MOOC/ Add-on courses to earn additional 20 credits & thus eligible to get honors degree.
- 4. Institute will encourage the students in terms of technical/ financial/ flexible academic schedule/ logistical support for Co-curricular/ Extra-Curricular activities.
- 5. Faculty will provide advice on career choice/higher studies/competitive Exams/ skill development.
- 6. Encouraging/Handholding/Guiding the students to:

1. attend Conferences/workshops

- 2. Publish research articles
- 3. Work for Funded Research Projects
- 4. Applying for patents

### 5. Participating in

- National Level Hackathons
- Ideathons
- Project Based Exhibitions etc.

#### **Encouraging the Slow Learners**

- 1. The institutional mentoring system enables the slow learners among the students and their parents to know about the hardships faced by them at an early stage, in this matter wherever required such student will be referred to the counselling cell of the institution so as to take suitable action.
- 2. Individual attention even after college hours.
- 3. Student Mentoring sessions are held for students on regular basis throughout the program. In these sessions, the faculty advisor / mentor will regularly interact with the student / parent. The mentor will be helping the student in his academic problems by referring to the concerned subject teacher.
- 4. During the Tutorial Classes, Advanced and slow learners are grouped together thus facilitates mutual learning.
- 5. Remedial Classes are exclusively held for slow learners thus enables one to one interaction
- 6.Bridge courses in Programming/ Mathematics/ English Communication Skills etc. are conducted for the students.
- 7. NoteSapp- Mobile App developed by the students is used as a digital platform for academic material sharing.

File Description	Document
Any additional information	View Document
link for additional information	View Document

#### 2.2.2 Student - Full time teacher ratio

**Response:** 15.57

File Description	Document
Any additional information	View Document

#### 2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0.06

2.2.3.1 Number of differently abled students on rolls

Response: 3

File Description	Document
List of students(differently abled)	View Document
Institutional data in prescribed format	View Document
Any other document submitted by the Institution to a Government agency giving this information	View Document
Any additional information	View Document

## **2.3 Teaching- Learning Process**

**2.3.1** Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

### **Response:**

The institution has successfully implemented Outcome Based Learning and Teaching (OBLT). In this connection, every year the Institute organizes training programs on pedagogy, modern tools in engineering education and orientation programs for faculty. The faculty are also deputed to various institutes across country to attend Faculty Development Programs (FDPs) to strengthen their domain knowledge. The faculty are encouraged to deliver the courses using both Active & Passive methods considering their curriculum structure and assessment strategies.

At the beginning of the every semester course coordinators will design delivery methods for every course which will lead to better employability, entrepreneurship and skills development of the students. Course coordinators will decide upon the Student Centric Learning activities as a component of Continuous Internal Evaluation (CIE). The following delivery methods are adopted to enhance learning experiences:

### **Experiential learning:**

- Course Projects/ Main Project
- App Based Teaching
- Certification Based Learning
- Simulations laboratory
- Laboratory Experiments
- Programming Assignment
- Industry Based Internship
- Organizational Study
- Lego Mindstrom & Tetrix Lab
- Model based learning
- Project Based Learning in Center of Excellence like Small Satellite, Robotics, Aerospace & IoT, Nano Materials & MEMS etc.

### **Participative learning:**

• Course Projects/ Main Projects

- Tutorials
- Debates
- Industry Based Case Studies.
- Project Exhibitions/ Open house
- Industry Based Internships.
- Survey Camps
- Boot camps
- Hackathons/ Codethon/Ideathon

#### Problem solving methodologies:

- Tutorials
- Role Play
- Course Projects/ Main Project
- Assignments
- Learning Activity assignments

# Additionally, the following Student Centric Delivery methods are used for attain the Program Outcomes:

- Seminars
- Self- Demonstration Based Teaching
- Workshop/Invited Talks/Webinars
- Industrial Tour
- National/ International Conferences/Exhibitions/ Symposia

Institute/Departments have designed effective rubrics to evaluate the learning experience of the students. The identified Gap will help the course coordinator to adopt better/innovative delivery methods.

File Description	Document	
Any additional information	View Document	
Link for Additional Information	View Document	

**2.3.2** Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

**Response:** 86.24

2.3.2.1 Number of teachers using ICT

Response: 257

File Description	Document
List of teachers (using ICT for teaching)	View Document
Any additional information	View Document
Provide link for webpage describing the " LMS/ Academic management system"	View Document

#### 2.3.3 Ratio of students to mentor for academic and stress related issues

#### **Response:** 15.57

2.3.3.1 Number of mentors	
Response: 298	
File Description	Document
Any additional information	View Document

## 2.3.4 Preparation and adherence to Academic Calendar and Teaching plans by the institution

#### **Response:**

## Preparation and adherence to Academic Calendar:

Academic Dean's office will collect the academic activity plan from Department and other academic sections. The input thus collected are collated and placed before Internal Academic Board. The Academic section will prepare the Academic calendar with the suggestion of Internal Academic Board and get it approved by IQAC.

Academic calendar is prepared well in advance before the start of the semester and made available to all the students, teaching and non-teaching staff and also made available in the college Website/Notice Boards/ Student Management System/ Curriculum Hand Book. The academic calendar includes registration of the courses, CIE Schedule, Drop and withdrawal of courses, examination schedule, feedback schedule, attendance and CIE submission, last working date, holidays and results announcement date etc. Institute strictly adheres to all the dates given in the academic calendar without any deviations

In case of deviation because of unavoidable circumstances, prior approval will be taken from the relevant functionary. All the assessments and surveys are being strictly conducted as per the Academic Calendar.

#### **Teaching Plan:**

- Departments will conduct Brain Storming Sessions at the Beginning of Every Semester to decide upon the Various Delivery & Assessment Methods by considering CO/PO/PSO attainment, Blooms levels and Gaps of the previous batch and incorporated in the lesson plan.
- Course coordinators will prepare a Lesson plan which includes syllabi coverage & schedule for

learning activities.

- DUGC/DPGC will scrutinize the Lesson Plans of every course. The same will be uploaded in Student Management Software.
- After every class, Course Coordinator will enter the work done during that session.
- Class committee consisting of student representative and concerned faculty members meet periodically to discuss about the progress of completion of curriculum and carry out any remedial measures.
- DUGC/DPGC will periodically monitors the deviation if any between Lesson Plan & Work done.
- During Academic Audit, the committee will verify all the documents related to Teaching & Learning and places the report to IQAC.

# 2.4 Teacher Profile and Quality

2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 100			
File Description	Document		
Year wise full time teachers and sanctioned posts for 5 years	View Document		
List of the faculty members authenticated by the Head of HEI	View Document		
Any additional information	View Document		

# 2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

Response: 20.49

2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
77	61	55	51	36

File Description	Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	View Document
Any additional information	View Document

2.4.3 Teaching experience per full time teacher in number of years

## Response: 12.42

2.4.3.1 Total experience of full-time teachers		
Response: 3702.1		
File Description	Document	
Any additional information	View Document	

# **2.4.4** Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

#### **Response:** 26.32

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
18	14	18	15	6

File Description	Document
Institutional data in prescribed format	View Document
e-copies of award letters (scanned or soft copy)	View Document

# 2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years

#### **Response:** 13.77

2.4.5.1 Number of full time teachers from other states year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
43	35	42	37	29

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	View Document
Any additional information	View Document

# **2.5 Evaluation Process and Reforms**

# **2.5.1** Average number of days from the date of last semester-end/ year- end examination till the declaration of results during the last five years

## Response: 14.2

2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
13	15	15	15	13

File Description	Document
List of programs and date of last semester and date of declaration of result	View Document
Any additional information	View Document

# **2.5.2** Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

## Response: 0.04

2.5.2.1 Number of complaints/grievances about evaluation year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
3	2	2	1	1

File Description	Document
Any additional information	View Document

# **2.5.3** Average percentage of applications for revaluation leading to change in marks during the last five years

#### Response: 9.36

2.5.3.1 Number of applications for revaluation leading to change in marks year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14	
96	116	103	110	97	
File Descriptio	n	D	ocument		

# **2.5.4** Positive impact of reforms on the examination procedures and processes including IT integration and continuous internal assessment on the examination management system

**Response:** 

Assessment/ Examination measure the student knowledge/understanding /competence in terms of learning outcomes. Assessment is divided into two parts with equal weightage for Continuous Internal Evaluation (CIE) and the Semesters End Examinations (SEE). A student is not eligible to appear for the SEE in a particular course, if the CIE is less than 40% and attendance is below 85%.

Each course syllabus is divided into 5 Units. The question papers(QP) has 5 Units and the student has to answer from each unit which ensures that he/she studies the entire syllabus.

Though NMIT is an Autonomous institution, the SEE evaluation is made transparent by involving examiners from other reputed institutions for QP setting/ conducting practical examinations/ Evaluation of answer scripts.

The Process of SEE

Stage 1:

• Autonomous office issues academic-calendar to the departments, which includes notification of SEE schedules.

• Board of Examiners (BoE) identifies a panel of Internal and external subject experts based on experience, usually 5 experts per course and approved by BOS

• Exam coordinator dispatches the official documents from BOE chairman to the subject experts which includes official letter/syllabus/COs/Blooms Taxonomy/ Templates for QP and Scheme.

Stage 2:

• Experts will submit the QP manuscript and scheme of evaluation to the BOE chairman within 2 weeks from the notification period.

Stage 3:

- QPs and schemes are scrutinized by the BOE members.
- Wherever required, BoE members will do necessary modifications that may include changes in CO & Blooms Level mapping/ minor modifications to the questions/ Marks allocations etc.
- Submission of accepted QPs and scheme to Controller of Examinations (CoE) from Chairman-BoE.

#### Stage 4:

- Typing of question papers from manuscripts and proof-reading under the direct supervision of CoE
- Printing of all the QPs and sealing in a Blind envelope.

#### Stage 5:

 $\cdot$  On the day of Exam, one question paper will be picked randomly by CoE/ Dean-Academic for printing.

## Stage 6:

- Answer scripts will be coded for transparent evaluation.
- Internal & External Evaluators will discuss on schemes & solutions before starting of the valuation.
- Minimum 10% of the scripts will be moderated by Senior Evaluator
- Passing criteria: 40% of the maximum marks

#### **Processes integrating IT:**

- Automated software captures the Attendance/CIE and SEE marks and generates the records according to the given format.
- Features of the Automated Software
  - Generation of Eligible-students-list for SEE based on the eligibility criteria
  - Room/seating allotments as per defined parameters and printing of Admit cards.
  - Automated invigilation duty assignment.
  - Generation of Forms-B/Forms-A.
  - Coding of Answer booklets (BARCODE)
  - Answer booklet bundling and unique OMR based marks capturing process.
  - Online Results processing/ Declaration of results/Generation of analysis reports
  - Bulk Grade card / Provisional Degree certificate printing.

## **CIE Process:**

- 50% of the weightage in each subject will be given to continuous evaluation
- 40% of CIE marks are allotted for learning activities like course projects/seminars/assignments/case study.
- DUGC will monitor MSE QP setting/evaluation process

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

2.5.5 Status of automation of Examination division along with approved Examination Manual A. 100% automation of entire division & implementation of Examination Management System (EMS)

B. Only student registration, Hall ticket issue & Result Processing

- C. Only student registration and result processing
- **D.** Only result processing

**Response:** A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Document
Current manual of examination automation system and Annual reports of examination including the present status of automation	View Document
Current Manual of examination automation system	View Document
Annual reports of examination including the present status of automation	View Document

# 2.6 Student Performance and Learning Outcomes

**2.6.1** Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students

## **Response:**

Program Outcomes (POs) have been incorporated in the curriculum design to meet the Graduate Attributes. Program Specific Outcomes (PSOs) by considering the Knowledge areas of the specific program given by Global professional bodies like IEEE, ASME, ACM, ASCE, etc.

Course Outcomes (COs) are defined by the course coordinator for the identified course and are mapped to POs and PSOs of the program. COs are stated by considering POs, PSOs and Blooms Level.

All the stakeholders are involved in finalizing the PSOs & COs.

The Vision, Mission, PEOs, POs, PSOs & COs are displayed to all stakeholders at

- College website www.nmit.ac.in
- Curriculum Handbooks (Both in hard copy and soft copy which is available on website)
- Department Class rooms & Laboratories
- Notice Boards
- HOD cabin and faculty rooms.

The Vision, Mission, PEOs, POs, PSOs & COs are disseminated during

- Faculty& Technical staff meetings
- Orientation Programs
- Alumni Meets
- Awareness Programs
- Parents Meetings
- BOS/ Advisory committee/ Academic council meetings.

Course outcomes (Cos) are statements that describe significant and essential learning that learners have achieved, and can reliably demonstrate at the end of a course or program. In other words, Course outcomes identify what the learner will know and be able to do by the end of a course or program. Each Course outcome specifies what is expected from the students to perform on a definite topic/area immediately after completion of course.

Course Outcomes of each Course are disseminated to students through:

- In the introductory class at beginning of each semester by the course coordinator.
- Course outcomes are made available in the syllabus copy, provided to the students in the beginning of the semester and also published in the college website.
- The questions in the question papers of SEE and MSE are mapped accordingly to the particular CO and Bloom's level.

The course exit survey at the end of each semester will be carried out on each course to identify the course outcomes.

File Description	Document	
Any additional information	View Document	
Link for Additional Information	View Document	

**2.6.2** Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

**Response:** 

## **CO Attainment Evolution:**

The attainment of each course is evaluated by using the following Direct / Indirect assessment methods

## 1. Mid Semester Examination (MSE) /Semester End Examination (SEE)

Each question/component is mapped to the respective Course Outcomes and Blooms level. After the evaluation of MSE/SEE, marks scored by the students in each questions and maximum marks for the respective question will be enter in OBE tool in Student Management System. Multiple questions can be mapped to same CO. The student who is scoring 60% and above of the total marks attempted in the respective CO is considered as attained.

## 1. Rubrics Evaluation

Each performance indicator will be mapped with COs.

Each performance indicator will be evaluated in 5 point scale (1. Excellent, 2.Very Good, 3.Good, 4. Satisfactory, 5.Poor). Each scale will carry marks.

The student who is scoring 60% and above of the total marks in the respective CO is considered as attained. The score 60% and above indicates good Skills, knowledge and attitude acquired by the student.

#### 1. Course Exit Survey

This survey is conducted by course coordinator at the end of each semester. Each question will be mapped to the CO and will be evaluated in 5 point scale (1. Excellent, 2.Very Good, 3.Good, 4. Satisfactory, 5.Poor).

By finding the no. of students attained and attempted for each CO in the above assessment methods, the percentage of attainment for the respective CO will be computed as

Percentage of CO attainment of PO=(No. of students attained/no. of students attempted)\*100

## PO and PSO attainment Evolution by direct assessment method:

All the COs of courses in the Program is mapped to POs and PSOs. The attainment of the CO is the attainment of the corresponding mapped PO or PSO. The program coordinator in consultation with course coordinators will collect the data of CO attainment of all the courses calculated through direct & indirect assessment methods and are used for the computation of program outcome attainment. Average of all the attainments of COs mapped to particular PO/PSO is attainment of the corresponding PO/PSO.

## PO and PSO attainment Evolution by Indirect Assessment Methods:

For computing PO/PSO Attainment through Indirect assessment methods, the following assessments methods are considered Program Exit Survey/ Alumni Survey/ Employer Survey.

This survey is conducted once in a year from outgoing students. This survey questions are designed to find out the attainment of POs/PSOs.

For each question, students will rate one of the following scales

## • Excellent

- Very Good
- Good
- Fair
- Poor

The students who rate themselves with top 2 levels (Excellent and Very good) are considered as attained.

The Percentage of Attainment for the respective PO will be computed as

Percentage of attainment of PO=(No. of students attained/Total no. of students)\*100

After evaluating all the CO, PO and PSO attainments the Program Assessment Committee will analyse the statistics, identify the gaps and suggest the refinement of delivery/assessment method/curriculum and present the same in front of an advisory committee.

Advisory Committee will analyse the feedback of Program Assessment Committee and suggest the required modifications.

File Description	Document	
Any additional information	View Document	
Link for Additional Information	View Document	

## 2.6.3 Average pass percentage of Students

**Response:** 97.69

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 1141

2.6.3.2 Total number of final year students who appeared for the examination conducted by the institution

Response: 1168

File Description	Document
List of programs and number of students passed and appeared in the final year examination	View Document
Any additional information	View Document
Link for annual report	View Document

## 2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.55



# **Criterion 3 - Research, Innovations and Extension**

## **3.1 Promotion of Research and Facilities**

**3.1.1** The institution has a well defined policy for promotion of research and the same is uploaded on the institutional website

#### Response: Yes

File Description	Document
Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	
URL of Policy document on promotion of research uploaded on website	View Document

## 3.1.2 The institution provides seed money to its teachers for research (average per year)

#### Response: 21.51

3.1.2.1 The amount of seed money provided by institution to its faculty year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
23.96	42.9	12.50	15.79	12.4

File Description	Document	
Minutes of the relevant bodies of the Institution	View Document	
List of teachers receiving grant and details of grant received	View Document	
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View Document	
Any additional information	View Document	

# **3.1.3** Number of teachers awarded international fellowship for advanced studies/ research during the last five years

## Response: 31

3.1.3.1 The number of teachers awarded international fellowship for advanced studies / research year-wise

## during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14	
18	5	0	6	2	
L					
File Descriptio	n		Document		

<ul> <li>3.1.4 Institution has the following facilities <ol> <li>Central Instrumentation Centre</li> <li>Animal House/Green House / Museum</li> <li>Central Fabrication facility</li> <li>Media laboratory/Business Lab/Studios</li> <li>Research / Statistical Databases</li> </ol> </li> <li>A. Any four facilities exist</li> <li>B. Three of the facilities exist</li> <li>C. Two of the facilities exist</li> <li>D. One of the facilities exist</li> <li>Response: A. Any four facilities exist</li> </ul>	
File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

## **3.2 Resource Mobilization for Research**

**3.2.1** Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution during the last five years (INR in Lakhs)

**Response:** 1283.78

3.2.1.1 Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five

# years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
159.35	318.38	11.75	79.55	714.75

File Description	Document
List of project and grant details	View Document
e-copies of the grant award letters for research projects sponsored by non-government	View Document

#### 3.2.2 Number of research centres recognised by University and National/International Bodies

## **Response:** 19

#### 3.2.2.1 Number of research centres recognised by University and National/ International Bodies

#### Response: 19

File Description	Document
Names of research centres	View Document
Any additional information	View Document

3.2.3 Percentage of teachers recognised as research guides			
Response: 15.91			
3.2.3.1 Number of teachers recognised as research	n guides		
Response: 63			
3.2.3.2 Number of full time teachers worked in the in	stitution during the last 5 years		
Response: 396			
File Description Document			
Details of teachers recognized as research guide <u>View Document</u>			
Any additional information	View Document		

# **3.2.4** Number of research projects per teacher funded, by government and non-government agencies, during the last five year

#### Response: 1.24

3.2.4.1 Number of research projects funded by government and non-government agencies during the last five years

#### Response: 98

1	
File Description     Document	
Supporting document from Funding Agency	View Document
link to funding agency website	View Document

## **3.3 Innovation Ecosystem**

**3.3.1 Institution has created an eco system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge** 

#### **Response:**

The institution has created an eco-system for innovations. National Science and Technology Entrepreneurship Development Board(DST- NSTEDB), New Delhi, sanctioned an Innovation and Entrepreneurship Development Centre (IEDC) to NMIT in the year 2010. The focus of IEDC is to develop innovative products and promote the spirit of Entrepreneurship amongst students. NMIT-IEDC has association with Professional bodies such as STEPs, Business Incubators' Association (ISBA), National Entrepreneurship Network (NEN) etc. Project at IDEC have tenure of five years with a total funding of Rs. 45 Lakhs.

The goal of NEN is to give the essence of entrepreneurship to students, and motivating them to take up entrepreneurial careers. At NMIT, NEN program offers entrepreneurship education in a structured manner by integrating with curricular and co-curricular activities.

The objectives of NEN program are

- Promoting entrepreneurship and networking by arranging interactions with entrepreneurs.
- Fostering the environment for setting up companies in the NMIT, and run by student entrepreneurs.
- To provide access to Mentors based on the specific needs of the entrepreneur.
- To provide access to investors based on readiness of the companies.

NMIT – MSME Technology Incubator is one of the few technology incubators in Karnataka established by the Ministry of Micro, Small and Medium Enterprises, Government of India. The incubator is funded by the ministry of MSME. Funding of Rs. 6+ Lakhs per project is provided for prototype development. The incubator also,

- Guides and mentors budding entrepreneurs
- Provides connectivity with venture capitalists
- Helps commercialize innovative ideas on new Products, Processes and Services

NMIT student teams working in the area of Small Satellite, Robotics, Nanomaterials and MEMS, Design

and Process Simulations, Computational fluid dynamics , Aerospace and IoT will take the advantage of CoEs . The main objectives of CoEs are

- Carry out research with the state-of-art facilities.
- Collaborate with National/International Research Laboratories and Premier Institutions.
- Promoting multidisciplinary projects/internships
- To Generate IPRs & publish research findings.

Íignis Innovations Lab is a campus venture of NMIT. The lab has been established in the year 2017. Íignis Lab is the brainchild of a few faculty members and students of NMIT who dared to dream and create a work-study program on Campus. Íignis started off with a few projects developed by students working as paid interns.

NMIT encourages the students to participate in competitions such as Hackathon, Technical Events conducted by various Institutions, and Industries. This is accomplished by establishing the in-house Hackathon club, which cultivates the habit of critical thinking, and innovation. This initiative motivated and enabled a numerous student teams to participate in National level events like Smart India Hackathon, Accenture Innovation Challenge, Unisys cloud 20-20 and many such events.

File Description	Document
link for additional information	View Document

# **3.3.2** Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry - Academia Innovative practices during the last five years

**Response:** 89

3.3.2.1 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14	
25	30	16	9	9	
File Descriptio	on		Document		
File Description			Document       View Document		

# **3.3.3** Number of awards for innovation won by institution/ teachers/ research scholars/students during the last five years

## Response: 103

3.3.3.1 Total number of awards for innovation won by institution/teachers/research scholars/students yearwise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14	
60	16	11	5	11	
File Descriptio	n	1	Document		
File Description			Document		
	on ion and award details		Document		

#### **3.3.4** Number of start-ups incubated on campus during the last five years

#### Response: 13

3.3.4.1 Total number of start-ups incubated on campus year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
6	3	3	0	1

File Description	Document
List of startups details like name of startup, nature, year of commencement etc	View Document
e- sanction order of the Institution for the start ups on campus	View Document
Contact details of the promoters for information	View Document
Any additional information	View Document

## **3.4 Research Publications and Awards**

3.4.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

Response: Yes

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

# **3.4.2** The institution provides incentives to teachers who receive state, national and international recognition/awards

Response: Yes

## 3.4.3 Number of Patents published/awarded during the last five years

## Response: 38

3.4.3.1 Total number of Patents published/awarded year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14	
15	4	11	6	2	

File Description	Document
List of patents and year it was awarded	View Document
Any additional information	View Document

# **3.4.4** Number of Ph.D.s awarded per teacher during the last five years

## Response: 0.65

3.4.4.1 How many Ph.Ds are awarded within last 5 years

Response: 41

3.4.4.2 Total number of teachers recognised as guides during the last 5 years

Response: 63

File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document
URL to the research page on HEI web site	View Document

3.4.5 Number of research papers per teacher in the Journals notified on UGC website during the last

## five years

## Response: 2.15

2017-18	2016-17	2015-16	2014-15	2013-14
222	92	99	117	51
ile Descriptio	n		Document	
-	papers by title, auth	nor, department,	Document       View Document	1

# **3.4.6** Number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings per teacher during the last five years

#### Response: 2.25

3.4.6.1 Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14	
260	101	119	69	58	

File Description	Document
List books and chapters in edited volumes / books published	View Document
Any additional information	View Document

# **3.4.7** Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

**Response:** 1.44

File Description	Document
BiblioMetrics of the publications during the last five	View Document
years	

**3.4.8** Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - h-index of the Institution

#### Response: 7.5

File Description	Document
Bibiliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View Document

## **3.5 Consultancy**

**3.5.1** Institution has a policy on consultancy including revenue sharing between the institution and the individual

Response: Yes	
File Description	Document
Soft copy of the Consultancy Policy	View Document
Minutes of the Governing Council/ Syndicate/Board of Management related to Consultancy policy	View Document
URL of the consultancy policy document	View Document

## 3.5.2 Revenue generated from consultancy during the last five years

**Response:** 49.19

3.5.2.1 Total amount generated from consultancy year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
11.51	9.85	16.5	3.37	7.96

File Description	Document
List of consultants and revenue generated by them	View Document
Audited statements of accounts indicating the revenue generated through consultancy	View Document
Any additional information	View Document

## **3.5.3** Revenue generated from corporate training by the institution during the last five years

# Response: 10.6

3.5.3.1 Total amount generated from corporate training by the institution year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14	
8.47	2.11	0	0.02	0	
			D 1		
File Description	n		Document		
-	n onsultants and rever	nue generated by	Document           View Document	1	

## **3.6 Extension Activities**

**3.6.1** Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

#### **Response:**

Nitte Meenakshi Institute of Technology has made remarkable impact to the environment and all the neighbor community by setting up College-Neighborhood-Community Network. Major emphasis is given on student engagement, holistic development, and service orientation of students contributing towards good citizenship.

Through the Network of NSS/NCC/Rotract/ Youth Wing of Red Cross Society/ Literary Forum/Chiguru units lead by a team of committed faculty will engage in the several community development programmes sponsored by the institute. Lack of awareness has been observed among the villagers about hygienic and nutrition, cleanliness, illiteracy, prevailing diseases etc. Efforts are directed in solving some of these issues.

NMIT has adopted three villages in its neighborhood viz Gantiganahalli, Harohalli and Nagenehalli to sensitize the young generation of students on several social issues by engaging them in several social service activities. Some of the programs organized are Road safety awareness programs, awareness on effects of narcotic drugs/ Cleanliness awareness program, open defecation eradication drive/ Gender sensitization drives/ rainwater harvesting/ blood donation camps etc. The college on its parts donated furniture, books, water fitter etc., to the government schools in the neighborhood.

Cleanliness awareness programs / Swatch Bharat programs and awareness programs on open defecation have been organized in association and collaboration with local bodies and NGOs. Along with student local citizens, members of Panchayat, political leaders are actively participated in spreading the message to the villagers. As an extension of the above group of students visit each and every house in Gantiganahalli and Venkatala villages to create awareness about the importance of cleanliness.

Students who are involved in these programs get educated themselves and motivate their peers to take up such initiatives. Some of the programs organized such as mass awareness rallies/ Speech by NCC cadets/ Street plays/ Shramdaan/ statue cleaning/ poster making competitions/ mass mobilization of shramdaan/essay completion/ ODF awareness programs/ etc. are carried out regularly.

Gender sensitization drive was a great success as we received very good responses from the Villagers. Rallies were organized and NCC cadets displayed placards and attracted the people with street play. Road safety and narcotic drug awareness programs were conducted in collaboration with Civil defense/ Karnataka police/ Narcotics Control Bureau of India. Street plays, rallies and lectures were also conducted for spreading the message as a regular basis.

Working outside the college campus and with diversified social groups of people allows students to gain more self-confidence, autonomy, and appreciation for others. These activities help them to become good leaders as well as well molded citizens.

File Description	Document
link for additional information	View Document

# **3.6.2** Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

## Response: 34

3.6.2.1 Total number of awards and recognition received for extension activities from Government /recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
25	6	0	3	0

File Description	Document
Number of awards for extension activities in last 5 years	View Document
e-copy of the award letters	View Document

# 3.6.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the last five years

#### **Response:** 85

3.6.3.1 Number of extension and outreach Programs conducted in collaboration with Industry, Community

and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

2017-18	2016-17	2015-16	201	4-15	2013-14
28	14	16	17		10
File Description			Document		
Reports of the ever	nt organized		View Docu	ment	
Reports of the event organized Number of extension and outreach programs conducted with industry,community etc for the last five years			View Docu	ment	

# 3.6.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

#### Response: 51.38

3.6.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. yearwise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2751	1566	2247	2860	1598

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Government or NGO etc	View Document

# **3.7** Collaboration

3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange per year

## Response: 76.8

3.7.1.1 Total number of Collaborative activities for research, faculty exchange, student exchange yearwise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14	
176	60	49		56	43	
File Description						
File Descrip	tion		Docun	nent		
-	<b>tion</b> Collaborative activities	for research,		nent Document		

# **3.7.2** Number of linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the last five years

Response: 831

3.7.2.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
271	194	168	122	76

File Description	Document
e-copies of linkage related Document	View Document
Details of linkages with institutions/industries for internship	View Document

# **3.7.3** Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

#### Response: 70

3.7.3.1 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years (only functional MoUs with ongoing activities to be considered)

2017-18	2016-17	2015-16	2014-15	2013-14
38	10	4	12	6

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	View Document

# **Criterion 4 - Infrastructure and Learning Resources**

# 4.1 Physical Facilities

**4.1.1** The institution has adequate facilities for teaching - learning. viz., classrooms, laboratories, computing equipment, etc

#### **Response:**

Facilities such as Infrastructure and Learning Resources are considered as an important element in today's Institutions of higher learning in promoting quality education. These facilities can have a profound impact on both teacher and student outcomes. Hence the institute provides best resources and facilities to support teaching-learning. The campus is spread over 22.3 Acres of land with 60,802 Sqm of built up area for teaching/learning facilities. The college has a Master Plan for the campus. Every year as per the physical infrastructure requirements of the next academic year, an annual plan for construction of additional buildings and infrastructure is prepared and also executed. Adequate budget is allotted each year to ensure that the planned infrastructure is in place before the start of the new academic year. The facilities comprise of Classrooms, Laboratories, Centers of Excellence(CoE), Seminar Halls, Board Rooms, Auditoria, Faculty Rooms, Library & Information Centre etc. We have a total of 88 classrooms/ Tutorial Rooms and 95 well-equipped laboratories with advanced equipment, machineries and softwares. Class rooms are well furnished and ventilated with an area of about 77Sq.m. ICT facility such as LCD Projector, Computer, Audio Systems, Wi-fi, Student management system etc have been provided. Lecture capturing rooms, Smart class rooms and English language laboratories are catering to the needs of the students. NMIT has 4 seminar halls of area varying from 77 Sqm to 256.98 Sqm, with computing facility and internet connection. We have an auditorium of area 600 Sqm with seating capacity of 500, it has ICT facility for conducting workshops/conferences/placement training sessions. The open-air theatre with an area about 2,500 Sqm can accommodate 2,000 people at a time. The Central Computing Facility (CCF) has extensive academic computing & networking facilities with a total of 1639 computers in the institute. Student Computer Ratio of 3.4:1 is maintained in the institute. The institute has numerous softwares and 400 mbps internet connectivity installed which facilitate the students to boost their knowledge on par with industry requirements. The institute has established 6 CoEs in the area of Small Satellite, Robotics, Nanomaterials and MEMS, Design and Process Simulations, Computational Fluid Dynamics and Aerospace and IoT to encourage multi-disciplinary research activities.

The Library & Information Centre of NMIT is housed in a spacious area of about 1300 Sqm with a seating capacity for about 300 people. The Centre has a comprehensive collection of Books, Periodicals, Audio/Video CD-ROMs, e-Resources in Engineering, Basic Sciences, Management and General subjects.

File Description	Document
Link for Additional Information	View Document

**4.1.2** The institution has adequate facilities for sports, games (indoor, outdoor),gymnasium, yoga centre etc., and cultural activities

**Response:** 

NMIT has excellent infrastructure for promoting sports for the benefit of students. The college has a Student Council which organizes co-curricular and extracurricular activities regularly. The Student Council is comprising of one girl/one boy from each class/section and the meetings of the council are held under the guidance of the faculty advisors.

The campus has a multi-purpose track, hockey ground, facilities for cricket, basketball, volleyball, ball & shuttle badminton and throw-ball. It also has facilities for indoor sports such as table tennis, carrom and chess etc. Students at the college take part in Zonal, Inter-zonal and Varsity Level Tournaments. Elite sportsmen and women are trained by Specialist Coaches. NMIT has achieved outstanding success in various sports and games events. Also, the college has hosted several University level tournaments such as VTU Bangalore North zone inter collegiate Basketball Men Tournament, VTU Bangalore North zone and inter zone volleyball tournaments etc. Separate multi-purpose gyms for male and female students with a range of sophisticated equipment are also provided and students are encouraged to use these facilities. A dedicated facility for Yoga and Meditation is also provided to students which increases concentration, helps cope with stress, and also gives a break from the normal activities.

Facility to conduct sports and	Year of establishment	Area(Sqm)
	cultural	
activities		
Playground	2001	8197
Old Gym(For men)	2004	86.85
New Gym(For Men)	2013	86.85
New Gym(For Women)	2013	104
Basket Ball court	2005	1760
Hockey ground	2010	4050
Volley-ball court	2010	850
Badminton court	2012	436.36
Badminton court(Indoor)	2016	304.93
Open Air Theatre	2001	2500
Auditorium	2018	600
Seminar Halls	2001	Varying from 77Sqm to
		256.98Sqm

National level Annual Techno Cultural fest, Anaadyanta was started in the year 2004. Anaadyanta amalgamates the thinkers and the dreamers in a three-day festivity of Technology, Art and Culture. From showcasing ideas, wit and opinions to celebrating creativity, Anaadyanta has successfully garnered eagerness and with escalating footfall every year, it has been leading in showcasing talent from among top institutes across the country. Anaadyanta is growing bigger and better with more events, bigger line ups and interesting quirks with every passing year.

A range of clubs and societies have been formed with interests varying from environmental activism to photography and various forms of art. Clubs like Music Club, Dance Club, Art club, Theatre Club, Photography club, Cultural Association, Literary forum, NMIT Hostels' Association etc exist at NMIT. Students are actively participating in the Units of NCC, NSS, ROTRACT, Youth Wing of RED CROSS society etc.

File Description	Document	
Any additional information	View Document	
link for additional information	View Document	

# **4.1.3** Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc

#### Response: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

#### Response: 93

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	View Document
Link for additional information which is optional	View Document

# 4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

#### Response: 52.08

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
1450	1420	1000	1250	1060

File Description	Document
Audited utilization statements	View Document
Any additional information	View Document

# 4.2 Library as a Learning Resource

## 4.2.1 Library is automated using Integrated Library Management System (ILMS)

#### **Response:**

A library plays a pivotal role in any HEI by providing necessary information to the learners. NMIT has a spacious central library which procures, manages and disseminates the electronic information and knowledge to the students, research scholars and faculty. The Central library is situated in the first and second floor of the Academic Block and occupies about 1300 Sqm and can accommodate about 300 students at a time. The Library is fully computerized since 2001 with application of EasyLib (until 2014) and then since 2014 KOHA- Integrated Library Managaemnt Software (Version 18.7) along with Bar code system.

## Library Collection

Titles	11,200	
Volumes	65,174	
Printed Journals–National	130	
Open access system	(Dewey Decimal Classification Scher	ne-231
Online access of international databases (Digital Library)	Member of National Digital Library &	& VTI
Access to	8 databases; 9880 e-Journals	
Digitized CDs'	2692	
NPTEL video lectures for reference	1000 Nos.	
Facilities	Reprographic/Scanning/Printing	
For ready reference	Departmental libraries	

Students and Faculty members can borrow and refer books in the central library by providing their respective ID card. It also provides books to students through Book Bank facility, which has an amazing collection of around 1,925 books with yearly addition of new books. Library has a huge collection of General Books in reference Section. Apart from Central Library, all Engineering Departments have departmental libraries for quick access of books. Also, the institute has an independent Main Library for Management Studies (MBA). Readers can make use of the extended library timing which is between 8:30am to 10pm. Free Internet access is provided to students, research scholars and faculty members of the institution. All the first-year students are made aware about the various facilities provided by the Central Library every year during Library Orientation Programme at the beginning of the academic session. Institute is having an e-resource server which has remote accessibility, loaded with Courseware (Videos & Notes) of MIT-OCM, Berkley, Stanford University and NPTEL-(National Programme for Technology Enhanced Learning, developed by IITs with the assistance of MHRD) comprises of UG and PG Engineering Syllabus, Soft Skills etc. It has e-resources such as CDs/DVDs/Copies of Question Papers, e-Books/e-Seminar Papers/Journals with articles/Newspaper clippings about NMIT, STUDSAT projects etc. are accessed through 'DSpace' software. Institute is subscribed to IEEE, Science Direct and other ejournals that can be accessed online. These resources can be accessed by students at any point of time to gain the knowledge beyond the syllabi. NMIT Library has implemented the Turnitin software service for Plagiarism checking of Research Papers and Thesis. The library also offers various vital services like Current Awareness Services, Newspaper Clipping Service, Reference Services and information regarding examinations etc.

File Description	Document	
Any additional information	View Document	
link for additional information	View Document	

# **4.2.2** Collection of rare books, manuscripts, special reports or any other knowledge resource for library enrichment

## **Response:**

The Rare Book collections of our Library has about 190 rare books covering all subjects in the field of Science and Technology including that of higher research from all parts of the world which are remarkable

for their rarity, valuable first editions and special editions. To name a few, the institute has an erratic collection of books published dated back to 1920s by prominent publishers like McGraw Hill, Pergamon, Chapman and Hall and Elsevier etc. These *books* are housed in the Reference section.

File Description	Document	
Any additional information	View Document	
link for additional information	View Document	

4.2.3 Does the institution have the following		
1.e-journals		
2.e-ShodhSindhu		
3. Shodhganga Membership		
4.e-books		
5.Databases		
Any 4 of the above		
Any 3 of the above		
Any 2 of the above		
Any 1 of the above		
<b>Response:</b> Any 4 of the above		
File DescriptionDocument		
Details of subscriptions like e-journals,e- ShodhSindhu,Shodhganga Membership etc	View Document	
Any additional information	View Document	

# **4.2.4** Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 35.59

4.2.4.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
53.08	38.37	29.92	34.15	22.43

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	View Document
Audited statements of accounts	View Document
Any additional information	View Document

4.2.5 Availability of remote access to e-resources of the library		
Response: Yes		
File Description	Document	
Any additional information View Document		

4.2.6 Percentage per day usage of library by teachers and students			
Response: 22.39			
4.2.6.1 Number of teachers and students using library per day over last one year			
Response: 1106			
File Description     Document			
Any additional information	View Document		

# 4.3 IT Infrastructure

# 4.3.1 Institution frequently updates its IT facilities including Wi-Fi

## **Response:**

The Central Computing Facility(CCF) forms an important component of NMITs infrastructure, providing a wide spectrum of services to the students as well as faculty and staff involved in research and other academic activities. The CCF provides support for students to have hands-on experience of what they learn in the classrooms and enhance their computer skills. It also supports research activities undertaken in the Institute. CCF has extensive academic computing & networking facilities thus, providing the College community with state-of-art facilities to cater to the computational needs and access to Internet resources. We have total of 1639 computers in the institute. Outdated computer systems are regularly replaced by newer versions.

The college has BSNL leased line(1:1) connectivity of 400 Mbps. The access speed with download speed and upload speed of 250 Mbps(At peak hour) at the terminating point is provided. The Campus network is

carefully planned, keeping options in mind for future expansions. Fibre-optic cabling is used to connect all the major buildings. The bandwidth has been gradually increased from 1 Mbps to 400 Mbps over a period of 19 years to suit the demands.

Internet connectivity	Year of up-dation
400 Mbps	2019 January
200 Mbps	2017 Jan -2018 Dec
100 Mbps	2015 Jan -2016 Dec
25 Mbps	2013 Jan -2014 Dec
10 Mbps	2011 Jan -2012 Dec
4 Mbps	2008 Jan-2010 Dec
1 Mbps	2001 Aug-2007 Dec

CCF has strong IT security infrastructure(Sophos) that protects the NMIT network from hackers. Systems are secured through Seqrite Antivirus software. Antivirus software are updated on yearly basis. Most of the servers/computers use Open Source platforms; hence software gets updated whenever new patch is available. We have an exclusive internet and language labs. The lab is kept open beyond working hours. The academic and hostel blocks are provided with Wi-fi facility since 2012.

Student management system, 'My Gurukul' provides information on existing and former students related to admission, change of branch, feedback etc. It has various features like timetable formation, mentoring, students' attendance and performance etc. It also displays schedule of Events, Examinations and Holidays in the calendar, etc. The students and staff are given individual login ID and password to access their account.

Biometric scanner-based attendance capturing system is installed to capture attendance of all the employees. NMIT has a mail server for employees to access e-mail.

The college follows standard IT policies such as Computer Hardware Purchase and Support, Campus Wireless Network, Network Security Zone, Password Management and Asset Management.

The college website provides visitors with a straightforward and intuitive way to navigate the site for information about the institution. It has high definition images, interactive portions, display on ongoing events and projects etc. *Prospective Students and Parents* can learn more about the campus from the website.

File Description	Document
Any additional information	View Document
link for additional information	View Document

#### 4.3.2 Student - Computer ratio

Response: 3.23

File Description	Document
Any additional information	View Document

4.3.3 Available bandwidth of internet connection in the Institution (Lease line ) ?50 MBPS		
35 MBPS - 50 MBPS		
20 MBPS - 35 MBPS		
5 MBPS - 20 MBPS		
Response: ?50 MBPS		
File Description	Document	
Any additional information	y additional information View Document	

# **4.3.4** Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

#### **Response:** Yes

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	View Document
Any additional information	View Document
Link to photographs	View Document

# 4.4 Maintenance of Campus Infrastructure

**4.4.1** Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

#### **Response:** 27.9

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
762.13	609.12	694	653.63	616.83

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts.	View Document
Any additional information	View Document

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

## **Response:**

Predefined measures exist and implemented within the Institute for the maintenance and utilization of its Physical, Academic and Support facilities. The high standard of maintenance ensures quality education and an inclusive teaching-learning experience to its faculty and students. Committees are formed for maintenance purpose.

- Stock verification of all the departments is done on regular basis. Faculty and staff members are involved in stock verification processes. Number of groups is formed with one senior faculty member as in-charge to verify the stock. Faculty from a particular department is not allowed to involve in the verification of stocks of his/her department. Adequate budget is allotted each year to ensure proper maintenance of facilities in the campus before the start of the new academic year.
- Maintenance of Computer laboratories, Batteries and Air conditioners are done by qualified technical staff of the respective departments. If necessary, assistance is taken by the vendors and manufacturers.
- The ICT enabled classrooms are maintained on a regular basis. Exclusive personnel are recruited to constantly monitor and keep up the usage of the systems without causing disturbance to the classes. Additional requirement of computers for the research and the project works are encouraged. Dedicated System/Network administrators are in place to undertake maintenance of Computer Peripherals & Networks. The institute has tied up with CITO Infotech for computer related systems repairs and maintenance by Hykon Ltd for servicing UPSs. All the e-waste is disposed through a vendor as per the guidelines.
- Regular updating of library books on a semester basis as per the changes in the syllabi is carried out. Student and Faculty are permitted to recommend the purchase of desired or relevant book to be procured to the library. Library committee discusses and approves the procurement of these books. Library committee meets twice a year to evaluate the existing resources and the number of copies available in the library. The adequate copies of books required are noted down in consultation with HoDs and the members of the faculty. List of required books are prepared after proper planning from the approved budget. Funds are allotted to purchase books to the departmental library whenever it is necessary even in between semesters. This procedure is carried out by the Librarian after the approval from the Library Committee.
- The Training and Placement Department provides pre-placement training in soft skills and Aptitude to all pre-final year students to enhance their performance at interviews. More than 100+ reputed companies representing diverse sectors visit the campus every year. The college has many MoUs with companies such as INFOSYS, WIPRO, Unisys, KPIT, Subex and GEIOM. These MoUs provide excellent opportunities for students to develop industry relevant skills.

- The college has a full-fledged project cum maintenance cell headed by a Senior Army Officer of the rank of Colonel (Engineers regiment) for construction and maintenance of all infrastructural facilities. Every year as per the physical infrastructure requirements of the next academic year, an annual plan for construction of additional buildings and infrastructure is prepared and executed. The institute has created good ambience in the campus by creating lawns, gardens, temples, rain water harvesting system, play grounds and parking facilities. They are also responsible for the proper operation of generator, Sewage Treatment Plant, electrical works, lifts and fire safety aides.
- The physical education department of college under the supervision of the Physical Director maintains the gym, sports equipment, kits and playgrounds. These facilities are kept ready and up to the mark before the commencement of sports activity.
- NMIT has BSNL telephone landline connections. All the laboratories/faculty rooms/seminar halls are provided with landline connections. Management and maintenance of telephones and extensions in the entire premises is done by professionals.
- The entire campus is Wi-Fi enabled and is under Video Surveillance. Security personnel are hired from a reputed security agency. CCTV cameras and security processes are maintained by the Security Chief appointed by the college.
- The college has a fleet of 33 buses which are regularly operating for providing transport facilities to all the staff and students from different corners of Bangalore city to the college campus and back. Transport facilities are also maintained by the college transport staff.
- The college has a well-equipped medical centre with a highly-qualified doctor and a nurse. A 24hour ambulance facility is also provided.
- Cafeteria and six other eateries serving multiple cuisines are available in the campus.
- Two ATM centres are available for faculty and students and are maintained by Corporation Bank and Axis Bank Extension counters.
- The college has setup a sewage treatment plant and the treated water is utilized for maintain the gardens and lawns.
- Well maintained separate common rooms and rest rooms for Girls and boys exist in the campus.
- Water purifiers with RO technology have been installed in all floors to provide safe drinking water. The quality of drinking water is tested on regular basis.
- The fire extinguishers are fixed in all the laboratories and corridors. They are refilled and kept functional all over the year.
- Adequate electric power backup systems have been established in case of power failure.
- Spacious parking facilities for two and four wheelers are provided to the staff members and students.

File Description		Document
Any additional information		View Document
link for additional information	7	/iew Document

### **Criterion 5 - Student Support and Progression**

#### **5.1 Student Support**

## **5.1.1** Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years

#### Response: 27.17

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1499	1374	1283	1022	739

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	View Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document

## 5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 10.33

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
625	675	349	341	272

File Description	Document
Any additional information	View Document

#### 5.1.3 Number of capability enhancement and development schemes -

#### 1. Guidance for competitive examinations

#### 2. Career Counselling

<ul> <li>3.Soft skill development</li> <li>4.Remedial coaching</li> <li>5.Language lab</li> <li>6.Bridge courses</li> <li>7.Yoga and Meditation</li> <li>8.Personal Counselling</li> </ul>	
7 or more of the above	
Any 6 of the above	
Any 5 of the above	
Any 4 of the above Response: 7 or more of the above	
File Description	Document
Details of capability enhancement and development schemes	View Document
Any additional information	View Document
Link to Institutional website	View Document

## **5.1.4** Average percentage of students benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

Response: 54.62

5.1.4.1 Number of students benefited by guidance for competitive examinations and career counselling offered by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2	2014-15	2013-14
3866	2377	2450	1	946	1321
File Description	Dn		Docume	nt	

during the last five years	0	
Any additional information		View Document

# **5.1.5** Average percentage of students benefited by Vocational Education and Training (VET) during the last five years

#### Response: 46.99

5.1.5.1 Number of students attending VET year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
3397	2720	1807	1195	1215

File Description	Document
Details of of students benefited by Vocational Education and Training (VET)	View Document
Any additional information	View Document

### 5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

<b>Response:</b>	Yes
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File Description	Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

#### **5.2 Student Progression**

Response: 61.65				
2.1.1 Number	of outgoing student	s placed year-wise d	uring the last five yea	ars
2017-18	2016-17	2015-16	2014-15	2013-14
794	664	794	581	361

File Description	Document
Self attested list of students placed	View Document
Details of student placement during the last five years	View Document
Any additional information	View Document

#### 5.2.2 Percentage of student progression to higher education (previous graduating batch)

#### Response: 5.31

5.2.2.1 Number of outgoing students progressing to higher education

Response: 62	
File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education	View Document

# **5.2.3** Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 52.05

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil services/ State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
126	73	64	31	26

5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: NET/SLET/GATE/GMAT/CAT, GRE/TOEFL/ Civil Services/State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
167	118	112	91	82

File Description	Document
Upload supporting data for the same	View Document
Number of students qualifying in state/ national/ international level examinations during the last five years	View Document

#### **5.3 Student Participation and Activities**

**5.3.1** Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) during the last five years

#### Response: 60

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
24	5	20	9	2

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	View Document
e-copies of award letters and certificates	View Document
Any additional information	View Document

### **5.3.2** Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

#### **Response:**

NMIT has created a platform for active participation of the students in various academic & administrative bodies leading to the development and quality enhancement of the Institute.

Students' Council is an active and dynamic body driven by the students and mentored by the Faculty. The objective of the students' council is to give students an opportunity to develop leadership qualities through organizing and participating in various co-curricular/extra-curricular/Extension activities. Students' Council comprises of Class Representatives, Faculty Coordinators, Physical Director, Placement Officer,

HODs, & Principal. Office Bearers will be elected by the members of the student council. Under students' council we have several bodies for conducting various activities viz.

- Cultural Committee
  - Anaadyanta
  - Art Club
  - Music Club
  - Theatre Club
  - Dance Club
  - Photography Club
- Sports Committee
- Placement Committee
- Technical Committee
- Foreign Students Committee
- Literary Forum
- NSS
- NCC
- Rotract Club
- Youth Wing of Red Cross Society
- Hostel Committee
- Chiguru- Kannada Association

Each of the above will be headed by Student Convenor & Co-Convenor mentored by Faculty-Convenor. Under these bodies, students will involve in planning various activities/promotion of these activities inside & outside the Institute/Interacting with the benefactors for the annual Techno-Cultural Fest/Event Management/Editing News Letter and College Magazine/Organizing awareness camps/extension activities/etc.

In addition to the Institutional Level Bodies, every department has various clubs, student chapters under various professional organizations to manage department level technical activities namely:

- 1. The Indian Society for Technical Education (ISTE) Students' Chapter
- 2. Institution of Engineers (IE) Students' Chapter
- 3. Institution of Electronics and Telecommunication Engineers (IETE) Students' Chapter
- 4. The Aeronautical Society of India Students' Chapter
- 5. Association of Consulting Civil Engineers (India) Students' Chapter
- 6. Indian Concrete Institute (ICI) Students' Chapter
- 7. The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) Students' Chapter
- 8. Fluid Power Society of India (FPSI) Students' Chapter
- 9. Society of Automotive Engineers (SAE) Students' Chapter
- 10. The American Society of Mechanical Engineers (ASME) Students' Chapter
- 11. National Entrepreneurship Network (NEN) Students' Chapter and so on.

Students are represented in various academic & administrative Bodies/Committees like:

1. Internal Quality Assurance Cell (IQAC): Student members in IQAC help to disseminate the quality policies adopted by the institution among the student community and also help in

communicating the student view point while taking any quality policy decision.

- 2. Departmental Undergraduate Committee (DUGC)/ Board of Studies (BoS): DUGC/ BoS invite UG students on academic related matters / revising the curriculum.
- 3. **Program Assessment Committee (PAC):** Students actively participate in evaluating program effectiveness and proposing necessary changes.
- 4. **Departmental Advisory Body (DAB):** Students actively participate in the DAB to fulfil outcome based education requirements.
- 5. Class Committee: Class representatives along with a few active students are a part of the Class Committee which monitors the teaching/learning processes of the class.

File Description	Document	
Any additional information	View Document	
Link for Aditional Information	View Document	

### **5.3.3** Average number of sports and cultural activities / competitions organised at the institution level per year

#### Response: 10

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
11	15	7	6	11

File Description	Document	
Report of the event	View Document	
Number of sports and cultural activities / competitions organised per year	View Document	

#### **5.4 Alumni Engagement**

**5.4.1** The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years

#### **Response:**

NMIT Alumni Association creates and maintains an enduring connection between the Institute and its alumni. Collaborating with an extremely dedicated Office Bearers, the Association works to enrich strong bonds between alumni, students and the Institute. Association works to keep alumni informed, and create a

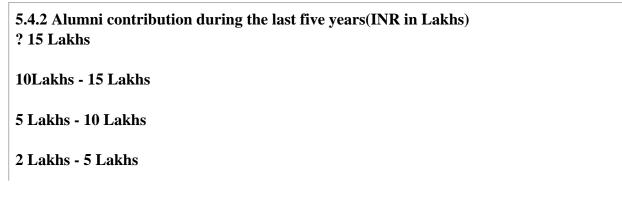
network enabling them to remain engaged with their alma mater.

NMIT Alumni Association has been functioning since 2006. Every year, the institute along with the office bearers of Alumni Association conduct an alumni meet to interact with students and faculty and to get to know the latest developments and achievements of the College/Alumni. During the alumni meet, alumni share their feedback and suggestions which help to improve curriculum, facilities, placement, training etc leading to huge improvement in these areas. Alumni are invited to the institute during workshops/ programs where they share their knowledge among the students/faculty. An exclusive networking Web and Mobile App (www.alumni.nmit.ac.in /Almashines Alumni) has been created by partnering with a company named AlmaShines, thus 4333 alumni are connected to their alma mater. The portal is a focal point of contact among alumni to interact and network with each other as well as with the alma mater. The alumni can get information about the institute, fellow classmates, students, faculty, conferences, alumni meets, featured alumni, success stories of alumni using this portal. The alumni are actively supporting the institute by posting job/ internship opportunities to the current students/ other alumni who can apply through the Portal. The alumni association of the Institute is a conglomeration of entrepreneurs, professionals and bureaucrats catering to the society in various sectors. The institute as of now has an Alumni Chapter at the parent institute but proposes to host Alumni Chapters across the globe (New Delhi, USA, Dubai & Europe etc). In the near future, we want to make the Alumni Association a strong pillar of the institute so that it will serve to help in development of all the stakeholders related to the institution.

Alumni network by itself is one of the best professional networking platforms available today. Hence it has been proposed in the Internal Quality Assurance Cell (IQAC) that certain identified alumni will be paired with current students for technical mentoring which will enhance technical skills of the students.. Being an autonomous institute, Alumni have been playing an active role in the design of curriculum and the syllabus by being members of Board of Studies (BoS) of their respective departments. Various committees like IQAC, Advisory committees, etc involve alumni for the development and quality enhancement of the institute. The institute regularly interacts with the Alumni to benchmark best practices and implement them wherever necessary.

Alumni are contributing significantly with paid membership of Rs. 1000/- to the alumni association. In 2014, few of the Alumni have contributed towards tuition fee for one of the economically weak students. Recently, couple of Departments have started the Annual Project Exhibition & Competition with financial support by the Alumni.

File Description	Document
Link for Additional Information	View Document



Response: ? 15 Lakhs		
File Description	Document	
Any additional information	View Document	
Alumni association audited statements	View Document	

#### 5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

#### **Response:** 19

5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
6	4	4	2	3

File Description	Document
Report of the event	View Document
Number of Alumni Association / Chapters meetings conducted during the last five years	View Document

### **Criterion 6 - Governance, Leadership and Management**

#### 6.1 Institutional Vision and Leadership

**6.1.1** The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the institution

**Response:** 

#### Vision of the Institution

To provide India and the World, technical manpower of the highest academic excellence and World class by shaping our youth through holistic and integrated education of the highest quality.

#### Mission of the Institution

To develop Nitte Meenakshi Institute of Technology through Quality, Innovative and State-of-art educational initiatives into a Centre of Academic Excellence that will turn out youth with well-balanced personality & commitment to rich cultural heritage of India and who will successfully face the Scientific and Technological challenges in the fast-evolving Global scenario with a high degree of credibility, integrity and ethical standards.

The Vision and Mission statements of the Institute is of current relevance and are consistent with Vision and objectives of the draft National Education Policy (2016). The institute considers all the stakeholders in different capacities into account and educates them in accomplishing the goals towards Vision and Mission. A 360 degree perspective plan is developed by a team formed by the Governing Council (GC) which considers important factors i.e. structure, mechanisms and stake holders within the system and their capacity to act, their creativity, the collaboration between them, their confidence, and the coherence of the action with other initiatives.

The Principal, who is the member secretary of the governing Council, provides leadership for the academic administration and creates an effective environment, conducive for learning. GC ensures that quality education is imparted to the students that foster the holistic development of the students. GC also ensures all-round development of the Institute and achievement of strategic plans. Principal takes necessary steps for the implementation of the Governing Council decisions, through the Academic council, Board of Studies (BOS), Departmental Advisory Committee (DAC) as well as several other committees.

The Academic Council is responsible for the execution of Vision and Mission of the Institution through the academic activities and also it will guide several academic bodies in the implementation of Outcome Based Curricula, Outcome Based Learning & Teaching, Outcome Based Assessment as well as co-curricular activities.

The other academic bodies such as Internal Quality Assurance Cell (IQAC), Board of Studies (BOS), Departmental Advisory Committee (DAC), Program Assessment Committee (PAC) and Departmental Undergraduate/Postgraduate Committee (DUGC/DPGC) will work towards accomplishing the goals of Vision & Mission. All the stakeholders are members of the above mentioned committees.

Faculty, Students, Alumni, Parents & Employers will participate, through several Committees, in

developing curriculum, teaching methodology, as well as student welfare. This ensures, all stakeholders of the Institute are considered at various stages in achieving the Vision and Mission for sustainable growth to cater the local, national and global needs.

File Description	Document
Link for Additional Information	View Document

#### 6.1.2 The institution practices decentralization and participative management

#### **Response:**

Decentralized education promises to be more efficient, better reflect on local priorities, encourage participation of all stakeholders, improve learning outcomes and quality of teaching. To achieve this, the institution has decentralized the whole working of the institution thus making the mechanism transparent at all levels such as Management, Administration, Financial and Academic activities. The Governing council (GC) is the highest authority to implement and monitor the rules & regulations and to delegate the powers to various bodies like Academic Council (AC), Boards of Studies (BOS), Board of Examiners (BOE) and Finance committee and to look into the activities and smooth functioning. The Principal who is the Member Secretary of the governing body takes necessary steps for implementing GC decisions, through the HODs as well as members of the several committees.

The Finance Committee will look into the budgetary provisions and apprises the GC about the same. It will monitor the institution's budget and takes corrective action to address the financial issues. Principal is having authority to spend the entire recurring expenditure of the Institute within the sanctioned budget after following the necessary procedure.

Academic council will ensure the quality in academic activities such as design & framing of curricula, proper evaluation system etc. through its subsidiary bodies such as BoS and BOE. Dean-Academics are responsible for all the academic related activities and he will act in consultation with Principal.

Internal Quality Assurance Cell (IQAC) is responsible for overseeing the activities of various departments to review and improve the quality of teaching and learning processes.

At the departmental level the process is decentralized and Head of the department has the responsibility of all the academic activities such as designing the curriculum and scrutinizing the question paper through DUGC, BOS and BOE. All the stakeholders including Faculty, Students, Alumni, employers, industry experts, educationalist, scientist, community representatives are included in various functional committees of the institution. CO, PO & PSOs attainments and GAP Analysis will be reviewed by Program Assessment Committee (PAC) and Department Advisory Committee (DAC). The Controller of Examination will oversee the Evaluation process of SEE.

#### Other decentralized administrative committees are

- Purchase Committee
- Anti-Ragging Committee

- SC/ST and BCM Cell
- Internal Complaint Committee
- Students' Grievance Redressal Committee
- Library Committee
- Hostel Committee
- Student Council

The Trust has provided a handbook consisting of rules & regulations of the Institution and staff welfare policies, which help them to function with more ease and better efficiency.

We have a culture of participative management in the institution. The levels of participative management are

- Institutional Level
- Departmental levels
- Purchase & Procurement activities
- Construction activities
- Planning & Development
- Enforcement of Discipline

File Description	Document	
Any additional information	View Document	
Link for Additional Information	View Document	

#### **6.2 Strategy Development and Deployment**

#### 6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

#### **Response:**

The institution has a perspective plan, which is made by the combined participation of senior faculty members, Heads of the departments, Deans, Principal and the Management. The plan is vetted by the Governing body. All the departmental activities are streamlined according to the perspective plans. It is being formulated by looking into down the line over a period of minimum five years. The goals and objectives are being set according to the perspective plan. These are made known to each and every member of the institute through various meetings and platforms.

One activity successfully implemented based on the strategic plan is

• Accreditation of all UG Programs

Accreditation will ensure Quality and Relevance of Education, especially of the programs/Institute. In this regard the Institute has a strategic plan to reach the following Milestones

- NBA Accreditation of all UG Programs
- NAAC accreditation
- NIRF Ranking

Outcome based education is one of the important parameters for Accreditation, In this regard following actions plans have been implemented

- Deputed senior professors for Master Trainer Program organized by NAAC/NBA
- Developed an Outcome Based Curriculum by referring to Guidelines of Professional Bodies, UGC, AICTE and VTU.
- Conducted regular Faculty Awareness Programs on Outcome Based Education
- Faculty are practicing Outcome Based Learning & Teaching(OBLT) and Outcome Based Assessment (OBA) by adopting Innovative Delivery & Assessment methods
- Administrative Setup to monitor the OBE parameters is in Place

Faculty Information and Contributions is one of the Parameters for Accreditation. In this regard following action plan have been implemented

- Recruited eminent Faculty as and when required to meet the Faculty-Student Ratio i.e. around 1.15
- Faculty are regularly deputed for Faculty Development Programs
- Faculty are deputed to pursue Doctoral Programs
- Established Several Multi-Disciplinary Research Centres and Department Level Research Laboratories for increasing Research Outcome
- MOUs with reputed Research Organizations

Students' Performance is another Parameter for Accreditation. In this regard following action plan have been implemented

- Faculty introduced effective delivery method to improve the Learning ability of the student
- Strong interaction with Industries for Internship/Placements
- Regular Training Programs to improve placement/higher studies percentage
- Several Professional Bodies/Student bodies have been established to excel in co-curricular activities
- MSME Incubator/IEDC have been established for inculcating entrepreneurial skills among the students

Facilities are one of the Parameters for Accreditation. In this regard the following action plans have been implemented

- Created the State of the art infrastructure for Laboratory work
- Established Centre of Excellence in Aerospace Engineering & IOT leads to better employability rate
- Created several Self-learning facilities
- Several Student support systems have been implemented

#### Impact

• NAAC accredited with "A" Grade

- 6 UG programs have been accredited by NBA under Teir-1 Scheme
- Ranked one among top 150 Engineering Institution in the country by NIRF for the successive 3 years
  - 2017 Ranked in the band of 101 to 150
  - 2018 100th Rank
  - 2019 142nd Rank
- NMIT is awarded "Platinum " Grade in the AICTE-CII 2018 Survey of Industries
- NMIT awarded 'GOLD' rating from QS iGauge

File Description	Document
Strategic Plan and deployment documents on the website	View Document
Link for Additional Information	View Document

# 6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism

#### **Response:**

The organization has a well-structured administrative setup with GC as the highest decision-making body. The following are different bodies constituted.

- Governing Council(GC)
- Academic Council(AC)
- Boards of Studies(BoS)
- Finance Committee(FC)
- Purchase Committee
- Departmental Under/Post Graduate Committee
- Boards of Examiners(BoE)
- Internal Quality Assurance Cell(IQAC)

#### Others:

- Program Assessment Committee(PAC)
- Department Advisory Committee/Body(DAB)
- Anti-Ragging Committee.
- Internal Complaint Committee(ICC)
- Hostel Committee.
- Library Committee.
- Grievance Redressal Committee(GRC).
- Mal-Practice Consideration Committee.

Functions of GC:GC have powers to:

- Fix fees and other charges payable by students on recommendations of FC.
- Institute scholarships/fellowships/medals/prizes/certificates on recommendations of AC.
- Approval for starting of new programmes leading to degrees and/or diplomas.
- Perform other functions when necessary, deem fit for proper development and fulfil objectives for which the institute has been declared as autonomous.
- Approval for TEQIP activities.

Functions of AC:AC shall have powers to:

- Approve proposals, with/without modifications of BoS.
- Adopt regulations regarding admission of students consistent with University/Government norms.
- Regulations consistent with University norms for examinations and for improving quality of teaching-learning.
- Approve list of students for conferment of Degrees/Diplomas/Certificates.
- Form Regulations for Co-curricular/extra-curricular activities.
- Advise GC on academic affairs.

#### **Functions of BoS**:

- To consider recommendations of DUGC/DPGC relating to Programmes and to make recommendations to the AC.
- To approve framed/revised curriculum by DUGC for undergraduate courses.
- To ensure all norms and regulations regarding undergraduate programmes are strictly followed.
- To make periodic review of these Regulations regarding undergraduate programmes and recommend any modifications to the AC.
- To recommend to the AC, award of stipends, scholarships, medals and prizes etc.
- To constitute sub-committees for monitoring the implementation of academic curriculum and to provide guidance in curriculum assessment and evaluation process.
- Any appropriate responsibility/function assigned by the AC/GC or Chairman of the AC/GC.

Functions of FC: They are an advisory body to GC to consider Budget estimates & Audited accounts.

**Function of IQAC:**IQAC is responsible for:

- Monitoring quality parameters of Academic, Research & Administrative activities
- Attainment of PEOs and POs.
- Teaching-learning and assessment methods to meet COs.
- Functioning of R&D activities in college to maintain quality and standards

Also, other committees at department level BOE/DUGC/DPGC/PAC/DAC monitor question paper quality/syllabus/teacher-learning process/evaluation and perform functions as assigned by the AC/BOS.

Institute follows well-defined 'Service and Conduct Rules', Procedures, Recruitment and Promotional Policies of Nitte Education Trust (NET). For details, refer to www.nmit.ac.in

#### Grievance Redressal mechanism:

• All stakeholders can present their grievances to HoDs/Principal/Management.

- Online feedback mechanism for students and teachers is introduced.
- Grievance is analyzed by GRC and forwards the resolution to concerned authority.
- At first, HoDs in their faculty meeting/DUGC/DPGC will analyze and solve grievances pertaining to department.
- If problems pertain to institute level, the principal and HoDs decide and solve grievances.
- If stakeholders are still dissatisfied, they can approach the principal and management representatives.

File Description	Document	
Any additional information	View Document	
Link for Additional Information	View Document	
Link to Organogram of the Institution webpage	View Document	

6.2.3 Implementation of e-governance in areas of	operation			
<ol> <li>Planning and Development</li> <li>Administration</li> <li>Finance and Accounts</li> <li>Student Admission and Support</li> <li>Examination</li> </ol> All 5 of the above Any 4 of the above Any 3 of the above				
Any 2 of the above				
<b>Response:</b> All 5 of the above				
File Description     Document				
Screen shots of user interfaces View Document				
ERP Document View Document				
Details of implementation of e-governance in areas of operation Planning and Development,Administration etc	<u>View Document</u>			
Any additional information	View Document			

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and

#### implementation of their resolutions

#### **Response:**

As per the norms of UGC and AICTE the institute has established several bodies to oversee the activities of institute such as Administrative, Finance and Teaching-Learning process. Following is the summary of the meetings held and its effectiveness and implementation of the resolution.

Committee Name	Resolution	Action Taken
Governing Council	. In August 2013, a proposal for	The ERP solution named MyC
	implementation of ERP solution for	rcomprehensive online student inf
	student management was pu	tknowledge management collabora
	forward in the Governing Counci	the most efficient and effectiv
	meeting.	communication to all stake holder
		institutions. It was approved and
		from the year 2014.
Academic Council	It has been resolved to introduce	eDepartments have introduced MO
	MOOC Electives for the 2017	as a part of Syllabi with 3 acaden
	Batch students and onwards	the 2017 batch students.
Board of Studies (BoS)	• It has been resolved in BoS-	Department of ISE removed
	ISE that there should not be	limit on number for the prog
	any limits on number to opt	• The course Automotive Eng
	for the program	has been introduced for 6th
	elective.(2018)	B.E(Mechanical Engineerin
	• It has been resolved in BOS	- Scheme
	MECH, to introduce a new	
	course Automotive	
	Engineering – II so as to	
	include the latest	
	technologies/ systems in this	S
	field.	
Internal Quality Assurance Cell	External member suggested that	
	there has to be a proper mechanism	
	set up for parents to interact with	
	the management or staff (2018)	created for better interaction
		parents and teachers.
		Student Management System
		enables the parents to know
		of their ward on a regular ba
Finance Committee	e	
	expenditure for the FY 2017-18	committee along with the actual ex
	along with the budget	income.
Anti-Ragging Committee	1.	tIn the beginning of every academic
	numbers of wardens and anti-	60
	ragging committee members &	
	squads at all prominent places	sprominent places
I		

(2013)
It was decided to implement OneImplemented OTP facility f
Time Password(OTP) on the grievance in the student manage
students' registered mobile number within 24 hours.
so that login is private and avoids
misuse of student's login (2018)
Resolved to start Newspaper Newspaper Clipping service has
Clipping service for all the faculty to all the faculty members through
members
Document
View Document
View Document

#### **6.3 Faculty Empowerment Strategies**

#### 6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

#### **Response:**

The Institution provides effective welfare measures to both teaching and non-teaching staff. All statutory welfare measures are implemented. Various monetary, non-monetary measures towards personal and professional growth are being followed to the satisfaction of the employees.

- 1. Free Transportation facility to all the faculty and non-teaching staff
- 2. Subsidized medical insurance scheme
- 3.ESI scheme for non-teaching staff
- 4.PF and Gratuity benefits
- 5. Loan facility from the VIVIDDHODESHA Multi-purpose Co-operative Society
- 6. Subsidized rent for staff members staying in staff quarters
- 7. Employees are covered under EPF and Gratuity.
- 8. Maternity Leave of 180days with full salary.
- 9. Study Leave for higher studies
- 10. Financial assistance for publishing research papers
- 11. Financial assistance to attend FDPs/Workshops/Training programs
- 12. Seed Money for young faculty to pursue research
- 13. Reduction in workload for the faculty working in Research Centers
- 14. Special casual Leave of 30days to attend FDP, workshops and seminars
- 15. Half Pay leave for ladies to cater their infants
- 16. Incentives for best research work.
- 17. The faculty is given the advance salary whenever they are in a special and utmost emergency cases
- 18. Concession in tuition fees for children of employees for primary, secondary and higher education at Nitte Education Trust's schools and colleges

- 19. Full time Medical facility with qualified Doctor and nurse are available in the institution.
- 20. Sports, gym and yoga facilities are provided for staff and family.
- 21. Extension Counter of Axis Bank/ATM facilities are available in the campus.

File Description	Document
Link for Additional Information	View Document

### **6.3.2** Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years

#### Response: 48.31

6.3.2.1 Number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
50	187	144	134	128

File Description	Document
Details of teachers provided with financial support to attend conferences, workshops etc during the last five years	View Document
Any additional information	View Document

**6.3.3** Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Response: 22.2

6.3.3.1 Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
22	35	20	08	26

File Description	Document
Reports of the Human Resource Development Centres (UGC ASC or other relevant centres).	View Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	View Document
Any additional information	View Document

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

Response: 47.89

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
137	124	144	110	127

File Description	Document
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers).	View Document
IQAC report summary	View Document
Details of teachers attending professional development programs during the last five years	View Document
Any additional information	View Document

#### 6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

#### **Response:**

The institute has a formal Self-appraisal form which is of 3600 in nature. The faculty must fill in and submit at the end of the academic year. Based on this the faculty's performance will be analyzed and appropriate action is taken if necessary. The main purpose of this system is to identify the Strength, weakness, opportunities and Threats so that the faculty can be nurtured in an appropriate way to achieve his/her goals. The faculty will be aware of expectation of Institute/Accreditation Bodies/ Students. This also helps in better Teaching Learning process.

Self-appraisal forms are collected from every individual at the end of the academic year by the HoDs. The HoD will review the filled in form and evaluate the same based on the individual faculty performance at both department and institute level considering teaching learning process and on the performance of the faculty and his responsibilities at the institute level towards co-curricular and extra-curricular activities. This appraisal also considers the students' feedback on Teaching & Learning process adopted by the faculty.

After the completion of the HoDs evaluation, the duly accepted performance reports are submitted to the Principal's office. If appraisal is found to be poor/not satisfactory, then the concerned faculty will be counselled by HOD/Dean/Principal, so that his/her performance improves in the subsequent semesters.

Self-Appraisal considers following parameters on which the faculty performance will be evaluated.

- Teaching, Learning & Evaluation related Activities
- Co-curricular, Extra-curricular, Professional development related Activities
- Research, Publication & Academic Contribution related Activities
- Feed Back from Students and Involvement in departmental Admin works

Similarly, Heads of the Academic/Non-Academic Section will submit the performance report on the Non-teaching staff to the Principal.

File Description	Document
Any additional information	View Document

#### 6.4 Financial Management and Resource Mobilization

#### 6.4.1 Institution conducts internal and external financial audits regularly

#### **Response:**

Institution has developed a system to look into the financial aspects. Both internal and external audit is carried out at regular intervals. The observation made during these audits is considered with utmost responsibility and action is taken to rectify immediately.

Internal/operational audit(IA) is a voluntary appraisal activity undertaken to provide assurance over the effectiveness of internal controls, risk management and governance to facilitate the achievement of organizational objectives.

IA is centered on activities like:

- Monitoring the effectiveness of internal controls and proposing improvements
- Investigating instances of fraud/theft
- Monitoring compliance with laws and regulations of the trust
- Reviewing and verifying the necessary financial and operating information
- Evaluating risk management policies and procedures

• Examining the effectiveness, efficiency and economy of operations and processes

The annual IA is conducted independently by Chief Internal Auditor and his/her team. Objectives are defined post discussion with the management/Trustees and consulting activity is designed which has added value and improved the Trust's operations. Internal controls are checked and verified by the auditor and deficiencies are noted. The IA examines hard copy or electronic records of the transactions, ensures compliance with the management system procedures and test the effectiveness and implementation of internal controls. They evaluate the internal controls and make recommendations on improvement. The finding of the IA is discussed with the board of trustees, accounting officers and actions are taken to resolve them.

External audit(EA) involves the examination of the truth and fairness of the financial statements by a Charted Accountant(CA)/external accountancy firm who is independent of the institute. EA provides a reasonable assurance to the management that the financial statements, as reported are free from material misstatements. External auditors will comply with professional auditing standards such as the International Standards on Auditing and ethical guidelines to maintain a level of quality and trust.

Statutory audit is conducted annually by CA appointed by the Board of trustees. Objectives of the audit are approved by the board of trustees. Using appropriate sampling techniques; the auditor performs detailed tests on selected transactions and accounts in all major accounts.

Audit procedures include:

- If assets of the Trust are adequately safeguarded.
- Disbursements are supported by appropriate source documents
- Periodic/timely reconciliations are performed of the department's statement of condition, trust account subsidiary ledgers, commissions and fees paid to the institution
- Accuracy of amounts and receipt of income from investments
- Payments for services like, brokerage fees, real-estate management fees, maintenance charges, and other disbursements to source documents
- Account transactions for accuracy to source documents.
- Tax returns are prepared and filed within stipulated dates.

Audit reports are communicated to the Board of Trustees.

Also, a Finance Committee is formed by the GC to

- Consider the annual budget and financial estimates of the institution and submit them to the GC for approval;
- Fixing limits of total recurring and non-recurring expenditure year based, on the income and resources of the institution.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

### 6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

#### **Response:** 962.13

6.4.2.1 Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	7 2015-16	2014-15	2013-14	
921.1809	7 14.8505	5 12.9486	9.558	3.595	

File Description	Document
Details of Funds / Grants received from non- government bodies during the last five years	View Document
Any additional information	View Document
Annual statements of accounts	View Document

#### 6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

#### **Response:**

The different sources for mobilizing the funds is as follows

- 1. Tuition fees from students
- 2. Through external research projects
- 3. TEQIP

The major source of revenue for the institute is the Annual tuition fee collected from students. The fee is collected from students' as per the guidelines issued by the fee fixation committee of state government of Karnataka. Mobilization of funds is also done through sponsored projects from DST, FIST, DRDO, AICTE, VGST etc.. Institute was also funded by TEQIP a World Bank funding.

The college budget is allocated based on the needs. The college follows a systematic approach towards the allocation of budget. All the departments are requested to submit an estimate of requirements for their respective department which is discussed under various heads of their department. The needs of the particular department are analysed separately and the required budget is allocated. Further, if there is any

requirement for the departments other than the one stated in the budget, the same can be procured by submitting the necessary details.Hence, all the departments are allocated with budget adequacy to meet their needs. Budget requirements under 'recurring 'and 'non-recurring' heads are collected from every department before the commencement of the financial year. Before the commencement of the financial year, budget proposal is collected from all departments. The same is placed before the Finance committee and the committee in turn will deliberate and makes necessary changes for a proper balance of receipts and expenditure. The same will be submitted to Governing Council for approval. Budget approvals will be communicated to the departments and sections. The institution keeps track of the budget. In any unforeseen circumstances, non-budgeted amount is considered and allotted depending on the merit of the case. The requests are consolidated and reviewed by the Administration team and funds are allotted. Utilization of allocated funds are monitored periodically and reviewed at the end of the Financial Year

Almost, 95% of the total budget was spent during the last three years. More budgets have been allocated to the infrastructure built-up and laboratory equipment's. Also moderate budgets have been allocated in case of consumables; the same has been utilized for Research and development activities. Separate budget has been allocated for library, Research and development. Additional funds will be allocated in case of emergency requirement. Some of the namely utilization of funds is towards the expenditure on salary of teaching and supporting staff, purchase of equipment, machinery and furniture, library books, e-subscriptions, electricity charges, consumables, software, internet bills, repair and maintenance, faculty development programs, advertisement, affiliation and approval fees, printing & stationary, sanitation-housekeeping-gardening and security charges, and other miscellaneous expenses.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

#### 6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

#### **Response:**

As per the norms of UGC institute constituted the IQAC to develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution. To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices. The best two practices institutionalized as a result of IQAC initiatives are

1. Orientation Programme for Newly Inducted NMIT Faculty Members

Orientation programme is initiated to acquaint the newly joined faculty members regarding the Structure, Functions and Structure-Function relations and in that the role of teachers in Institution building, academic system, research initiatives and professional ethics. This facilitates the faculty to adopt the best practices and try innovations in teaching, learning and evaluation processes which facilitates the overall performance of the students.

The objectives of the program are:

- 1. To introduce the teachers to the NMIT Human Resource facilities and how they can make use of the same under the autonomous structure;
- 2. To acquaint teachers to the NMIT Institutional and professional ethics, work culture, infrastructure and other facilities in addition to curricular, co-curricular and extracurricular activities;
- 3. To inspire and motivate them to enable them to contribute to NMIT prestige and Status. To acquaint them to the mentorship scheme and enrich knowledge on Student Mentoring To make the faculty conversant with Outcome Based Education system
- 4. To motivate the faculty in taking up Interdisciplinary Research.
- 5. To explore the best practices in teaching & learning

The methodology adopted for this orientation programme is innovative in nature in the sense the participants are given orientation regarding the departments, its activities; its infrastructure etc. will be within the department itself. Also, visit to the concerned departmental laboratories and other important facilities of the department. This may also give an opportunity to the faculty members to understand the innovations introduced by the departments after the college has become autonomous in terms of academic (teaching, learning and evaluation) and non-academic (administration and other co-curricular & extracurricular activities). Participants will be given orientation on all the other important concepts that are essential for a teacher to function effectively in NMIT such as Mentoring, Multidisciplinary research, Outcome Based Education etc.

1. Faculty Colloquium: Culture of Faculty Colloquium is initiated in the year 2016. Each department will conduct colloquium every month and at the Institute level one colloquium will be conducted every semester. The objective of the series is to provide a research issues, challenges, and directions on emerging topics of interest to the faculty members and students. The Faculty Colloquium is a forum designed to bring graduate students and faculty, together to discuss issues they find important. Every faculty of the department is to give the colloquium. The idea was to make the faculty aware of the new technologies/research topics and encouraging group learning. So far more than 250 colloquiums are conducted by the above departments.

File Description	Document
Any additional information	View Document

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms

#### **Response:**

The initiatives of IQAC have significantly improved the Academic Environment, Teaching, and Learning Process, Curriculum and Evaluation Methods and Research environment in the institution by adopting following quality assurance polices

Quality Assurance Policy	Parameters	
Faculty Academic Audit	Teaching and Learning	
	• Research	
	• Documentation	
	OBE Process	
360 degree Feedback	Academic	
	• Placement	
	• Infrastructure	
	Support System	
Academic and Administrative Audit	OBE Process	
	• Curriculum	
	• Students' performance	
	Faculty contribution	
	Lab Infrastructure	
	Stakeholder's Feedback	
	• Documentation	
	Best Practices	
Feedback on faculty	Effectiveness of Teaching & Learning	
	Faculty commitment	
Faculty Self Appraisal	Teaching and Learning	
	Faculty Contribution	
	• Documentation	
	OBE Process	
Faculty Need Analysis	• Priority of the Faculty on the area of FDPs	
	Ph.D problem statement	
	• Progress	
Reviewing the Ph.D. scholars Status	Publications	
Reviewing the Research contribution of	• Research	
Senior Faculty	Publication	
	Academic Contribution	

#### 1. Faculty Academic audit

At the institute level the Faculty Academic Audit is in force. The centralized audit committee comprises of experienced faculty representative from every department. The committee is headed by one of the Senior Professor at the institute level. The committee is actively engaged in faculty evaluation by considering Teaching, Learning & Evaluation related Activities, Co-curricular, Extra-curricular, Professional development related Activities, Research, Publication & Academic Contribution related Activities, Feed Back from Students and Involvement in Departmental/Institution works,. Auditors write a report highlighting examples of exemplary practice, noting areas for improvement and evaluating a department's approach to educational quality practices. Audit has helped in assessing the strengths and weakness of the faculty and also in developing a methodology in overcoming the weaknesses.

#### 2. Academic and Administrative Audit

Academic and Administrative Audit becomes one of the major criteria of any institute as it gives an insight towards compliance with policies and procedures followed, evaluate compliance with rules and guidelines established by regulatory bodies, effectiveness and security of technology systems, code of ethics and evaluation system. In overall it has helped the institute:

- To understand the existing system and assess the strengths and weaknesses of the Departments and Administrative Units and to overcoming the weaknesses.
- To identify the bottlenecks in the existing administrative mechanisms and to identify the opportunities for academic reforms, administrative reforms and examination reforms etc.
- To evaluate the optimum utilization of financial and other resources.
- To improve on by adopting different the methods for continuous improvement of quality keeping in mind criteria and reports by regulatory bodies.

During Audit the following parameters have been assessed

- Curriculum Hand Book
- Admission File
- Department Budget
- Academic Performance
- Placement statistics for last 5 years
- Higher studies statistics for last 5 years
- Internship statistics for last 5 years
- Co- curricular Activities
- Faculty Achievement/Recognition
- Student Achievement Data
- External/Internal Stake holder Feedback/Surveys
- Academic Audit of the faculty members
- Meeting Circular sent with Agenda, recorded proceedings
- PO & PSO attainment
- Research & Development/ Consultancy
- Industry-Institute Interactions
- Students Projects
- Visiting/Adjunct Faculty
- Laboratory
- Self-Learning Facilities
- Mentoring Records
- Stock Books
- Faculty Attendance /Leave Record
- Department Communication Ledger
- Additional Institute Responsibilities handled by the Department
- Extension Activity /Social Service
- Department Activity Plan

- Improvements after Autonomy
- Best practices

File Description	Document
Any additional information	View Document

#### 6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

#### Response: 13.8

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
24	15	15	3	12

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	View Document
Any additional information	View Document
IQAC link	View Document

#### 6.5.4 Quality assurance initiatives of the institution include

- 1. Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements
- 2. Academic Administrative Audit (AAA) and initiation of follow up action
- **3.**Participation in NIRF
- 4.ISO Certification
- 5.NBA or any other quality audit

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

#### **Response:** Any 4 of the above

File Description	Document
e-copies of the accreditations and certifications	View Document
Details of Quality assurance initiatives of the institution	View Document
Any additional information	View Document
Annual reports of Institution	View Document

6.5.5 Incremental improvements made during the preceding five years *(in case of first cycle)* Post accreditation quality initiatives *(second and subsequent cycles)* 

#### **Response:**

Recommendations for quality enhancement byQuality Initiatives adopted by the NMIT NAAC Peer Team

Introduction of more Humanities, Social Sciences, Institute has introduced courses such as Value Based Le Management and Foreign Language courses as electives. of NCC (As per the Guidelines of UGC, New Delhi), Co

> Professional Ethics, ENTREPRENEURSHIP Management & IPR, Human Resource Management Management & IPR, Software Project Managem Humanities, Social Sciences, Management.

> Proposal to introduce the German & Japanese lange courses in new curriculum across all the branches as Ope

> carried by the student by interacting with the concer industries and R&D organisations are paying a stipend du

Question papers for all UG programmes need to beCIE & SEE Questions are framed as per Bloom's Taxor innovative in nature to encourage thinking capabilities of has been identified with levels on the basis of thinking the students. Also provide open book exam options. the students. Also provide open book exam options. Field Theory, Data Mining , etc. open book exam has be

Choice Based Credit System must provide increased The choice based credit system is being adopted from 20 choice and variety of courses so as to enable the students of courses like NCC, Value Based Leadership, etc is to choose from such options and encourage "learning byElective. Institute offers several learning activities 1 doing." Tutorial, Case Study, Programming Assignment, In encourage "learning by doing"

Innovations in programme structure to provide longInternship has been made mandatory for UG and PG students internship options and encourage faculty to alsovaries from 6 weeks (short duration) to long duration supervise the internship and engage with industry. supervise the internship and engage with industry. supervise the internship and engage with industry. semester and PG students are encouraged to opt for Faculty members are being assigned to supervise and ev

Link for Additional Information	View Document
File Description	Document
Provision of institute funds for patent filing.	The Institution provides 100% funding to the faculty me patents of their research work.
	Principal will interact with faculty members to shortcomings.
shortcomings, if any to individual faculty.	are considered as bench marks for the the faculty pro-
	atingSelf-appraisals by faculty, appraisal by HoDs and studer
Administrative restructuring for optimisation resources, both men & facilities.	of MIS and ERP software tools are used to provide effe along with decentralised management under various depa
Administrative restructuring for optimization	being done regularly.
	Department Audits, FDP's, 360 degree feedback, Mente
academic audits should be conducted.	proactive to improve the quality of teaching learning pro-
IQAC may be made more proactive and freq	people who are in need. JuentAfter obtaining NAAC accreditation in the year 2014, th
	running Government of India sponsored PMKVY programs, training in KGTTI to facilitate the multi skill
	development training programmes during the vacation
technical staff.	management depute the interested non-teaching sta
Multi-skill development programmes for non-teaching	Springer, Knimbus, Kopykitab and Sententia ng &In order to provide multi skilling to the non-tea
	ASCE, Taylor & Francis, Proquest-Engineering, Pro
	Online,ASME
	lakhs for this purpose. NMIT Library has subscri
Enrich library subscription to online journals and e-I database.	bookTo enrich library with online Journal and e-books datab member of VTU consortium. Every year institute spend
English liber and a single scaling in such as the	publishing their research articles/patents
	provided for the faculty to attend conference/we
	during the last 5 years. Financial assistance of Rs. 1.
	complete their Ph.D degree earn while they learn. See Lakhs has been provided to the young faculty member
for M.Tech./Ph.D. students to earn while they learn.	are being encouraged to do Ph.D by external registrat
allowance to eligible faculty and provide opportur	nitiesunder the deputation by the management with full salar
Increase seed grant and professional develop	mentMany faculty members of this institute have completed
	centre of IITB, Mumbai and IIT, Kharagpur to con through NMICT, Govt. of India.
	are being used for campus management solution. Thi
MIS&ERP for various campus management solution	
	obustleaching learning methods and wi-fi facility is prov
Blend more ICT tools and increase Wi-Fi facilitie	es to About 70% of the courses blended with ICT tools

### **Criterion 7 - Institutional Values and Best Practices**

#### 7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

#### Response: 47

7.1.1.1 Number of gender equity promotion programs organized by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14	
17	9	7	9	5	

File Description	Document
Report of the event	View Document
List of gender equity promotion programs organized by the institution	View Document

#### 7.1.2 Institution shows gender sensitivity in providing facilities such as

- a) Safety and Security
- b) Counselling
- c) Common Room

#### **Response:**

As a matter of fact, true spirit of education is being practiced in Nitte Meenakshi Institute of Technology (NMIT) i.e. no differentiation in caste, creed, religion and gender including third gender. NMIT provides safety, security & counseling facilities to both male and female students /staff.

The institute is following an open and clear system of staff selection purely on the basis of merit for recruiting male as well as female staff members. The selection is carried out through an open advertisement followed by demonstration by the candidate in the classroom, appearing for personal interview etc.

The institute has grievance mechanism for Women such as Internal Complaints Committee (ICC) and Committee on Women Security Welfare, Grievances and Addressal (CWSWGA), which address issues faced by women. Women Grievance cell handles cases (if any) with high confidentiality. The above cell on a regular basis conducts activities to encourage women to fight against any sort of injustice/inequalities/safety etc.

The college campus has proved to be very secure due to its well-maintained security system. Separate hostels for girls and boys with good security systems are available. NMIT has on campus hostel facilities

for 500 girls and 1200 boy students, each of the hostels are equipped with separate GYM, 24/7 security guards, Wi-Fi connectivity, CCTV Cameras, drinking water facilities and dining facility.

The management always focuses on any health and security issues. A separate vehicle is available round the clock to attend any kind of medical emergency 24/7. A fully functional health Centre with a part time doctor with a full time staff nurse are in place to offer medical care for minor issues and First aid. The college has tied up with nearby multi-specialty hospitals such as Aveksha Hospital & Ramaiah Memorial Hospital. Faculty counsellors and Wardens of the hostels are always available to counsel the girl students. They are staying in staff quarters inside the campus.

To maintain the privacy as well as to avoid unwanted incidents, NMIT maintains separate common room for boys as well as and girls. These area well-ventilated, and has washrooms, dressing mirrors, etc. Student management system allows the submission of grievances, which will be resolved by the concerned authority within stipulated timeframe

NMIT has introduced mentoring system since its inception, wherein, each faculty advisor is assigned to a batch of 15 students. Performances/problems of students are attended by the mentors as well as class teacher. Professional counseling cell has also been established and regular Counseling is done to the students from time to time. Professional counsellor will help students to discuss their problems and get assistance in identifying their problems as well as solving their issues

NMIT ensures the participation of Women students in intra and inter-institutional competitions as well as cultural activities. As a result of this, many NMIT women teams are winning awards and recognition in technical/sport/cultural events. NMIT always encourages women to participate in NCC/NSS/Rotract/Youth wing of Red Cross society for 360 degree development of the student community.

File Description	Document
Link for Additional Information	View Document

### **7.1.3 Percentage of annual power requirement of the Institution met by the renewable energy sources**

#### Response: 80

7.1.3.1 Annual power requirement met by renewable energy sources (in KWH)

#### Response: 1128960

7.1.3.2 Total annual power requirement (in KWH)

Response: 1411200

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document
Any additional information	View Document

7.1.4 Percentage of annual lighting power requirements met through LED bulbs	
Response: 42	
7.1.4.1 Annual lighting power requirement met throu	gh LED bulbs (in KWH)
Response: 21985	
7.1.4.2 Annual lighting power requirement (in KWH)	
Response: 52346	
File Description	Document
Details of lighting power requirements met through LED bulbs	View Document
Any additional information	View Document

#### 7.1.5 Waste Management steps including:

- Solid waste management
- Liquid waste management
- E-waste management

#### **Response:**

Nitte Meenakshi Institute of Technology (NMIT) believes in "Let's go green and keep our campus clean". NMIT's pivotal operations have very less impact on the environment as the institute is very conscious of generating less waste and recycling it by passing it through a system that enables the used material to be reused ensuring that less natural resources are consumed. Environmental initiatives like use of renewable energy, Rain water harvesting, Sewage treatment plants, Zero water discharge, No smoking zone, waste management system etc. have been implemented. Environment consciousness is embodied in the heart of the college by tree plantations from NSS/ NCC/Rotract/Chiguru teams every year which is the predominant motive of the management to maintain the pristine purity and beauty of the college and also to provide a congenial atmosphere for the academic and non-academic pursuits.

The institute's waste management practices are divided into three parts:

Solid Waste Management
 Liquid Waste Management
 E-Waste Management

- 1.Solid Waste Management: The waste generated in the campus includes wrappers, glass, metals, paper, plastics, etc. Old newspapers, used papers and journal files, workshop scrap etc. are given for recycling to external agencies. Glass, metals, plastic and other non-biodegradable wastes are given to external agencies where they are segregated and disposed/ recycled according to the nature of the waste. Leaf litter is allowed to decompose systematically over a period of time to be used as manure for the gardens in the institute. Excess leaf litter is disposed off to vendors who use it for composting/ agricultural purposes. Apart from dry solid waste, the campus generates an average of 30 kgs of organic waste per day and 200 kgs of processed food waste per day from canteens and hostels which is sent to piggeries. Sanitary Napkin Incinerators have been installed in the girls' hostels to facilitate disposal of sanitary napkins in an environment-friendly way. Department of Civil Engineering have introduced projects for students of VII Semester in Solid and Liquid Waste Management, which enhances the knowledge about waste management in the students and motivates them for proper management of solid and liquid waste. Currently a survey of quantity and population data for waste generated is being analyzed by the students of VII Semester to apply for funding for a composting plant to be setup in the institute.
- 1. Liquid Waste Management: The liquid wastes generated in the campus include Sewage, Laboratory, Laundry, hostel and canteen effluent waste. The above waste is treated through Sewage Treatment Plant (STP) setup in the institute with a capacity of 240 KLD (Kilo Litres per Day). The entire treated water is used for watering the gardens and lawns maintained in the campus. The sludge settled in the STP is removed and is dried on drying beds and used as manure for the gardens. Therefore, the entire waste water generated in the campus is treated and reused. The laboratory waste water does not contain hazardous chemicals and periodical monitoring is done by the maintenance team. The wastewater entering the STP is tested for its characteristics like Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Total dissolved Solids (TDS), pH and Colour etc. on a timely basis.
- 1.E-Waste Management: Electronic goods are put to optimum use; the minor repairs are set right by the Laboratory assistants and teaching staff; and the major repairs are handled by the Technical Assistant and are reused. NMIT has entered into MoU with SOGO Synergy which buys our damaged computers and other non-reparable e-waste and issues a Recycling certificate. SOGO Synergy has a State-Of-The-Art Warehouse measuring 20,000 sq. feet meant for storage, dismantling and recycling of electronic waste with the support of latest technology. The equipment which cannot be refurbished for re-use is dismantled and remanufactured into raw materials (i.e. metals, plastics, glass) to be marketed as recyclable. The company assures that the E-waste does not end up in a landfill. It is sent to an agency authorized by Karnataka State Pollution Control Board (KSCB) for disposal, which processes E-waste in a Zero dumping technology. UPS Batteries are recharged / repaired / exchanged by the suppliers. The waste compact discs and other disposable non-hazardous items are used by students for decoration during college fests as a creative means of showcasing the waste management practice that has been induced in the minds of the students.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

#### 7.1.6 Rain water harvesting structures and utilization in the campus

#### **Response:**

Keeping in mind the flourishing metropolitan community around the campus and the rising demand for water facilities, rooftop rainwater harvesting has been established in the campus with the support of Karnataka State Council for Science and Technology (KSCST), Govt. of Karnataka. The collected water from the roof top is passed through a filter system and stored in two large wells having a dimension of 30\*30ft which aids in groundwater recharge. The harvested water is also used for domestic purposes. Well maintained storm water drains are installed to facilitate the easy movement of storm water to municipal drains.

The institute encourages on conserving water through the following strategies:

- Planting of native flora to reduce water consumption.
- Sustainable approaches for implementation of innovative water-efficient technologies such as rainwater harvesting, treatment and reuse of water etc.
- Promote water efficiency practices to all the stakeholders in the campus.
- Monitor and minimize water consumption in the campus.
- Promote the culture of planting saplings in the campus every year during World Environment Day by students and NSS teams.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

#### 7.1.7 Green Practices

- Students, staff using
- a) Bicycles
- b) Public Transport
- c) Pedestrian friendly roads
- Plastic-free campus
- Paperless office
- Green landscaping with trees and plants

#### **Response:**

The well maintained gardens, fountains and parks in NMIT campus showcase the green environment. NMIT has hundreds of Coconut, Neem, Tamarind, Jackfruit, Mango trees in the lush green campus of 23 acres. The faculty and students are encouraged by the NSS/NCC/Rotract/Chiguru teams to keep the campus clean and green. The college organizes activities/awareness camps like Swacch Bharath, tree plantation drives, etc. regularly.

Energy Audit is conducted regularly to assess the pattern of usage. Solar power generation plants are installed on the top of the academic buildings, which are capable of generating 382 KW of power every day. NMIT uses solar power for supplying hot water for six hostels. NMIT has taken the initiative to replace CFL lamps with LED lamps, which has resulted in more than 40% of the Lighting Power requirement, with reduction in power consumption by LED's.

NMIT has in-house sewage water treatment plant, is capable of recycling two Lakh liters of sewage water every day. The recycled water is used for gardening purposes. All buildings of NMIT are installed with rain water harvesting system.

NMIT operates 35 buses from all corners of Bangalore city helping the students and staff members to use the transportation. It discourages the usage of individual transportation. A few faculty and students use bicycles to travel.

All academic/ residential blocks are well illuminated with natural light and very well ventilated. All buildings of the institution are designed by considering the maximum utilization of the natural resources.

NMIT is declared as a plastic free campus. All cafeterias/stationary shops are supporting this by using cloth/paper for packaging and serving needs. For enforcing carbon neutrality, cigarettes and tobacco products are strictly banned within the 100 meters of the campus. Display boards have been put-up at various places to remind the limited and responsible usage of natural resources. Dustbins are installed at prominent places, which discourage irresponsible disposal.

Electronic components are put to optimum use; the minor deficiency are set right by staff and the Laboratory assistants; and the major repairs, by professional technicians, and are reused. For E-waste disposal, NMIT has entered into MoU with SOGO Synergy which buys our damaged computers and other non-reparable e-waste and issues a Recycling certificate.

Usage of papers is reduced by promoting the usage of Enterprise Resource Planning software named MyGurukul for academic and administration purposes. All communications happen through digital means such as distributing the documents etc. Double-sided printing is encouraged for all academic/administrative matters, thus moving towards paperless transactions. Waste papers will be sent to an external recycling unit. The usage of papers is restricted in every possible way.

As a fruit of all the above initiatives, NMIT has bagged the best clean campus award from the Indian Society for Technical Education New Delhi in the year 2019. NMIT has also received prizes for four successive years from the Department of Horticulture, Government of Karnataka, for best maintained lawns/gardens.

File Description	Document	
Any additional information	View Document	
Link for Additional Information	View Document	

# **7.1.8** Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

#### Response: 10.86

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component yearwise during the last five years(INR in Lakhs)

2	017-18	2016-17	2015-16	2014-15	2013-14
2	59.6	285.86	299.65	230.83	213.44

File Description	Document
Green audit report	View Document
Details of expenditure on green initiatives and waste management during the last five years	View Document
Any additional information	View Document

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

- **1.Physical facilities**
- 2. Provision for lift
- 3. Ramp / Rails
- **4.Braille Software/facilities**
- **5.Rest Rooms**
- **6.Scribes for examination**
- 7. Special skill development for differently abled students
- 8. Any other similar facility (Specify)

#### A. 7 and more of the above

- **B.** At least 6 of the above
- C. At least 4 of the above
- **D.** At least 2 of the above

**Response:** A. 7 and more of the above

File Description	Document
Resources available in the institution for Divyangjan	View Document
Any additional information	View Document
link to photos and videos of facilities for Divyangjan	View Document

# 7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

#### Response: 93

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
21	20	20	14	18

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	View Document
Any additional information	View Document

# 7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

#### **Response:** 99

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
32	27	29	08	03

File Description	Document
Report of the event	View Document
Any additional information	View Document

#### 7.1.12

# Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff

<b>Response:</b>	Yes	
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File Description	Document
URL to Handbook on code of conduct for students and teachers, manuals and brochures on human values and professional ethics	View Document

7.1.13 Display of core values in the institution and on its website	
Response: Yes	
File Description	Document
Provide URL of website that displays core values	View Document

# 7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations

Response: Yes

File Description	Document
Details of activities organized to increase consciousness about national identities and symbols	View Document
Any additional information	View Document

#### 7.1.15 The institution offers a course on Human Values and professional ethics

# Response: Yes File Description Document Any additional information View Document

Any auditional information		
Provide link to Courses on Human Values and professional ethics on Institutional website	View Document	

# **7.1.16** The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions

#### Response: Yes

File Description	Document
Any additional information	View Document
Provide URL of supporting documents to prove institution functions as per professional code	View Document

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years

#### Response: 125

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
27	23	33	29	13

File Description	Document
List of activities conducted for promotion of universal values	View Document
Any additional information	View Document

# **7.1.18** Institution organizes national festivals and birth / death anniversaries of the great Indian personalities

#### **Response:**

NMIT has always been zealous in celebrating national festivals and birth/ death anniversaries of great Indian personalities. Following are such occasions:

1. **The Independence Day and Republic Day** are annually celebrated with drill parades of NCC students and skits on social themes by the NSS team members, commemorating the nation's independence and the dawn of a new India as a Sovereign, Secular, Socialistic and Democratic

Republic respectively.

- 2. Engineers Day is celebrated annually on 15th September as a tribute to the greatest Indian Engineer Sir.Mokshagundam Visvesvaraya. Talks are organized in the campus by eminent speakers on this occasion to mould the young minds of NMIT to contemplate the role of engineers in an evolving nation.
- 3. **International Women's Day** is celebrated annually on 8th March to recognize and honor the contribution of women in the Indian state of affairs and international forum.
- 4. Earth Day is celebrated annually on 22nd April by the NSS team to capture the beautiful environment we are basking in and to cultivate awareness amongst the young minds regarding the protection of our ecosystem.
- 5. **International Yoga Day** is celebrated annually on 21st June in which the students of the college, NSS and NCC student volunteers and faculty members participate vigorously.
- 6. **National Science Day** is celebrated annually on 28th February to mark the discovery of the Raman Effect by Indian physicist Sir.C.V. Raman. The students are educated on the significance of scientific applications in daily life of the people.
- 7. **Teachers' Day** is celebrated annually on 5th September as a tribute to the birthday of Dr.Sarvapalli Radhakrishnan. Students celebrate to show gratitude and acknowledge the role of teachers in their lives.
- 8. Vivekananda Jayanti(National Youth Day) is celebrated annually on 12th January to create awareness amongst the students about the importance of Human Rights in India.
- 9. National Mathematics Day is celebrated annually on 22nd December to honor the birth anniversary of the famous mathematician Sir.Srinivasa Ramanujan.
- 10. **Karnataka Rajyotsava/Karnataka Formation Day(State Festival)** is celebrated annually on 1st November by hoisting of the official Karnataka flag with an address from the Director and Principal and a cultural program is organized by the Kannada Club–Chiguru.
- 11. **Rama Navami** is celebrated annually on 13th April to mark the arrival of Lord Vishnu's seventh avatar, Lord Rama. The temple inside the institute celebrates the festival with Vedic chants and enlightening the students with the principles followed by Lord Rama.
- 12. **Ayudha Pooja** is celebrated annually in the month of October to respect every ayudha (machine) you approach, be it to learn or use. Ayudha Pooja conveys our reverence towards one's own body and mind.
- 13. **Holi** is celebrated annually in the month of March with colors to represent the arrival of Spring and the triumph of good over evil.
- 14. **Ganesh Chaturthi** is celebrated annually in the month of September to symbolize the destroyer of obstacles, leading one to success. Students pray to Lord Ganesh and immerse him in the river to be reborn with new beginnings.

# 7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

#### **Response:**

Several committees are formed to decentralize powers and maintain transparency in all activities of the institute including financial, academic and administrative functions. All such activities are administered by the Principal and Management.

#### Finance:

- All monetary transactions of the institute are through the bank in the form of cheques/Demand drafts/electronic transfer. The tuition fee and hostel mess fees etc. are remitted through an e-commerce gateway. The salary paid to employees is also through bank transactions.
- Budget proposals are prepared by all departments and submitted to the institute's Finance Committee which is then placed for approval by the Governing Council(GC). After approval, the department receives the allocated budget towards its expenses.
- Statutory external audit is conducted periodically by a Chartered Accountant appointed by the Board of Trustees.
- Internal Audit(IA) is conducted by Chief Internal Auditor and his/her team annually. IA examines hard copy/electronic records of transactions, ensures compliance with management system procedures and tests the effectiveness and implementation of internal controls.
- The audit reports of each financial year are displayed on the institute website.

#### Academic:

- MyGurukul is an online student information and knowledge management portal which helps in effective means of communication to all stake holders. Parents are informed about their wards' performance like attendance,marks,etc every month. Academic calendars, Timetables etc. are displayed in the platform prior to the starting of next semester.
- Internal evaluation marks are displayed in the portal and students can verify their evaluated papers.
- It has an automated examination process with facilities like Retotaling/Revaluation/Issue of Photo Copy etc.
- Students are nominated to be members of various academic committees like IQAC/DUGC/BoS/PAC/DAB etc.

#### Administrative Functions:

- Administrative Policies, rules and regulations for all employees are formulated in the 'Service & Conduct Rules' book and displayed on the website to all stakeholders where the roles and responsibilities are well elucidated.
- Code of conduct and other students' related information are disclosed in the annually published student handbooks.
- Various programs offered, syllabus, brochures; mandatory disclosures like AQAR, AICTE/UGC/NAAC approvals, GC meeting proceedings, student handbooks and Strategic Plans etc. are uploaded on the website.
- Various Committees like Grievance Redressal Cell, Anti-Ragging Committee, Committee on Women's Welfare, Security, Grievance and Addressal, Student Council, SC/ST and BCM Cell etc. have been setup with faculty, students and management representatives as members.
- The student fees are collected as per the State Government norms. The pay scale of teaching staff is as per AICTE norms and of the non-teaching staff is as per State Government norms.

#### Auxiliary:

- Research and Consultancy guidelines, Institutional Strategic Plans and its Implementation and Monitoring, Code of Ethics and Institutional Governance etc. are displayed on the website.
- Training and Placement activities are mailed/messaged to all students regularly. Departmental

coordinators ensure maximum attendance of students to such activities.

#### 7.2 Best Practices

#### 7.2.1 Describe at least two institutional best practices (as per NAAC Format)

#### **Response:**

#### 1. Title of the Practice

#### Stimulating Culture of Multidisciplinary Research

#### **1. Objectives of the Practice**

- To inculcate culture of multidisciplinary research and innovation among UG/PG/Ph.D. Sstudents and Faculty.
- To provide platform and opportunities for students and faculty from different discipline to collaborate and share research activities and ideas
- To establish Centre of Excellence in the multidisciplinary research areas by collaborating with advanced research institutes like IISc./ISRO/NAL/CAIR/ etc.

#### 1. The Context

In the present context, In the Indian higher education system, different research/study disciplines are treated as opaque walls. This hinders quality research and innovation to be part of the higher education system. These walls need to be adequately porous so that any student pursuing in any discipline has to necessarily go beyond the frontiers of his/her own domain thus enabling them to pursue knowledge of yet another discipline. In such an environment, the horizon of research one pursues gets deeper and leads to newer and innovative practices.

However, Multidisciplinary research requires adequate background of numerous specialized disciplines, which aim at achieving a common goal. It leads to improved opportunities and flexibility to the students to get better employment/research careers.

#### 1. The Practice

In the context of Indian higher education, if the departments work independently then the solution developed may not be feasible to meet the societal/global needs. However, most of the current requirements need expertise of several disciplines. In this context, NMIT has been encouraging the practice of Multidisciplinary Research. The faculty and students of different disciplines will come together to work towards a common goal.

#### **Practice:**

Established Multi-Disciplinary Research Centers, These centers provide advanced research facilities and training for faculty and students drawn from different disciplines, such as

- Center of Small Satellite Research in collaboration with ISRO, Bangalore.
- Center of Robotics Research.
- Centre of Nanomaterials and MEMS in collaboration with IISc, Bangalore.
- ° Center of Design and Process Simulation in collaboration with Dassault Systems
- Center of Computational Fluid Dynamics in collaboration with NAL.
- Center of Aerospace and IoT in collaboration with Dassault System & PTC. 11 Labs have been established with a funding of about Rs.25 Crores.
- Centre for Cyber Security & IOT in collaboration with Subex Company.
- Introduced Courses related to Muti-Disciplinary Research. Institute offers wide range of courses as Open Electives thus encouraging the students to acquire knowledge in various emerging domains.
- Seed money for the young Faculty to pursue multidisciplinary research.
- MoUs with reputed R&D Organizations/Industries/Universities of India & Abroad.
- Department wise monthly Faculty Colloquium, to share the domain knowledge among the faculty of the department as well as other departments.
- Reduction in workload for the faculty working in Research Centers for better research productivity
- Financial assistance to publish research articles, filing patents and to attend FDPs/Workshops/Training programs

#### 1. Evidence of Success

Provide evidence of success such as performance against targets and benchmarks of review results. What do these results indicate? Describe in about 200 words.

- Good numbers of UG/PG/PhD students are involved in multidisciplinary Research activities.
- Faculty members who are working in the research canters are able to get good amount of Funding from National funding agencies such as DST, DIT, AICTE, DSIR, VGST, VTU etc.
- Good number of Research articles is published in SCI/WOS/Scopus Journals & Conferences.
- Three Indian Patents have been granted & 34 Patents have been published.
- During Last five years, about Rs. 1 crore has been given as seed money to the Faculty for encouraging research.
- NMIT has signed an MoU with North Dakota State University (NDSU), Fargo, USA which is a renowned Land Grant Research University for immersion programs Faculty exchange & promotion of joint Research.
- Robotics Engineering-Lego Mindstorms and TETRIX Course is offered as an open elective for students across all engineering departments for Sem 3 and 4 from the academic year 2015-16. The Course has 40% theory & 60% Practical sessions.
- Electronics/Mechanical /Electrical/Computer science faculty and students are involved in Small Satellite Research Program.
  - First time in India, under this Center, the UG students had successfully built India's first Pico Satellite "STUDSAT-I" which was launched onto space through ISRO?s PSLV-C15

vehicle on 12th July 2010 from Sriharikota.

- STUDSAT team has created a National Record by entering into LIMCA BOOK of RECORDS 2011 Edition
- NMIT has setup a unique Ground Station to track the Satellites (NASTRAC) which has already obtained an Indian Patent.
- The multidisciplinary group in NMIT developed several vision based robots for various applications. Students have developed a Pick & Place Robot and OFC link which has been kept as permanent exhibit at Birla Science Center, Hyderabad
- Graduates who worked in these multidisciplinary research centres having admitted by the World's premier Universities like Surrey/ Texas/Oxford/Indiana/etc. for their Masters/PhD programs.
- Graduates who worked in these multidisciplinary research centres have got better placement offers with high CTC from Core Industries/R & D Organizations.

#### 1. Problems Encountered and Resources Required

It is difficult to coordinate students drawn from different disciplines to undertake interdisciplinary research. Since UG students actively participating in R&D work leave the college after their graduation, continuing the projects undertaken requires financial support to retain them after their graduation. This requires some additional financial resources and availability of senior faculty. Availability of time for UG students to work in these multidisciplinary Centres is less because of tight academic schedule.

1. Notes (Optional)

#### **Best Practice -2**

#### 1. Title of the Practice

#### Learner Centric Teaching & Assessment

#### **1. Objectives of the Practice**

- To seed in a clear expectation of what needs to be accomplished by the student at the end of the course/program.
- To structure Learning & Teaching process catering to the students' needs.
- To increase student involvement which allows them to feel responsible for their own learning,
- To uphold the standards of engineering education and to ensure that students will be prepared for professional life after they graduate.

• To decide what learning level the student would be at

#### 1. The Context

Grade based educational system irrelevant and does not rely on the conventional teaching methods. Outcome based education (OBE) is the latest paradigm shift in the Indian Higher education system. The increasing need to produce more able and competitive learners for the globalized world has led to a reform in the education system.

OBE is an education reform model which is based on a student centric learning and focuses on the outcomes instead of the input. In contrast with traditional education, OBE puts much emphasis on the learning process being effectively pursued and managed by the students themselves and the Faculty are only acting as facilitators.

Specific and clearly defined outcomes must be established so that the students will be able to set their own expectations and means to achieve the desired outcomes. With OBE, the assessments methods of various skills, knowledge and attitudes become diverse and various learning pedagogies need to be introduced to ensure the achievement of the outcomes. The defined outcomes must be specific, measurable, achievable, realistic and time-based.

The main problem with the implementation of outcome based education is the broad definition of outcome based education itself. The attainment of soft skills/lifelong learning skills are difficult to measure, the assessment of soft skills must be conducted in several courses. While OBE emphasizes on student centric learning, the actual implementation of OBE is still strongly dependent on Faculty as presenters of knowledge. The implementation of OBE in engineering education also requires the integration of laboratory works which differentiates the engineering programme from many other disciplines.

#### 1. The Practice

NMIT has successfully introduced Outcome Based Education since 2012. Institute is regularly conducting Awareness Training on OBE/ Pedagogy Training on Outcome Based Learning and Teaching (OBLT) to the Faculty. During orientation program, student will be made aware of OBE. The Institute has effective administrative setup in the form of various committees such as DUGC, PAC, DAB, BOE, BOS, and IQAC & AC to implement/monitor the Out Come Based Curricula/Teaching/Assessment.

Towards the framing of Outcome Based Curricula, DUGC/BOS will refer knowledge areas proposed by Professional Body Guidelines (IEEE/ACM/ASCE/ASME/etc.), guidelines of UGC/AICTE/VTU and syllabi of premier Institution. The Institute will take feedback/input from all the stakeholders' viz. Students/Faculty/Alumni/Parents/Employers.

Towards the effective Outcome based Teaching/Learning, Departments will conduct Faculty Brainstorming sessions during the beginning of the semester to deliberate on Delivery & Assessment Methods. Faculty has adopted course specific effective/innovative delivery methods such as

- Demonstration Based Teaching
- App Based Teaching
- Certification Based Learning
- MOOC Based Learning through SVAYAM/NPTE/UDEMY
- Google Class Rooms
- Tool based teaching
- Lectures interspersed with discussions
- Tutorials
- Course Projects/ Mini Project
- Main Project
- Case Studies
- Industrial/Site Visits
- Programming Assignments
- Seminars
- Debates
- Written Assignments
- Hands on Sessions
- Self-study /Internship
- Workshops/Invited Talks/Webinars

NMIT has adopted effective direct & indirect assessment methods to measure the learning outcomes. Faculty have designed effective rubrics for evaluating different Learning activities and Laboratory Experiments which result in accurate assessment of learning outcomes

The Institute/Departments have adopted the following practices

- MOOC Based Electives
- MOOC Based References for most of the courses
- Practical experiments are directly related to Real World Applications
- Long term Internship
- Plagiarism check for UG/PG/PhD Project Reports
- Latex Based Reports
- Practical Integrated Courses
- Industry Driven Electives
- Partial delivery of Course by Industry Experts

#### 1. Evidence of Success

- Continuous Quality Improvement is in force where departments follows OBC => OBLT => OBA => Gap Analysis.
- Innovative delivery methods are adopted by the faculty which are students centric.
- UG Programs are accredited by NBA under Tier-1 Scheme.
- Rubrics enable students to know the standard in teaching and learning expected for successful completion of the course/ project.
- Improved practical skills of the students in all aspects of teaching and learning.
- Improved innovative culture among the students, that resulted in many National Level awards

- Learning activities are making the Students Industry Ready resulting in higher & better employment
- Fast learners are taking up higher studies in reputed Universities by appearing in GATE/GRE/IELTS/TOEFL etc.

#### **1. Problems Encountered and Resources Required**

Across different programs or even different instructors, outcomes could be interpreted differently, leading to a difference in education, even though the same outcomes were said to be achieved. By outlining specific outcomes, a holistic approach to learning is lost. Learning finds itself being reduced to something that is specific, measurable, and observable. As a result, outcomes are not yet widely recognized as a valid way of conceptualizing what learning is about. Further Faculty & students are overloaded with academic activities.

#### 1. Notes (Optional)

NMIT offers courses like NCC, Values Based Leadership, Constitution of India and Professional Ethics (CIP), Environmental Studies leading to overall development of the students.

Any other information regarding Institutional Values and Best Practices which the Autonomous College would like to include.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

#### 7.3 Institutional Distinctiveness

**7.3.1** Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

**Response:** 

#### **Innovation & Entrepreneurship at NMIT**

Engineering drives innovation through the development of new processes and technologies. Hence, fostering innovation is an important goal of engineering education. Promoting Innovation is also a national goal. In this line Nitte Meenakshi Institute of Technology, Bangalore has created conducive environment for Innovation & Entrepreneurship which has made NMIT to stand differently among the other Engineering Institutes of India.

As an Autonomous Institute, NMIT has started promoting Innovation and entrepreneurship from the year 2008. Innovation and Entrepreneurship Development Centre (IEDC) was established in the year 2010 and funded with Rs. 45 lakhs by the Department of Science and Technology (NSTEDB), New Delhi. Under IEDC, every year 5 Innovative projects were funded with Rs 5 Lakhs each. As a next step Business Incubator was established with the support of MSME (Micro, Small and Medium Enterprises), Govt. of India to provide early support to our students for incubating their innovative ideas. Further Innovation club has been established with the support of University. NMIT has also established a Campus Company- Iignis Innovation Lab which enables the students to develop societal applications and earn while learning.

A good research will lead to an innovation. There is no innovation without proper research. With this vision, NMIT has established five multi-disciplinary Centers of Excellence (CoE) viz Small Satellites (Supported by ISRO), Robotics, Nanomaterials & MEMS, Computational Fluid Dynamics, and Design Engineering & Process Simulation. NMIT is a unique Institution to establish Center of Excellence for skill development in Aerospace and IoT (CoE) in collaboration with renowned companies(Dassault systems & PTC) with a funding of Rs 25 Crores which imparts high end modern technical skills and knowledge among the engineering graduates and make them 'Industry Ready'. NMIT has several sponsored research projects amounting to Rs.15 Crores sanctioned by different National Funding Agencies such as DST, DIT, ISRO, AICTE, DRDO Labs, VGST, IEEE, VTU, UNESCO-KSCST, etc. which provides opportunities for UG/PG/PhD students to work 24X7 in these projects which will lead to Innovation.

To introduce culture of Innovation during the early stage of Engineering, NMIT is the first college in India to introduce Robotics Engineering-Lego Mindstorms and TETRIX with Laboratory Course for II Year B.E Students. The course is on the lines of a few US/European Universities. Course Projects/Project Competitions/Internship has been introduced from 1st year of engineering which will enable NMIT to inculcate Innovative thinking.

Highly qualified and experienced faculty comprising of 85 Ph.Ds primarily from IISc, IITs & NITs will enable NMIT to create IISc/IIT/NIT culture among its students and to practice Outcome Based Education successfully. The College is having Several Technical/Entrepreneurship promoting clubs supported by Professional Bodies such as IEEE/IE/IETE/NEN/etc. There is a Hackathon club which helps the students to participate in International/National Level Competitions where students have been bagging several awards at the National Level. NMIT students have also been proving their talents from the past 3 years continuously by winning awards in Smart India Hackathon, which is the biggest Hackathon in the world initiated by the Govt. of India. Other events where our students outperformed are:

- Unisys Cloud 20/20 Contest
- Bigbot League (Infosys)
- DHFL Fintech challenge
- Smart Odisha Hackathon
- Accenture Innovation Challenge
- CONSENSYS India Hackathon
- Rupay Contactless Ideathon
- 3M-CII Young Innovators Challenge Awards
- Carl Zeiss hackathon
- IoT Innovation Challenge
- SAE Baha/Supra
- Rally car Design Challenge

- National Solar Vehicle Championship
- GIISC-Reimagine Waste, Hackathon (IISc)
- ISGW (India Smart Grid Week) etc.

These initiative and activities have resulted in the setting up of few successful start-ups by our Alumni and also by a few of our present students.

File Description	Document	
Any additional information	View Document	
Link for Additional Information	View Document	

### **5. CONCLUSION**

#### **Additional Information :**

- NMIT is identified as Regional Nodal Centres of IIT-B/ IIT-KGP for faculty development programs under the National Mission on Education through ICT(NMEICT), under MHRD, Govt. of India.
- NMIT is the first college in India to introduce Robotics Engineering-Lego Mindstorms and TETRIX with Laboratory Course for II Year B.E Students. The course is on the lines of few US/European Universities.
- Since 2013, the institute has a unique Scheme of Deputing UG Students to Industry, R&D Organizations, IISc, IITs and NID for a minimum period of 6 weeks internship leading to academic credits.
- Eleven Departments of NMIT offer doctoral programs of VTU / University of Mysore (UoM).
- Highly qualified and experience faculty comprising 86 Ph.Ds primarily from IISc, IITs & NITs. An additional 88 Faculty members are pursuing Ph.Ds in different research centres of NMIT as well as in other Institutions of eminence.
- The institute provides students' the state-of-art technology infrastructure which entails access to advanced softwares, high speed internet connectivity (400 Mbps), subscription to highly rated online resources.
- NCC Elective Only College in the state of Karnataka offering this as per UGC Syllabus.
- Value Based Leadership Open elective offered in collaboration with ISCKON, Bangalore.
- It has an active and dynamic Training and Placement cell. The Placement cell has successfully attracted a large number of reputed organizations for on-campus placements. The Placement cell also conducts programs to improve the competence of students by enhancing soft skills / analytical abilities / problem solving capabilities/ attitudinal and leadership qualities.
- The institute has modern hostel facilities in the campus both for boys and girls with in-house mess as well as Residential Facility for Faculty.
- Institute has a well equipped medical center with qualified Doctor and staff nurse.

#### **Concluding Remarks :**

NMIT is the one of the youngest engineering college, which has reached several milestones in a short span, to name a few

- Autonomous Status with 2(f) & 12(B)
- TEQIP Funded Institute
- 6 Centers of Excellence
- MSME Incubator
- IEDC
- NAAC Accreditation
- NBA Accreditation
- NIRF Ranking

NMIT offers verity of academic programs which satisfies the Global/National/Industry needs. To provide Learner-Centric Environment, NMIT has successfully implemented Outcome Based Education resulted in effective/innovative delivery and assessment methods. To create conducive learning environment, NMIT has

spacious and well-equipped Classrooms, Laboratories, Lecture capturing rooms, Seminar Halls, Auditoria, Library and Staff rooms

Research Promotional and IPR Policy of NMIT resulted in following metrics during last 5 years

- 86 PhDs primarily from IISc/IITs/NITs.
- Good amount of Research Funding from reputed National/State Agencies
- 51 Consultancy projects
- 103 Innovation Awards
- 217 WOS/SCOPUS indexed papers
- 50 Books/Book Chapters
- 39 Patents has been Granted/Published

NMIT has always been student centric, encouraging the students to excel in all aspects of curricular, cocurricular and extracurricular activities. This has been proven through the various student chapters established like ISTE, IETE, Institution of Engineers, The Aeronautical Society of India, ACCE India), ICI, IEEE, ISHRAE, FPSI, SAE, ASME, NEN etc. and students are actively participating and achieving many awards. NMIT has an active and dynamic Training and Placement cell resulted in better placements/Higher studies/startups

NMIT has a well-structured governance system resulted in noticeable growth of the Institute. Almost all teaching & non-teaching Faculty has benefited by the Welfare policy of the Institute.

Nitte Meenakshi Institute of Technology has made remarkable impact to the environment and all the neighbor community by setting up College-Neighborhood-Community Network through different wings such as NSS/NCC/Rotract /YWR/Students' Council/etc. Major emphasis has given on student engagement, holistic development, and service orientation of students contributing towards good citizenship.