Yearly Status Report - 2019-2020

Part A	
Data of the Institution	
1. Name of the Institution	**NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)**
Name of the head of the Institution	**Dr. H C Nagaraj**
Designation	**Principal**
Does the Institution function from own campus	**Yes**
Phone no/Alternate Phone no.	**08022167803**
Mobile no.	**9845275240**
Registered Email	**principal@nmit.ac.in**
Alternate Email	**dyregistrar@nmit.ac.in**
Address	**PO Box No. 6429, YELAHANKA,**
City/Town	**Bangalore**
State/UT	**Karnataka**
Pincode	**560064**

2. Institutional Status

Autonomous Status (Provide date of Conformant of Autonomous Status)	**26-Apr-2019**
Type of Institution	**Co-education**
Location	**Urban**
Financial Status	**Self financed**
Name of the IQAC co-ordinator/Director	**Dr. Sanjay H A**
Phone no/Alternate Phone no.	**08022167864**
Mobile no.	**9342560303**
Registered Email	**sanjay.ha@nmit.ac.in**
Alternate Email	**iqac@nmit.ac.in**

3. Website Address

Web-link of the AQAR: (Previous Academic Year)	https://www.nmit.ac.in/aqar2018-19-download.html

4. Whether Academic Calendar prepared during the year

4. Whether Academic Calendar prepared during the year	**Yes**
if yes,whether it is uploaded in the institutional website: Weblink :	https://www.nmit.ac.in/academic-calendar.html

5. Accrediation Details

Cycle	Grade	CGPA	Year of Accrediation	Validity Period From	Period To
1	A	3.02	2014	05-May-2014	04-May-2019
2	A+	3.33	2020	08-Jan-2020	07-Jan-2025

6. Date of Establishment of IQAC

26-Feb-2013

7. Internal Quality Assurance System

Quality initiatives by IQAC during the year for promoting quality culture		
Item /Title of the quality initiative by	Date & Duration	Number of participants/ beneficiaries

IQAC		
External Audit Accreditation	19-Nov-2019 5	309
Internal Audit Accreditation	19-Nov-2019 5	309
360 Degree Feedback	24-Sep-2020 1	4762
Guest Lecture on New Education Policy	24-Oct-2019 1	69
Two days workshop on Effective course Outcome writing and assessment planning	26-Jul-2019 2	41
Workshop on	06-Jan-2020 5	150
Online training on Microsoft teams	01-Sep-2020 1	309
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8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Institution	Business incubator	MSME	2020 1825	0
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9. Whether composition of IQAC as per latest NAAC guidelines:	**Yes**
Upload latest notification of formation of IQAC	[View File](#)
10. Number of IQAC meetings held during the year :	**6**
The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website	**Yes**
Upload the minutes of meeting and action taken report	[View File](#)
11. Whether IQAC received funding from any of the funding agency to support its activities during the year?	**No**
12. Significant contributions made by IQAC during the current year(maximum five bullets)	

Internal Audit Accreditation External Audit Accreditation Program Exit Survey Online training on Microsoft teams 360 Degree Feedback Plagiarism check for UG/PG/Ph.D thesis Faculty Self Appraisal OpenHouse Project Expo Atal innovation ranking NIRF Online training on Zoom Meeting Feedback for Even semester 201920 Workshop on Outcome Based Education for faculty Faculty Monthly Activity Report Feedback for ODD semester 201920 Department wise review of research status Guest Lecture on New Education Policy Identifying Slow learners/Irregular students of 1st year with Action plan AICTE CII survey Induction Programme for Newly Joined Students with Industry experts Orientation program to newly joined faculty Alumni Survey NBA SAR preparation for two UG Programmes Two days workshop on Effective course Outcome writing and assessment planning

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13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achivements/Outcomes
MSE QP Quality Review (2 Members Committee)	Facilitating the creation of a learner-centric environment conducive to quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process
One Day Workshop on "Teacher Empowerment: The Facts and Impacts" for the faculty who are teaching 1st year course	Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles;
Establishing Project Office, which will act as Data Collection Center using ERP Software	Development and maintenance of institutional database through MIS for the purpose of maintaining /enhancing the institutional quality;
IQAC Meeting (With External Members)	Development of Quality Culture in the institution
Identifying Slow learners/Irregular students of 1st year with Action plan	Facilitating the creation of a learner-centric environment conducive to quality education
Review of Students' Feedback on Faculty Questionnaire and 360 Degree Feedback Questionnaire	Development and application of quality benchmarks/parameters for various academic and administrative activities of the institution
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14. Whether AQAR was placed before statutory body ?

Yes

Name of Statutory Body	Meeting Date
Academic Council	29-Sep-2020

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	**Yes**
Date of Visit	**25-Nov-2019**
16. Whether institutional data submitted to AISHE:	**Yes**
Year of Submission	**2020**
Date of Submission	**30-Sep-2020**
17. Does the Institution have Management Information System ?	**Yes**
If yes, give a brief descripiton and a list of modules currently operational (maximum 500 words)	**DHI Net HRMS Login portal Praptha Accounting Management Software EasyLib**

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Design and Development

1.1.1 – Programmes for which syllabus revision was carried out during the Academic year

Name of Programme	Programme Code	Programme Specialization	Date of Revision
BE	**AE**	**Aeronautical Engineering**	**30/07/2019**
BE	**CV**	**Civil Engineering**	**30/07/2019**
BE	**CSE**	**Computer Science & Engineering**	**30/07/2019**
BE	**IS**	**Information Science & Engineering**	**30/07/2019**
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1.1.2 – Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the Academic year

Programme with Code	Programme Specialization	Date of Introduction	Course with Code	Date of Introduction
BE	**AERONAUTICAL ENGINEERING**	**30/07/2019**	**Elements of Aircraft Engineering Design 18AE32**	**30/07/2019**
BE	**INFORMATION SCIENCE & ENGINEERING**	**30/07/2019**	**DIGITAL DESIGN 18IS32**	**30/07/2019**
BE	**Electronics and Communication**	**30/07/2019**	**MACHINE LEARNING FORPATTERN**	**30/07/2019**

BE	Electrical and Electronics Engineering	30/07/2019	Advance Power Electronics 14EEE752	30/07/2019
	Engineering		RECOGNITION 7ECE656	
BE	COMPUTER SCIENCE & ENGINEERING	30/07/2019	ADVANCED ALGORITHMS 17CSE659	30/07/2019
BE	MECHANICAL ENGINEERING	30/07/2019	Design of Machine Elements 18ME51	30/07/2019
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1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the Academic year

Programme/Course	Programme Specialization	Dates of Introduction
Mtech	DATA SCIENCE	01/08/2019
Mtech	AEROSPACE	01/08/2019
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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the College level during the Academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
Mtech	DATA SCIENCE	01/08/2019
Mtech	AEROSPACE	01/08/2019

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
FLIGHT TRAINING PROGRAM	30/07/2019	20
Importance Aspects of QA- QC Ready Mix Concrete and Site Visit	30/07/2019	271
Advanced Excel	30/07/2019	105
COE-IOT	30/07/2019	96
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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
BE	Aeronautical Engineering	136
BE	Computer Science & Engineering	275
BE	Civil Engineering	223
BE	Electronics & Communication Engineering	373

BE	Information Science & Engineering	344
MBA	Master of Business Administration	139
MCA	Master of Computer Applications	106
BE	Mechanical Engineering	338
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	Yes
Alumni	Yes
Parents	Yes

1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution? (maximum 500 words)

Feedback Obtained

A well-structured feedback mechanism has been developed by the institute for Curriculum development and teaching learning process. The feed back is collected from all the stake holders. The feedback collected will be analyzed and action will be initiated at the appropriate levels. The main purpose of this policy is to collect the stakeholders' perceptions of the effectiveness of the curriculum and its implementation. The institution's IQAC is a pioneer body to maintain consistent quality consistence and to implement quality enhancement measure. Under aggies of IQAC, the whole process of feedback collection and analyze is carried out. The feedback will be taken at the end of the academic year. The collected feedback will be analyzed for curriculum development and Teaching Learning Process (TLP). The feedback collected will be in two areas of the institutes curricular concerns: the structure, operation, and impact of a course offered. Effective Feedback collected will help the institute, to maximize their potential at different stages of training, raise their awareness of strengths and areas for improvement, and identify actions to be taken to improve performance. Feedback are collected from the students at the end of the Programme. Feedback from parents will be collected during parent teacher meeting which will be held at least once in a semester. The suggestions through mentor parent meeting will also be forwarded to the coordinators for necessary possible implementation. The feedback from the employers on the students' performance and the curriculum based on the industrial needs is obtained through the Training and Placement Cell. Subsequently, the information is disseminated to the concerned departments. The alumni who have been inducted into the various boards/committees such as BOS, IQAC will provide their feedback at these forums which will be considered for possible adoption. The feedback thus obtained from them is utilized in the process of the curriculum enrichment. The feedback collected is evaluated at the departmental level at a 5-pointer scale. The Departmental Undergraduate Committee will analyze the data and make a report to incorporate the feedback, by taking into the confidence of Faculty for change in syllabus and TLP in association with Program Assessment Committee and Departmental Advisory Committee. The change in Curricula and TLP will be forwarded to BOS for necessary action and approval.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
BE	Electrical & Electronics Engineering	120	400	104
BE	Information Science & Engineering	180	92581	180
BE	Electronics & Communication Engineering	180	92882	180
BE	Computer Science & Engineering	180	96914	180
BE	Civil Engineeering	120	200	78
BE	Aeronautical Engineering	60	250	55

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2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2019	4307	455	257	24	28

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Numberof smart classrooms	E-resources and techniques used
309	309	18	89	5	13

View File of ICT Tools and resources

View File of E-resources and techniques used

2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

NMIT is having an effective mentoring system to emphasize towards enhancement of the institutional ambience to better serve the needs of an ever-changing and dynamic learning community. The Institute is having the following administrative setup for effective mentoring. ? Mentor ? Class teacher ? Department level mentor coordinator ? HOD ? Professional counselor ? Institute academic committee Each faculty will be the mentor of a group of 15 to 20 students. As far as possible department will maintain same mentor for the same group of

students till their graduation. Other than mentor class teacher also provide additional support to the students. Department level mentor coordinator will coordinate all the activities related to mentoring in consultation with HoD. On the need basis HoD will counsel the student and parent. Department may refer the student to professional counselor on need basis. The institute academic committee will discuss mentoring related issues at least twice in a semester during its meetings and revise/ upgrade the system if necessary. Mentoring during COVID Pandemic situation: The Faculties/ mentors have always been standing out to help their students from the inception, and it was a lot more during COVID-19 crisis. Departments ensured the following things were taken care utmost during those times: ? Before the online classes started, All the mentors spoke to their students personally over call and briefed them how to gear up for online classes. ? Students were trained on the dos and don'ts of using the application and technology. ? Students were built and poured with confidence to take up the new type of teaching and learning process in a more confident way. ? Every mentor ensured that all the mentees under them received the study materials. ? Students belonging to rural areas and who couldnt access to high speed internet were mentored further to not worry and they were supported with complete study materials. ? Mentors also approached the parents of their mentees and had a general talk with them regarding any issues or queries that dealt with students mindset and online classes Responsibilities of Mentor: • Meet the group of students at least twice a month. • Continuously monitor, counsel, guide and motivate the students in all academic matters. • Guide the student on how to address stress related issues. • Advise students regarding choice of electives, project, summer training etc. • Contact parents/guardians if situation demands e.g. academic irregularities, negative behavioral changes and interpersonal relations, detrimental activities etc. • Advise students in their career development/professional guidance. • Intimate HOD and suggest if any administrative action is called for. • Maintain a brief but clear record of all discussions with students. • Maintain a detail progressive record of the student. • Refer the students to meet professional counselor on need basis. • Post comments / suggestions to the students in the website link of DHI. The link to this online portal can be accessed through the college website www.nmit.ac.in. • Students and parents can access the portal using username and password.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
4762	309	1:15

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
309	309	Nill	27	97

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2019	Ms. VarshaVishwanath	Assistant Professor	Two research projects is awarded State Level First Prize by Karnataka State Council for Science and Technology, IISc, Bangalore
2019	Dr. SAROJADEVI H	Professor	honorary Rosalind Member of London Journals Press. Membership ID#GK62209
2019	Dr. Vasanthakumar G U	Associate Professor	Certified Microsoft

| 2020 | Anand. S | Assistant Professor | Innovative Educator Award |
| | | | Outstanding Mentor Award of Team HORUS, Dynamist Motorsports |

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2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
BE	AE	1st	09/12/2019	23/12/2019
BE	CS	3rd	16/12/2019	31/12/2019
BE	IS	5th	14/12/2019	28/12/2019
BE	EC	7th	14/12/2019	28/12/2019
MBA	MBA	3rd	15/01/2020	29/01/2020
Mtech	CNE	1st	20/01/2020	04/02/2020

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2.5.2 – Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
5	4742	0.11

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 in website of the institution (to provide the weblink)

https://www.nmit.ac.in/autonomous-scheme-syllabus.html

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
AE	BE	Aeronautical Engineering	72	71	98.61
CV	BE	Civil Engineeering	128	127	99.22
CS	BE	Computer Science & Engineering	229	228	99.56
EC	BE		199	196	98.49

		Electronics & Communication Engineering			
MBA	MBA	Master of Business Administration	111	110	99.10
CSE	Mtech	Computer Science & Engineering	6	6	100
VLSI	Mtech	VLSI Design & Embedded Systems	9	7	77.78

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2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

https://nmit.ac.in/pdf/naac2/2019-20/360_degree_feedback_2019-20.pdf

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Promotion of Research and Facilities

3.1.1 – The institution provides seed money to its teachers for research

Yes
Name of the teacher getting seed money
Mrs. Sridevi H R
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3.1.2 – Teachers awarded National/International fellowship for advanced studies/ research during the year

Type	Name of the teacher awarded the fellowship	Name of the award	Date of award	Awarding agency
International	Mr. Harish Kumar L	PhD International Fellowship	22/07/2019	University of Malaya, Malayasia
International	Mr. Rachith S N	PhD International Fellowship	25/11/2019	University of Hasselt, Belgium
National	Sanket salvi	PhD National Fellowship	19/08/2019	National Institute of Technology, Karnataka
National	Dr. Vinyas Mahesh	Post Doctrol Fellowship	19/08/2019	Indian Institute of

				Science, Bangalore

3.2 – Resource Mobilization for Research

3.2.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Major Projects	1825	Department of Science and Technology (DST)- FIST	60	0
Major Projects	548	GTRE- DRDO	9.96	4.22
Any Other (Specify)	365	All India Council for Technical Education (AICTE) GOC- Grant for Organizing Conference	5	5
Interdiscipli nary Projects	365	DSIR	11.25	11.25
Minor Projects	90	Visvesvaraya Technological University (VTU)- (TEQIP III)	1.08	1.08

3.2.2 – Number of ongoing research projects per teacher funded by government and non-government agencies during the years

38

3.3 – Innovation Ecosystem

3.3.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
Xilinx Vivado Technique and Machine Learning Algorithm Using PYNQ Framework	Electronics and Communication Engineering	08/06/2020
Faculty development program on research methodology	Master of Business Administration	19/02/2020
EPLAN for Electrical Engineers	Electrical and Electronics Engineering	22/01/2020
Workshop on Building Construction	Civil Engineering	25/09/2019
Faculty Development	Computer Science and	03/03/2020

Program on Data Science and Big Data Analytics	Engineering	
One day workshop on Decentalized applications and smart contract development	Information Science and Engineering	05/11/2019

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3.3.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
Design Fabrication of Racing Drone	Mr. G Nitish Kumar, Mr. B JaswanthSimha, Mr. Praveen Rathod, Mr. B M Shreyas and Mr. Vijay Bhajantri	MLR Institute of Technology, Hyderabad	05/10/2019	Students
Prosthetic Hands	Dr. Mrutyunjay Maharana	Festival of Innovation and Entrepreneurship (FINE)	09/07/2019	Teachers
3D Printed ECO-Friendly Ganesha Using Mud or Clay	Dr. Shefali Jagwani	IEEE Bangalore Section WIE Affinity group	16/10/2019	Faculty

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3.3.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsored By	Name of the Start-up	Nature of Start-up	Date of Commencement
Iignis Innovation Lab	Mr. Rohan G	Nitte Meenakshi Institute of Technology	Ragi Media	IT Services	17/08/2019
Iignis Innovation Lab	Mr. Ghanashyam J U	Nitte Meenakshi Institute of Technology	Alynnover Technology Solutions Pvt Ltd	IT Services	01/08/2019
Center for Innovation Incubation and Entrepreneurship	Saumya Ranjan and Sachin Angadi	Nitte Meenakshi Institute of Technology	Verge Motors Private Limited	Automotive	08/05/2019
Embedded Systems Lab	Mr. Rudresha K J	Nitte Meenakshi Institute of Technology	ArtiSense Technologies Pvt. Ltd	IT Services	18/12/2019

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3.4 – Research Publications and Awards

3.4.1 – Ph. Ds awarded during the year

Name of the Department	Number of PhD's Awarded

Aeronautical Engineering	2
Civil Engineering	1
Electronics and Communication Enginnering	5
Electrical and Electronics Engineering	1
Information Science and Engineering	1
Master of Business Administration	4
Mechanical Engineering	3

3.4.2 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
International	Aeronautical Engineering	5	1.02
International	Civil Engineering	9	1.98
International	Computer Science and Engineering	15	2.66
International	Electronics and Communication Enginnering	13	1.98
International	Electrical and Electronics Engineering	5	1.04
International	Information Science and Engineering	10	0.82
International	Mechanical Engineering	28	2.07
International	Basic Science	19	2.49
International	Master of Business Administration	12	3.43
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3.4.3 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
Aeronautical Engineering	5
Civil Engineering	5
Computer Science and Engineering	19
Electronics and Communication Enginnering	17
Electrical and Electronics Engineering	8
Information Science and Engineering	32
Mechanical Engineering	18

Master of Business Administration	7
Basic Science	2

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3.4.4 – Patents published/awarded during the year

Patent Details	Patent status	Patent Number	Date of Award
A flexible Substrate and a Method Thereof	Published	201841006773	28/06/2019
Anti-Drowing Kit with Location Tracker	Published	201941024082	18/06/2019
Large Scale Chemical Based Smart Air Purifier Using IOT	Published	201941024083	18/06/2019
Range Extender Engine For Hybrid Electric Vehicles	Filed	201941054031	26/12/2019
Frictionless Vertical Axis Maglev Wind Turbine	Filed	201941054028	26/12/2019
Real-Time Onboard Truckload Weighing System	Filed	201941054030	26/12/2019
Multiutility Agricultural Vehicle	Filed	201941054027	26/12/2019
Solar Powered Rice Puffing Machine	Filed	201941054029	26/12/2019

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3.4.5 – Bibliometrics of the publications during the last academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
No Data Entered/Not Applicable !!!						

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3.4.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Influence of interphase	Vinyas M., Sunny K.K., Harursampath	Composite Structures	2019	9	6	Department of Aerospace

on the multi-physics coupled frequency of three-phase smart magneto-electro-elastic composite plates	D., Nguyen-Thoi T., Loja M.A.R.						Engineering, Indian Institute of Science, Bangalore, 560012, India Department of Mechanical Engineering, Nitte Meenakshi Institute of Technology, Bangalore, Karnataka 560064, India Division of Computational Mathematics and
Nonlinear forced vibration of smart multiscale sandwich composite doubly curved porous shell	Karimiasl M., Ebrahimi F., Mahesh V.	Thin-Walled Structures	2019	9	9	VTU Research Centre, Nitte Meenakshi Institute of Technology, NMIT, Bangalore, India CSE Dept, SDMIT, Shree Dharmasthala Manjunatheswara Institute of Technology, Dharmasthala Road, Near Siddhavana, South Canara, Ujire, Karnataka 574240, India Nitt
A finite element-based	Vinyas M., Sandeep	Journal of Intelligent	2019	9	10	Department of

assessment of free vibration behaviour of circular and annular magneto-electro-elastic plates using higher order shear deformation theory	A.S., Nguyen-Thoi T., Ebrahimi F., Duc D.N.	Material Systems and Structures				Mechanical Engineering, Nitte Meenakshi Institute of Technology, Bangalore, 560064, India Department of Mechanical Engineering, National Institute of Technology Karnataka, Surathkal, Mangalore, 575025, India Tata Consultancy Services,
Cutting Forces, Surface Roughness and Tool Wear Quality Assessment Using ANN and PSO Approach During Machining of MDN431 with TiN/AlN-Coated Cutting Tool	Badiger P.V., Desai V., Ramesh M.R., Prajwala B.K., Raveendra K.	Arabian Journal for Science and Engineering	2019	9	6	Nonlinear Multifunctional Composites Analysis and Design (NMCAD) Lab, Department of Aerospace Engineering, Indian Institute of Science, Bangalore, Karnataka 560012, India Department of Mechanical Engineering, Nitte Meenakshi Institute of Technology

Nonlinear free and forced vibration analysis of multiscale composite doubly curved shell embedded in shape-memory alloy fiber under hygrothermal environment	Karimiasl M., Ebrahimi F., Mahesh V.	JVC/Journal of Vibration and Control	2019	9	12	Department of Mechanical Engineering, Nitte Meenakshi Institute of Technology, Bengaluru, India CSMST Division, CSIR-NAL, Bengaluru, India Department of Mechanical Engineering, Ramaiah Institute of Technology, Bengaluru, India
Microstructure, mechanical and wear properties of the A357 composites reinforced with dual sized SiC particles	Lakshmikanthan A., Bontha S., Krishna M., Koppad P.G., Ramprabhu T.	Journal of Alloys and Compounds	2019	9	15	Department of Mechanical Engineering, National Institute of Technology Karnataka, Surathkal, Mangaluru, 575025, India Department of Mechanical Engineering, Nitte Meenakshi Institute of Technology, Bengaluru, 560064, India Department of Mechanical E

3.4.7 – Faculty participation in Seminars/Conferences and Symposia during the year				
Number of Faculty	International	National	State	Local
Presented papers	92	9	Nill	Nill
Attended/Seminars/Workshops	14	160	107	120
Resource persons	2	10	8	22

3.5 – Consultancy

3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultan(s) department	Name of consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
Dr.Sanjay H A	Training for faculty of VTU on OBE	VTU,TEQIP 3	300000
Dr.Manoj Kumar M V	NIH app	Cybernet infocom, Nejersey,USA	220000
Dr.Sanjay H A	User management and map view layout using react and Fabric.js	Code parva technologies	135000
Dr. Veda S N	Segregation of strands in Hemp fiber	Namarata Hemp Co Pvt. Ltd	1000000

3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultan(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
Mr. Vikram	Lathe Operator	PMKVY	168300	25
Ms. Savitha	Assistant Fashion designer	PMKVY	136000	25
Dr. Thippeswamy M N , Mr. Honnappa, Mr. Bhargav	Airline Service Executive	PMKVY	79560	25
Dr. Vinayaka	GATE crash course	GOODWILL GATE2IIT	67500	27

3.6 – Extension Activities

3.6.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Walkathon	NCC / NSS	30	550
Eye Check-up	NSS	25	100
Cleanliness Drive	NCC	10	160
Blood Donation Camp	NCC/ NSS/ Rotract/ YRC	35	145
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3.6.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
Republic Day Parade 2020	Gold medal SD Army Best cadet- Karnataka Goa directorate, Chief ministers commendation	National Cadet Corps, Karnataka state government	1
IGC	Participated in IGC	39 Kar Inf Battalion, Bengaluru B GP	1
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3.6.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activites	Number of students participated in such activites
Awareness program on Adolescent Alcohol and Drug Abuse	NCC NMIT	Traffic Control and Road Safety	40	160
Swami Vivekananda Jayanthi	NSS NMIT	Swami Vivekananda Jayanthi	50	130
Swachh Bharath	NSS NMIT	Swachh Bharath Abhiyan	20	80
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3.7 – Collaborations

3.7.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Academic project	Swathi R, Vikhyath shetty, Shrey srivastava	Unisys	365
Academic project	Bibek,Pavithra	Netscout	365
Research	Shefali Jagwani,	Nitte Meenakshi	90

	Gyanendra Kumar Sah, Dr L Venkatesha	Institute of Technolgy	
Faculty exchange	A.V.Shreyas & Sankaran Venkateswaran	Nitte Meenakshi Institute of Technology	2
INTERNSHIP	Purshottam Kamat	Green Ventures Pvt. Ltd.	112

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3.7.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Internship	Interfacing UART CONTROLLER OF QORiq P2020 HIGH SPEED PROCESSOR	HAL, m.mro @hal-india.com	03/06/2019	13/07/2019	Gurmukh Singh Arora
Internship	Industry Linkage for Internship	Shriram Life Insurance	07/01/2020	08/01/2020	R.Winston Joel Samuel
Internship	Weather station (displaying temperature, humidity on OLED and web server)	Li2 Technology, info@li2.in	03/06/2019	05/07/2019	Praveen B S
Internship	Smart Parking	Indian Tech-Keys, indiantechkeys@gmail.com	10/06/2019	31/07/2019	Manjunath Reddy Hagaladal

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3.7.3 – MoUs signed with institutions of national, international importance, other institutions, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
Infosys Limited	15/11/2019	FEP,TTT, InfyTQ Certification for students	220
M/s UNISYS INDIA PVT LTD(Unisys)	19/07/2019	Academic Research Program,Academic Innovation Program,	400

| | Faculty/Student Development Programs,Corporate Training,Industrial Visit,Curriculum Design,Partial Delivery of Course,Internship, Placement | |

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CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
1000	654.11

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Classrooms with Wi-Fi OR LAN	Existing
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Newly Added
Value of the equipment purchased during the year (rs. in lakhs)	Newly Added
Video Centre	Existing
Seminar halls with ICT facilities	Existing
Classrooms with LCD facilities	Existing
Seminar Halls	Existing
Laboratories	Newly Added
Class rooms	Existing
Campus Area	Existing

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4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or patially)	Version	Year of automation
KOHA	Fully	19.05	2001

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
Weeding (hard & soft)	Nill	Nill	Nill	Nill	Nill	Nill
Text Books	45682	8654884	700	375843	46382	9030727

Reference Books	6000	5026000	93	44640	6093	5070640
e-Books	25157	7202000	Nill	Nill	25157	7202000
Journals	84	4378216	Nill	292436	84	4670652
e-Journals	1892	8258415	Nill	4603993	1892	12862408
Digital Database	1	370000	Nill	Nill	1	370000
CD & Video	2000	6000	Nill	Nill	2000	6000
Library Automation	1	185000	Nill	35000	1	220000
Others(specify)	Nill	1336000	Nill	129804	Nill	1465804

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4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
Kiran B R	Boyers Moor Algorithm	youtube	16/04/2020
Manjunatha L	Moment of Inertia	PowerPoint/OneNote xSplitter/VideoCutter/Youtube/GoogleMeet	27/06/2020
Suthan R	Supersonic combustrion	Microsoft power point and Screen recorder	15/04/2020
Manjunatha L	Department library Student/Issue Return Management system	Worpress and Google Sheets	16/03/2020

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4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/ GBPS)	Others
Existing	1639	1215	1500	30	152	40	202	400	0
Added	0	0	0	0	0	0	0	0	0
Total	1639	1215	1500	30	152	40	202	400	0

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

400 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
Impartus: Leading Video Platform for Lecture Capture and Live Online Courses	https://a.impartus.com/login/#/
PowerPoint/OneNote xSplitter/VideoCutter/Youtube/GoogleMeet	https://www.youtube.com/playlist?list=PLxTKIR49WBrcer08qCMkT0KaystL550E6

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurredon maintenance of physical facilites
1070	1025.75	1900	664.87

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website)

NMIT campus is spread over 22.3 Acres of land with 92,580 Sqm of built up area for teaching/learning facilities. We have a total of 88 classrooms, 4 seminar halls, 95 well-equipped labs, an auditorium and an open-air theater.These are provided with ICT facilities such as LCD Projectors, Computers, Audio Systems, Wi-fi, Student management system etc. Lecture capturing rooms, Smart class rooms and English language laboratories are catering to the needs of the students. Class rooms are well furnished and ventilated with an area of about 77 Sqm. We have total of 1639 computers in the institute. The college has BSNL leased line (1:1) connectivity of 400 Mbps, also the entire campus is Wi-Fi enabled. The existing physical infrastructure is used beyond regular college hours for conducting online examinations, placement training sessions, intercollegiate competitions and for activities of various clubs and societies dedicated to Music, Dance, Art, Theatre, Photography, Cultural activities, Literature, Hostels' Association, NCC, NSS, ROTRACT, Youth Wing of RED CROSS society etc. The lecture capture room equipped with Impartus Lecture Capture system is utilized by the teachers, and the captured videos are shared with the students. NMIT library is housed in a spacious building spanning 1300 Sqm. The library resources have been completely computerized with the application of KOHA- Integrated Library Management Software along with Bar code system. Apart from comprehensive collection of books the library also offers various vital services like Plagiarism checking, Current Awareness Services, Newspaper Clipping Service, Reference Services and information regarding examinations etc. The campus has a multi-purpose track, a hockey ground, facilities for cricket, basketball, volleyball, shuttle badminton and throw-ball. We have facilities for indoor sports such as table tennis, carrom, chess etc. 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 the students. NMIT has BSNL telephone landline connection connecting the

entire campus. 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. The college has a well-equipped and properly maintained medical centre, Cafeteria and six other eateries, Two ATM centres, water purifiers with RO technology, fire extinguishers, rain water harvesting system, adequate electric power backup systems, spacious parking facilities and a sewage treatment plant. Well established measures are existing and implemented within the Institute for the maintenance and use 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 at NMIT.

https://www.nmit.ac.in/facility-library.html

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	NMIT Fee Wavier	759	65207674
Financial Support from Other Sources			
a) National	Teachers Benefit fund, PMSS, PMSSS, Post Matric/Food Accomadation/Fee Concession, OBC fee concession, SC ST fee concession SCHOLARSHIP, Defence Child scholarship, Bunts Sangha student fund, Sitaram Jindal Foundation	1299	31033363
b)International	Nill	Nill	Nill
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5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
Soft Skills	30/09/2019	54	Gopinath, Accenture technologies
Communicative English	05/08/2019	1047	Dept. of Science and Humanities, NMIT
Youth Empowerment and stress management	12/02/2020	14	Ram Krishna Art of Living
Latest Trends and Challenges in	27/01/2020	81	ChipEdge Technologies,

Design For Testablity (DFT) in VLSI Design			Bangalore
UNIX System and Commands	27/08/2020	93	Dept of CSE, NMIT
Basic Thermodynamics	24/08/2019	50	Mr.Raviprakash, Mechanical Department
Personal Counselling	17/08/2019	4730	All NMIT Faculty, NMIT
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5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passedin the comp. exam	Number of studentsp placed
2019	Importance of GATE in Higher Education	75	Nill	50	40
2019	GUIDANCE FOR GATE/GRE and other exams	199	Nill	130	150
2019	Career Counselling for Higher Studies	Nill	108	Nill	105
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5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
1	1	6

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Nameof organizations visited	Number of students participated	Number of stduents placed	Nameof organizations visited	Number of students participated	Number of stduents placed
Accenture, TCS, INFOSYS, Accord, Amazon, BOSCH, BYJUs	1230	1033	TCS, NTT Data, Cognizant, Cerner etc	200	44

etc					
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5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Depratment graduated from	Name of institution joined	Name of programme admitted to
2019	78	BE	EEE, AE, CSE, CV, ME, ECE, ISE	University of Alberta, Kempton University of Applied Science, Technische Hochschule Inglosdat, The University of Siegen - Germany, University if Texas, Dallas etc	MS, MBA, MTech etc

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5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
GATE	14
GRE	24
TOFEL	17
Any Other	14
CAT	1

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5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Kannada Rajyotsava and Ethnic Day	College	50
VTU Mens Basketball Tournoment	Inter-University	80
VTU Mens/Womens Badminton Tournoment	Inter-University	25

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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)

Year	Name of the award/medal	National/ Internaional	Number of awards for	Number of awards for	Student ID number	Name of the student

				Sports	Cultural		
2019	Finalist mister and miss waves	National	Nill	1	1NT19CS086	Isha Bhardwaj
2019	Winners	National	1	Nill	1NT16EE038	Pranav S
2019	Silver	National	1	Nill	1NT17EC117	Rashmi HN
2019	1st Prize	National	Nill	1	1NT17IS059	Achyuth Nag
2019	Winners	National	1	Nill	1NT18ME096	Nithin H V

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5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

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/extracurricular/ 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 o Anaadyanta o Art Club o Music Club oTheatre Club o Dance Club o 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.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

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 toimprove 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.

5.4.2 – No. of registered Alumni:

7820

5.4.3 – Alumni contribution during the year (in Rupees) :

1320000

5.4.4 – Meetings/activities organized by Alumni Association :

1

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 – Institutional Vision and Leadership

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

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), Internal Quality Assurance Cell (IQAC), Boards of Studies (BOS), Board of Examiners (BOE) and Finance committee and to look into the activities and smooth functioning. The two practices of decentralisation and participative management during the year 2019-20 are: 1. Effective implementation of Outcome Based Education (OBE). At the Departmental/Institutional level the following committees have been established for the effective implementation of OBE: - a. Class Committee b. DUGC/DPGC c. Programme Assessment Committee (PAC) d. Departmental Advisory Committee (DAC) e. BOS f. BOE g. IQAC – Academic and Administrative Audit Committee NMIT practices a culture of participative management, by involving faculty members, students, alumni and employers in various administrative roles in academic and non-academic committees. The above said committees are having all internal/external stakeholders for the transparent and effective implementation of OBE. 2. Academic and Examination autonomy - 3. Effective functioning of Student council. To support and monitor the co-curricular and extra-curricular activities of the students, institute has the following committees/roles: - a. Student council b. Unnat Bharat c. NCC d. NSS e. GEEKMYHAM – Technical Committee f. Cultural Committee g. Anaadyanta – Committee for National level fest h. Sports Committee i. Dance club j. Theatre club k. CHIGURU kannada association l. Music club m. Photography club n. Art club o. Foreign student's association p. Student welfare officer q. Various clubs at the departmental level. The above committees are having both faculty and student members who participate in effective implementation of various cocurricular and extra-curricular activities.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Admission of Students	• Quality enhancement of Teaching learning process by getting accredited by the government agencies NAAC and NBA. • Improving institutional branding by Participating in AICTE - CII survey. • Recruiting faculty members having Ph.D from reputed institutions like IISc/IIT/NITs. • Improvement in

	placement of students with high salary package. • Enabling global hiring. • Setting up of Centre of Excellence in Power Engineering. • Participating in Education fair conducted by various states across India. • Improving institutional branding by scoring better ranks in NIRF, ARIIA and other private ranking agencies.
Industry Interaction / Collaboration	The institute has: - • Undertaking Consultancy projects from Industries and Private entrepreneurs. • MoUs with industries. • Industry internships and projects. • Partial delivery of courses by industry experts. • Industrial visit. • Establishment of Automotive learning lab with the support of Toyota.
Human Resource Management	Well established HR policy for recruitment and promotions. • Well established Research, Consultancy and Financial support guidelines. • Nitte HRMS portal. • Face recognition based Biometric system to monitor the attendance of the staff members. • Annual Faculty Performance appraisal system is in place. • Orientation program is conducted for all newly recruited faculty members. • Involvement of faculty in NAAC, NBA, NIRF, AICTE – CII survey and ARIIA ranking for innovations. • Regular Faculty Staff empowerment programmes conducted. • Financial assistance for publishing research papers in Scopus/WOS indexed conferences/journal and attending FDPs.
Library, ICT and Physical Infrastructure / Instrumentation	The library resources have been completely bar Coded and automated using a dedicated software KOHA. Apart from comprehensive collection of books the library also offers various vital services like: - • Plagiarism checking (Project reports and Ph.D thesis) • EBooks and E-Journals service. • Member of VTU consortium. • Digital Library. • Current Awareness Magazine service. • Newspapers Clipping Service • Reference Services and information regarding examinations. • We have a total of 88 classrooms/ Tutorial Rooms and 101 well-equipped laboratories with advanced ICT facilities. • Lecture capturing rooms, Smart classrooms, English language laboratory, seminar halls, auditorium and open-air theatre are catering to the needs of the students. • Impartus

		lecture capturing system.
	Research and Development	Regarding Research and Development, the following were initiated: - • Research council is established in NMIT to periodically monitor the research activities. • Reviewing the Research contribution of Faculty. • Financial assistance for publications/patents. • Deputation of faculty for Ph.D with financial aid. • Establishment of Multi-disciplinary research centres. • Reduction of teaching workload for faculty who are involved in COE's. • Setting up of Centre of excellence in Power Engineering. • Seed money for young researchers. • New collaboration with industries. • Creation of Domain based faculty research groups at department level.
	Examination and Evaluation	• Design of Rubrics for evaluating various learning activities like course project, case study, assignments etc. • Design of Rubrics for evaluating day-today laboratory experiments. • Assessment of learning levels of the students using student management software based on the Blooms Taxonomy. • GATE based aptitude test. • Different phases of rubrics evaluation as a final year project review. • Bar coding/OMR technologies are used in the conduction, evaluation and processing of results. • Review Moderation of the answer scripts by experienced faculty. • Conduction of Proctor based Online examination and Digital evaluation.
	Teaching and Learning	• Partial delivery of courses by industry experts. • Peer learning. • Students were asked to enrol for MOOCS apart from the regular courses and weightage for the same as a learning activity component. • Introduction of practical based learning activity. • Introduction of Industry based case studies. • Course-Project based learning. • Introduction of MOOC elective. • Implementation of Blended Learning.
	Curriculum Development	Quality improvement initiations taken by the Institute/Departments are: - • Curriculum revision • Introduction of new electives • Introduction of Integrated/Hybrid courses • Introduction of Professional practice courses/Industry based Electives • Introduction of MOOC Electives •

	Introduction of MOOC references

6.2.2 – Implementation of e-governance in areas of operations:

E-governace area	Details
Planning and Development	• DHI – student management software
Administration	DHI • HRMS Web Portal
Finance and Accounts	• HRMS Web Portal • Praptha • NACS • Niketa • Axis pay
Student Admission and Support	• DHI • Koha Software (Open Source) • Almashines • Direct Verify • Impartus
Examination	• DHI – student management software

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2019	NITHIN U AITHAL	Twrds Team Arion At Sae Collegiate Club -team Registration Fee Faculty Sae Membership For Supra Saeindia 2020 At New Delhi -	Nill	66198
2019	Mr. Siddalingappa P K	Flight Training Program, IIT Kanpur	Nill	354000
2019	Mamatha Bai B G	Diabetes Congress - 2019, Frankfurt, Germany	Nill	81652
2019	Dr. Jharna Majumdar	ICCSIE - 2019, Beijing China	Nill	144200
2019	Dr. Jharna Majumdar	CECNet - 2019, Kitakyushu City, Japan	Nill	255309
		[View File](#)		

6.3.2 – Number of professional development / administrative training programmes organized by the Colleges for teaching and non teaching staff during the year

Year	Title of the professional development	Title of the administrative training	From date	To Date	Number of participants (Teaching	Number of participants (non-teaching

	programme organised for teaching staff	programme organised for non-teaching staff			staff)	staff)
2019	Workshop on Virtual Lab	Nill	28/08/2019	28/08/2019	144	Nill
2019	Two days Hands on workshop on Mastering Mobile Application Development with Java and Android	Nill	26/09/2019	27/09/2019	61	Nill
2019	Online Webinar on Artificial Intelligence-An emerging trends in Technology	Nill	02/07/2020	03/07/2020	66	Nill
2019	Nill	Two Days Technical training on Microsoft Excel for Technical Staff	29/07/2020	30/07/2020	Nill	20
2019	Short Term Training Programme - Industry 4.0	Nill	24/08/2020	28/08/2020	1020	Nill
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6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
Youth convention on Effectiveness of Education organised by Sri Rama Krishna	1	02/08/2019	04/08/2019	3

students home				
A Three day faculty development on document typesetting using LATEX Document Typesetting Using Latex	25	09/12/2019	11/12/2019	3
Online FDP on "Lean Six Sigma Yellow Belt" Organized by the Department of Mechanical Engineering, NMIT, Bangalore.	23	07/04/2020	14/04/2020	8
Webinar on "Orientation in Education Methodology for professional Educators conducted by Nitte college of Pharmaceutical Science	10	03/06/2020	03/06/2020	1

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6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
309	309	296	296

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
1. Free Transportation facility to all the faculty 2. Subsidized medical insurance scheme 3. PF and Gratuity benefits 4. Subsidized rent for staff members staying in staff quarters 5. Loan facility from the VIVIDDHODESHA Multi-purpose Co-operative Society 6. Maternity Leave of 182 days with full salary. 7. Study Leave for higher studies 8. Financial assistance	1. Free Transportation facility to all the non-teaching staff 2. ESI scheme for non-teaching staff 3. PF and Gratuity benefits 4. Loan facility from the VIVIDDHODESHA Multi-purpose Co-operative Society 5. Subsidized rent for non-teaching staff members staying in staff quarters 6. Maternity Leave of 182 days with full salary. 7. Concession in tuition fees for children of	1. Accidental Health Insurance 2. InstitutionalScholarships/Fee concession 3. Financial assistance for Projects 4. Financial assistance for Co-curricular and extra-curricular activities

for publishing research papers 9. Financial assistance to attend FDPs/Workshops/Training programs 10. Seed Money for young faculty to pursue research 11. Reduction in workload for the faculty working in Research Centers 12. Half Pay leave for ladies to cater their infants 13. Concession in tuition fees for children of employees for primary, secondary and higher education atNitte Education Trust's schools and colleges	employees for primary, secondary and higher education at Nitte Education Trust's schools and colleges	

6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

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 centred 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 Trusts 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 departments 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, realestate 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. • 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. Internal Audit dates: - 25-06-2019 to 05.07.2019 External Audit dates: - 07.01.2020 to 22.01.2020

6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
Anaadyanta	5888850	National Level Techno cultural Fest
View File		

6.4.3 – Total corpus fund generated

380385036

6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	External Academic Experts	Yes	Dean Academics
Administrative	Yes	M R Kamath Co.	Yes	Hari Ram Shenoy

6.5.2 – Activities and support from the Parent – Teacher Association (at least three)

1. Feedback on curriculum. 2. Placement and Internship support. 3. Orientation program for 1st year students and Parents. 4. Regular parent -teacher meet to discuss about the educational progress of the students. 5. Suggestions regarding academic and administrative reforms. 6. Parents are involved in advisory committees.

6.5.3 – Development programmes for support staff (at least three)

1. Soft skill training program 2. Regular staff meetings to motivate them to have a better working environment 3. Yoga and meditation for physical and mental health 4. Technical workshop 5. Refresher course on usage of software tools

6.5.4 – Post Accreditation initiative(s) (mention at least three)

1. CIE SEE Questions are framed as per Bloom's Taxonomy. Each question has been identified with levels based on thinking capabilities of the students. In few of the courses like Principles of Parallel Programming, Power System Analysis Stability, Computer Techniques in Power System, Field Theory, Data Mining, etc. open book exam has been conducted. 2. Internship has been made mandatory for UG and PG students. The duration varies from 6 weeks (short duration) to long duration of 40 weeks. UG students are encouraged to opt for long term internship during their final semester and PG students are encouraged to opt for 1-year Internship. Faculty members are being assigned to supervise and evaluate the internship carried by the student by interacting with the

concerned industry. Some industries and RD organizations are paying a stipend during internship. 3. About 70 of the courses blended with ICT tools and e-resources in teaching learning methods and Wi-Fi facility is provided throughout the campus to facilitate the teaching learning process. Robust MIS ERP tools are being used for campus management solution. This college is a nodal centre of IITB, Mumbai and IIT, Kharagpur to conduct online courses through NMICT, Govt. of India. 4. In order to provide multi skilling to the nonteaching faculty, the management deputes the interested non-teaching staff to various skill development training programmes during the vacation. College is also running Government of India sponsored PMKVY skill development programs, training in KGTTI to facilitate the multi skilling activities for the people who are in need. 5. After obtaining NAAC accreditation in the year 2014, the IQAC has become proactive to improve the quality of teaching learning process. Academic and Department Audits, FDP's, 360-degree feedback, Mentoring the faculty are being done regularly. 6. The Institution provides 100 funding to the faculty members for filing the patents of their research/innovation work.

6.5.5 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b)Participation in NIRF	Yes
c)ISO certification	No
d)NBA or any other quality audit	Yes

6.5.6 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2019	Induction Programme for Newly Joined Students with Industry experts	17/08/2019	17/08/2019	17/08/2019	1015
2020	Workshop on Outcome Based Education for faculty	04/01/2020	06/01/2020	10/01/2020	150
		View File			

CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
International Women's Day Celebration	10/03/2020	10/03/2020	45	65
Ramadan	21/08/2019	21/08/2019	40	60

Ayurveda medical camp				
Talks on women health awarness by eminant speakers of Cytecare Cancer Hospital	24/10/2019	24/10/2019	78	220

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources
A major part of the electrical power requirement of the institution is met by the Solar Rooftop Photo Voltaic System having an installed capacity of 382 kW the sanctioned load being 450 kW. The maximum limit prescribed by the state electricity board is 85 of the sanctioned load. There by the institution meets the maximum requirement specified by the Electricity board. All new lighting installations use LED bulbs resulting in significant power saving. About 55 percent of the lighting power is met by LED bulbs. The institution (power producer) and the solution provider have undertaken that they will take all possible steps to implement net-metering once the guidelines and policies of BESCOM and KERC are favourable or operate as per any arrangement that is mutually acceptable.

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Physical facilities	Yes	2
Provision for lift	Yes	2
Ramp/Rails	Yes	2
Braille Software/facilities	No	Nill
Rest Rooms	Yes	2
Scribes for examination	Yes	2
Special skill development for differently abled students	No	Nill

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2019	40	38	12/08/2019	365	As per Excel Sheet	As per Excel Sheet	1800
				View File			

7.1.5 – Human Values and Professional Ethics

Title	Date of publication	Follow up(max 100 words)
REGULATIONS B E Degree Program (Autonomous)	08/01/2020	https://www.nmit.ac.in/autonomous-rules-regulation.html
Code of ethics to check malpractices and plagiarism in Research	08/01/2020	https://www.nmit.ac.in/code-of-ethics.html
Testing and Consultancy Rules	08/01/2020	https://www.nmit.ac.in/Innovation--Entrepreneurship.html
Intellectual Property Rights (IPR) Policy (Research/ Patent/consultancy)	08/01/2020	https://www.nmit.ac.in/Innovation--Entrepreneurship.html
Policy for Promotion of Research	08/01/2020	https://www.nmit.ac.in/pdf/3.1.1-Promotion-of-Research-and-Facilities.pdf
INSTITUTIONAL GOVERNANCE REVIEW TEMPLATE	08/01/2020	https://www.nmit.ac.in/disclosure.html
Professional code of prescribed/suggested by statutory bodies / regulatory authorities	08/01/2020	https://www.nmit.ac.in/disclosure.html
Code of conduct for BoG and Principal	08/01/2020	https://www.nmit.ac.in/disclosure.html

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
UNNAT BHARATH ABHIYAN - Groceries were distributed in the village TALAGAVARA, belonging to Doddaballapur Taluk of Bengaluru Rural District adopted by the NMIT under the UBA,	03/05/2020	03/05/2020	20
Adolescent Alcohol and Drug Abuse Awareness campaign - Create awareness in people on the effects of Alcohol and Drug abuse hence creating a healthy society.	29/02/2020	29/02/2020	60
EYE-CHECK UP - NSS unit of NMIT organized a Free	19/10/2019	19/10/2019	150

Eye Checkup camp at college as a part of Social Activity. Dr.Prashanth from Naada World Welfare trust, Bangalore., visited our college to conduct this camp on 19th October 2019.			
RAMADAN AYURVEDA MEDICAL CAMP - The NSS unit of NMIT organized an Ayurveda medical camp which provided free consultation with Ayurveda specialists. Obesity, menstrual irregularities, back pain, arthritis, thyroid and eye specialists had visited the c	21/08/2019	21/08/2019	252

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7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

? Liquid waste management :- The liquid wastes generated in the campus includeSewage, 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. ? 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 on-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. ? Green Practices :- 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. ? Roof Top Solar Power Plant :- A major part of the electrical power requirement of the institution is met by the Solar Rooftop Photo Voltaic System having an installed capacity of 382 kW the sanctioned load being 450 kW. The percentage share of contribution for college power requirement by renewable energy sources (Solar Plant) is around 382KWp. ? Rain Water Harvesting ? Food Waste Management

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

Stimulating Culture of Multidisciplinary Research 1. Objectives of the Practice • To inculcate culture of multidisciplinary research and innovation among UG/PG/Ph.D. students 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. 2. The 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 andleadsto 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. 3. The Practice Most of the current requirements need expertise of several disciplines. In this context, NMIT has 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, o Small Satellite Research in collaboration with ISRO o Robotics Research. o Nanomaterials and MEMS in collaboration with IISc o Design and Process Simulation in collaboration with Dassault Systems o Computational Fluid Dynamics in collaboration with NAL. o Aerospace and IoT in collaboration with Dassault System PTC o Cyber Security IoT in collaboration with Subex Company. • Seed money for the Faculty to pursue multidisciplinary research. • MoUs with RD Organizations of India Abroad. • Monthly Faculty Colloquium. • Reduction in workload for the faculty working in Research CoE. • Financial assistance for research activities. 4. Evidence of Success • UG/PG/PhD students are involved in multidisciplinary Research activities. • Faculty members who are working in the research canters are able to get Funding from National funding agencies such as DST, DIT, AICTE, DSIR, VGST, VTU etc. • Research articles are published in SCI/WOS/Scopus Journals Conferences. • Three Indian Patents have been granted 34 Patents have been published. • About Rs. 1 crore has been given as seed money to the faculty. • MoU with North Dakota State University (NDSU), USA • Robotics Engineering-Lego Mindstorms and TETRIX for 3rd and 4th semesters. • Faculty and students are involved in Small Satellite Research Program. o First time in India, under thisCenter, first Pico Satellite "STUDSAT-I" which was launched through ISRO?s PSLV-C15 vehicle, from Sriharikota. o STUDSAT team has created a National Record entering into LIMCA BOOK of RECORDS. • NMIT has setup an unique Ground Station to track the Satellites (NASTRAC) which has already obtained an Indian Patent. • Students

have developed Pick Place Robot which has been kept as permanent exhibit at Birla Science Centre, Hyderabad • Graduates who worked in these centres got 1. Admitted at the premier Universities like Surrey/Texas/Oxford/Indiana/etc. 2. Better placement offers with high CTC from Core Industries/ RD Organizations.

5. Problems Encountered and Resources Required Since UG students actively participating in RD 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. Best Practice - 2 Effective/Innovative Delivery Methods 1. Objectives • To provide platform and opportunities for teachers to experiment and practice the most relevant innovative teaching methods - such as project-based learning, non-formal education, outdoors education, new technologies. • To explore trending innovative teaching methods and strategies as well as a cooperative, inspirational and stimulating space where to experiment and practice new tools, strategies and approaches. • To improve student engagement, motivation and attainment. 2. The Context In the Indian higher education system, using innovative methods of teaching is a crucial skill for teachers and education staff. Scientific research has shown that innovative teaching methods and approaches can significantly enhance the student learning process. Experimenting new methods and strategies of teaching can improve student engagement, motivation and attainment. 3. The Practice NMIT has adopted OBE, and Effective/Innovative Delivery Methods. In Effective/Innovative Delivery methods teachers deliver the course content with the help of following delivery methods. 1. Case Study A case study helps students to generate an in-depth, multi-faceted understanding of the concept under investigation. Faculty will assign a case study to every student which is accompanied by a list of questions that asks students to reflect on the information and formulate a response to it. 2. Literature Reviewing/Presentation Faculty encourage students to go through the relevant research papers based on the course contents. Literature review activity will enable students to understand the contribution of other researchers and get a deeper insight into the research problem being studied. 3. Simulation In simulation activities, concepts are demonstrated to students with the software tools and hardware devices. These tools and devices mimic real-life scenarios in a controlled environment. Simulation-based learning offers more realistic learning than reading a just plain textbook. 4. Debate In debate, students express their opinion and thoughts on the topic of consideration. Debate activities enable students to practice speaking and listening skills. It also motivates students, develops argumentation strategies, and encourages learner autonomy. 5. Video-Based Learning In video-based learning, faculty will demonstrate the course concepts with the help of videos. These videos are created by faculty, otherwise, faculty will seek the help of online resources. 6. Project Based Learning Students are asked to implement a real working model of the concepts discussed in the classroom. Students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex problem. 7. Flipped Classroom Students are assigned with some topics in prior, and when that concept would be discussed in the classroom, that student who is assigned with that topic, would talk about it and the teacher would give more insight on that and other students would give their viewpoint on that topic. 8. Role Play Students were shown some animated videos related to the corporate office, they had to pick one character from that video and do the role-play of that character, by doing this, they would understand how other people are likely to respond to different approaches. 9. Business Charades In This approach, 2 teams were made, and topics were given from the course, one student from a team would come, and that student would enact and show, other team members had to guess the right term/sentence. 10. Hands-on Training Through the hands-on sessions,

students will gain a better understanding of the theoretical concepts taught in the classroom environment by practicing them practically. 11. Demonstration Based Learning Faculty demonstrate the course concepts through experiments/simulation - using software or hardware tools/devices. Course contents with the aid of demonstration will give the increased understanding to students. 12. MOOC based learning NMIT students are encouraged to learn from the Massive Open Online Courses (MOOCs) offered by well-known platforms such as NPTEL, Coursera, Udemy, etc. This will enable students to browse the topic of interest on their own and start learning on their own. This will promote lifelong learning capabilities to students. 13. GATE oriented aptitude test GATE-oriented aptitude test is used to promote the importance of engineering-based aptitude knowledge. NMIT uses GATE standard questions for conducting this activity. Through this student will be able to partially prepare for GATE, and understand the quality/standard of questions that will appear in such examinations. 14. Programming Assignment Faculty will assign a problem/ concept to students to implement and demonstrate using the programming language of their choice or the pre-specified programming language. Through this students will gain the skills required for scenario based coding. The evaluation of the programming assignment is done with the help of a pre-defined rubric 15. Tutorial Faculty conduct the interactive sessions with students, and teach by example and supply the information to complete a certain task. This enables students to gain much deeper knowledge on the course contents. 4. Evidence of Success • Increasing number of students are participating in national and international level events like Hackathon, Ideation, Coding competition. Students have won the awards of national (Smart India Hackathon) and international (MIT bitcoin expo, UC Berkely) repute. • Students are pursuing higher studies (M. E/ M.Tech./ Ph.D.) at national and international premier universities. • Students were able to get placed in reputed core companies with handsome pay compensation. 5. Problems Encountered and Resources Required • Pandemic situation posed a great challenge for teachers as well as students for un interrupted knowledge transfer, training and guidance. • Hands-on and experiment oriented teaching got interrupted in a great extent in online teaching learning environment.

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

https://nmit.ac.in/pdf/naac2/2019-20/7.2.1-_Best_Practices_-1__2_-_Updated_final.docx

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

INTRODUCTION OF STATE-OF-THE-ART OPEN ELECTIVE COURSE ON ROBOTICS ENGINEERING-LEGO MINDSTORMS AND TETRIX The higher education system, especially professional courses such as Engineering in our country has been more or less discipline oriented, this model of conventional hierarchical based engineering education system is a serious impediment for the students to study research subjects which are basically interdisciplinary in nature. . Such problems cannot be solved overnight however, what we can do is take few small steps in the direction of establishing an interdisciplinary research culture in academia by introducing more practical/hands-on based open elective interdisciplinary courses in our existing framework of engineering education. One such initiative by NMIT is to introduce an Open Elective course entitled "Robotics Engineering-LEGO Mindstorms TETRIX" which is based on LEGO Mindstorms NXT and TETRIX system for the 2nd year undergraduate engineering program. NMIT is the first Engineering Institute in the country to introduce such course in a true multidisciplinary environment. In this course, with hands-on minds on approach

students faculty members from different engineering discipline will engage in an active teaching learning experience leading to experimentation exploration. The course is being offered to 3rd 4th semester students across all under graduate disciplines as part of their curriculum. The state-of-the-art course is delivered to the students by experienced faculty members from across different engineering discipline. Objectives of course 1. To create a true multidisciplinary learning environment by bringing students from different engineering disciplines. 2. To provide Hands-on Minds-on training to students on Robotics using LEGO MINDSTORMS , TETRIX ROBOTC. 3. To indulge students in active learning to foster their creativity ingenuity. 4. To inculcate the research culture among young engineering students 5. To reinforce STEM (Science Technology Engineering Mathematics) education Some of the salient features of this course are as follows: a. This course is in line with global standard set by ABET (Accreditation Board for Engineering Technology) to reinforce STEM Education. "Robotics Engineering" Course will include state of the art tailor made curriculum developed by Carnegie Mellon University's Robotics Academy. b. Students will learn how to develop system or process using state of the art hardware with brick controllers, sensors and servo motors coupled with building elements such as gears, axles, links, channels made up of ABS plastic aircraft grade aluminium. c. Programming possibilities with National Instruments Lab VIEW for LEGO MINDSTORMS or ROBOTC, C, MATLAB and variety of software. d. Students will learn crucial project management skills at an earlier stage of their engineering. e. Students can work on open ended problems unlike in the conventional lab f. Students can assume the role of an Engineer or a Scientist, Perform WHAT IF? Analysis, Test their engineering skills, It doesn't matter if the design fails, Coz they will learn how why their design failed, this is how knowledge is enriched. g. Students can earn two extra credits (In place of Internship or self study component) by undergoing this course.

Provide the weblink of the institution
https://nmit.ac.in/pdf/naac2/2019-20/7.3.1_-_Performance_of_the_institution_in_one_area_-Updated_Final.doc

8.Future Plans of Actions for Next Academic Year

• Starting of B.E - AI and ML • Starting of B.E - AI and DS • Starting of M.Tech in New Emerging areas • Submission of NBA - Compliance report for B.E – CSE, B.E – EEE and B.E – ECE for further accreditation • Starting of Data Engineering Laboratory • Enhancement of Industry Institute Interaction through MOUs • Preparation of Code of conduct for faculty and students for Online classes • MSE QP Quality Review (Internal and external) • Final year student innovative project problem statement and implementation review (Institute wise) • IQAC Meeting with Parents, Students, Faculty and Alumni • Administrative Audit (Examination section/Autonomous section/Placement/HR/Library/ Transport/ Maintenance/ Sports)