

# HANDBOOK 2017-18







# Nitte Meenakshi Institute of Technology

(A Unit of Nitte Education Trust (R), Mangalore) An Autonomous Institution, Approved by UGC/AICTE/Govt. of Karnataka

Accredited by NBA (Tier-I) and NAAC (Grade 'A'), Affiliated to Visvesvaraya Technological University, Belagavi P.B.No. 6429, Yelahanka, Bengaluru-560064



### **VISION**

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



### **MISSION**

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



### **QUALITY POLICY**

To bring about Constant and Continuous Improvement in the Quality of Education Imparted and Turning out High Quality Professionals with Balanced and Globally Competitive Personality through Regular Monitoring of the Academic/ Administrative Activities of the Institution and Implementing Corrective Actions in following the Best Ethical and Transparent practices.



### PERSONNEL MEMORANDUM

Name:		
Admission Number:		
USN:		
Department:		
Semester/Year:		
Email-id:		
Phone No. of Guardian:		
Local Address:		
Cell phone No		
Driving License No.:		
Blood Group:		
Hobbies:		
Permanent Address:		
Phone No. of Parents:		
Mobile: Father:	Mother:	
Landline:		
Information by Hostellers:		
Hostel Block:		
Room No		
Emergency Contact No ·		

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### **FOREWORD**



Shri N V Hegde Chancellor, Nitte University and President, Nitte Education Trust, Mangalore

You have joined Nitte Meenakshi Institute of Technology, which is a part of Nitte Education Trust and a well-known engineering college in the state, to pursue your engineering studies. Nitte Education Trust and all their institutions are committed to cultivating the intellectual, social and ethical development of its students, in an environment of freedom and responsibility.

I am sure that the four years that you will be spending in the campus will prepare you for a rewarding career and a good future. The College has created facilities, processes and systems for rewarding campus experience and I wish that students will make the best use of these.

Good grades are stepping stones towards getting a good job and eventually leading a good life. Listen to your teachers when they tell you WHAT to do. But more importantly, think about it later and ask yourself WHY they told you to do it. Focus on your goals and study hard and that will fetch you wonderful rewards.

I wish each one of you the best of life in this campus and I hope you will through your achievements bring fame and name to your parents and your college.



Shri. N. V Hegde

### **PREFACE**

Prof. N. R. Shetty

Chancellor, Central University of Karnataka, Kalburgi Advisor, NET and Vice President, Red Cross Society; Former Vice Chancellor, Bangalore University, Chairman, Karnataka State Universities' Review Commission Former President, ISTE, New Delhi.



This handbook provides all the essential information required for your understanding of the Nitte Meenakshi Institution (NMIT), to ensure your comfortable stay in the academic atmosphere and help you to acquaint yourself with the **DO's and DONT's.** And also the **MUST and SHOULD** at NMIT. You will find most of the policies, regulations and procedures of the NMIT contained here in their entirety or referenced.

The Preamble section introduces you to the Nitte Education Trust and its activities, NMIT activities including research projects undertaken, Governing Council, Academic Council and the academic and supporting staff of the institution. The salient points of the regulation of autonomous institution provide you the course load and all other requirements to be fulfilled to complete the course and get the degree. The Academic Programs section of the handbook contains description of academic programs such as course content, syllabus, text books, reference materials, teaching methodology, assessment methods etc. Wherever possible, dates for the activities have been included. The handbook is generally updated on an annual basis. It is the responsibility of the Heads of the Departments/ Chairpersons/School Director to maintain an updated copy to which students may refer.

The responsibility for distributing information about changes rests with the office of the administrator. Questions regarding content should first be addressed to your departments' Head/Chairperson and then the Dean Academic.

NMIT has taken all initiatives to make engineering education the most enjoyable activity by providing all the essential inputs made available in the campus: be it Curricular, Co- Curricular or Extra Curricular. In addition NMIT has also tied up with other reputed organizations to ensure greater opportunities are made available to the students and faculty. It is for the students and faculty to exploit these opportunities for their own benefit and achieve success.



### **MESSAGE**



**Dr. H. C. Nagaraj**Principal, NMIT, Bangalore
Dean Faculty of Engineering, VTU, Belagavi.

NMIT, Bangalore has been growing to reach the highest excellence in engineering discipline since its inception. It's my privilege to write the foreword for the academic year 2017-18. This handbook has been well complied with all the available facilities, various activities and committees made available in our campus.

We have well qualified faculty with rich experience, technical staff and well equipped infrastructure to support the needs of the students. New methodologies have been incorporated in teaching learning process for better understanding of the concepts. We have regular mentoring process which would guide the student in progressive growth in the academics.

This handbook provides the complete organization, Academic Calendar and process adopted at NMIT, Bangalore that would support the students on any basic information required. I wish all the students an enjoyable stay and learn to prove to be an excellent individual.



Prof. H.C. Nagaraj



### **PREAMBLE**

Justice K S Hegde established Nitte Education Trust (R) with emphasis on value based education. The Trust established a high school at Nitte in the year 1979. Today, the Nitte Education Trust comprises of Medical and Dental Colleges offering UG and PG Programmes and 5 paramedical colleges, a 1000 bed super speciality Hospital, at Mangalore. Two Engineering Colleges one at Nitte and another at Bangalore, MBA, MCA Institutes, a college of Hotel management, Two First Grade Colleges at Nitte and Bangalore, several High Schools and PU Colleges in Dakshina Kannada and Udupi District and One International School at Bangalore. It has established rural health centers in different places in Udupi and Dakshina Kannada district. – In all 38 institutions with more than 15,100 students, 3,100 staff and 18,500 alumni.

The Trust is headed by Shri N V Hegde, a well-known Philanthropist and is ably advised by Dr. N R Shetty, Chancellor, Central University of Karnataka, Kalburgi; Chairman, Karnataka Universities Review Committee; former Vice Chancellor of Bangalore University and a Reputed Academic Administrator of our Country. Prof.N.R. Shetty is the advisor of NMIT, Bangalore.

**Nitte Meenakshi Institute of Technology (NMIT)** at Yelahanka Bangalore, run by Nitte Education Trust, Mangalore, started functioning from the academic year 2001.

NMIT offers 4 years UG Engineering Degree Programmes in the following disciplines:

- Computer Science & Engineering.
- Information Science & Engineering.
- Electronics & Communication Engineering.
- Mechanical Engineering.
- Electrical & Electronics Engineering.
- Civil Engineering.
- Aeronautical Engineering.

### NMIT also offers Two Years PG Programs in the following areas:

- M Tech in VLSI Design & Embedded Systems;
- M Tech in Computer Science & Engineering;
- M Tech in Thermal Power Engineering;
- M Tech in Machine Design;
- M Tech in Digital Communication & Networking;
- M Tech in Computer Network Engineering;
- M Tech in Structural Engineering;
- M Tech in Renewable Energy:
- Master of Business Administration.

NMIT also offers Master of Computer Applications program which is of three Years duration.

Visvesvaraya Technological University (VTU) has recognized several R&D centers offering Master's and Doctoral Programmes through research in the following Departments.

- Computer Science & Engineering.
- Electronics & Communication Engineering.
- Mechanical Engineering.
- Electrical & Electronics Engineering.

- Information Science & Engineering.
- Civil Engineering.
- Masters in Computer Applications.
- Management Studies.
- Mathematics.
- Physics.
- Chemistry.

University of Mysore (UoM) has recognized R&D centers of NMIT that are offering Doctoral programs in the following areas:

- Computer Science.
- Electronics.
- Mathematics.
- Management Studies.

In addition, 3 Years Diploma Programs that are offered by NMIT in the 2nd shift are:

- Diploma in Mechanical Engineering
- Diploma in Electronics & Communication Engineering
- Diploma in Civil Engineering
- Diploma in Computer Science & Engineering
- Diploma in Electrical & Electronics Engineering

All the above Programs have been approved by AICTE, New Delhi. The total sanctioned intake for 4 years UG Engineering Degree Programmes is 960 students per annum. The Institution is recognized by the Govt. of Karnataka (GOK) and is affiliated to Visvesvaraya Technological University, (VTU) Belgaum. Over the last decade, the Institute besides developing its Campus with infrastructural facilities has ensured Curricular, Co-Curricular and Extra Curricular activities and other amenities needed for the growth and development of the institution as well for the welfare of its staff and students.

Providing quality engineering and management education to the desiring and deserving students belonging to different parts of the country and world over, in addition, to the different regions of Karnataka is one of the main objectives of the institution.



The Institute's growth and development is phenomenal in terms of its achievements in the sense that the Govt. of Karnataka and Visvesvaraya Technological University, Belgaum have conferred the prestigious "Autonomous Status" to NMIT (the voungest to have received this status) from the Academic Year 2007-08, besides, being one of the very few Institutions in Our State, which has received permission from AICTE, New Delhi to admit 15% extra students, over and above, the sanctioned intake, for its UG and PG Programs on PIO quota, from the Academic Year 2008 – 2009. The Institution has been accredited by NAAC and four UG programs have been accredited under Tier-I by NBA, New Delhi. NMIT is the only unaided private engineering college in Karnataka state selected by the Govt. of India for the

World Bank funding under TEQIP (Technical Education Quality Improvement Program) Phase II under sub component 1.1.

Autonomous status of the Institute has definitely paved the way for introducing newer objectives into the philosophy of technical education. Keeping in view the need of the employment sector which is highly competitive, NMIT focus is geared towards quality, relevance and sustainability of its programs and products. Its new courses, teaching methodology, assessment practices are so designed that it is able to cater to the challenges posed by the society from time to time.

### **OUTCOME BASED EDUCATION (OBE)**

Outcome Based Education (OBE) is a systematic approach encompassing defining, designing, building, focusing and organizing everything in an education system in which emphasis is laid on what the student has learnt or able to demonstrate as a result of their learning rather than only on what has been taught to them. In simple terms, OBE ensures standard of quality in education system. Being an Autonomous Institute, our Institute has adopted Outcome Based Education system to inculcate academic excellence through various initiatives such as Student Centric Teaching & Learning Process, Industry relevant curriculum, Highly Qualified Faculty with relevant experience in Industry & Academia, Multidisciplinary Research & Development, and Student Mentoring etc.

### **How OBE helps students?**

OBE ensures that a set of **learning outcomes from students are established** right in the beginning of the learning process. This helps the teacher to **streamline** the process of **curriculum design, course delivery & course assessment** to meet the required learning outcomes. This ensures **student centric education system**, where each & **every student is assessed against the learning outcome**, thereby ensuring high quality in education.

### **National Board of Accreditation (NBA)**

The National Board of Accreditation (NBA) is one of the central accrediting bodies in India which ensures **quality assurance & continuous improvement** of the programme **through critical appraisal**. OBE is implemented & assessed at the programme level to meet the necessary quality or standard prescribed by the Independent accrediting bodies. NBA is one amongst them. Students would be happy to know that our institute is one among very few Institutions in the state of Karnataka to undergo NBA accreditation process in such a short time. Some of our UG programmes have undergone NBA accreditation under Tier-I (applicable to autonomous Institutions) scheme as per Washington Accord..

### **Definitions of some of the terms used in Outcome Based Education (OBE)**

(a) **Mission and Vision statement --** Mission statements are essentially the means to achieve the vision of the institution. For example, if the vision is to create high-quality engineering professionals, then the mission could be to offer a well-balanced programme of instruction,

practical experience, and opportunities for overall personality development. Vision is a futuristic statement that the institution would like to achieve over a long period of time, and Mission is the means by which it proposes to move toward the stated Vision.

- (b) **Programme Educational Objectives** (**PEOs**) Programme educational objectives are broad statements that describe the career and professional accomplishments that the programme is preparing graduates to achieve.
- (c) **Programme Outcomes** (**POs**) Programme Outcomes are narrower statements that describe what students are expected to know and be able to do upon the graduation. These relate to the skills, knowledge, and behavior that students acquire in their matriculation through the programme.
- (d) **Course Outcomes** (**COs**) -- Course Outcomes are narrower statements that describe what students are expected to know, and be able to do at the end of each course. These relate to the skills, knowledge, and behavior that students acquire in their matriculation through the course.
- (e) **Assessment** Assessment is one or more processes, carried out by the institution, that identify, collect, and prepare data to evaluate the achievement of programme educational objectives and programme outcomes.
- (f) **Evaluation** Evaluation is one or more processes, done by the evaluation team, for interpreting the data and evidence accumulated through assessment practices. Evaluation determines the extent to which programme educational objectives or programme outcomes are being achieved, and results in decisions and actions to improve the programme.
- (g) **Mapping** Mapping is the process of representing, preferably in matrix form, the correlation among the parameters. It may be done for one to many, many to one, and many to many parameters.

# <u>List of Programme Outcomes (POs) as prescribed by the National Board of Accreditation (NBA)</u>

- **PO1- Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation to the solution of complex engineering problems.
- **PO2- Problem analysis**: Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- **PO3- Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

- **PO4-** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions;
- **PO5- Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- **PO6- The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- **PO7-** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **PO8- Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **PO9- Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **PO10-** Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- **PO11- Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **PO12- Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### **Programme Specific Outcomes (PSO)**

Apart from above mentioned POs the programme will have **Programme Specific Outcomes** (**PSO**), which mainly concerns with the outcomes specific to the sub discipline of the programme.

### **RESEARCH ACTIVITY**

The institute is involved in R&D activities in the frontier/cutting edge/multidisciplinary areas of Engineering and Basic Sciences. The institution has been able to generate funds for the projects from various funding agencies like Department of Science & Technology, New Delhi, Department of Information Technology, New Delhi, AICTE, New Delhi., DRDO (ADE, CAIR, CVRDE, and NRB), VGST, The Govt. of Karnataka, IEEE, VTU. First time in India, with NMIT's leadership, UG students from consortium of seven prominent Engineering colleges have successfully built India's first Pico Satellite "STUDSAT" which was launched through ISRO's PSLV-C15 vehicle on 12th July 2010 from Sriharikota.

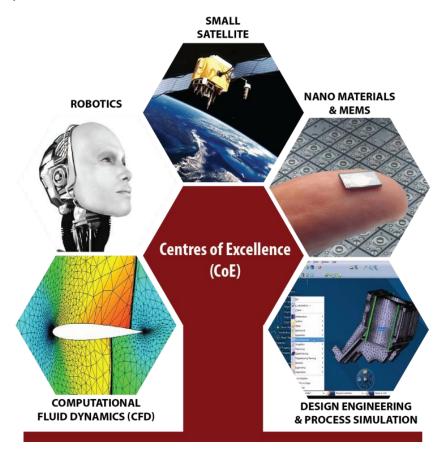
Training and Placement cell has been equipped with competent trainers to build' knowledge, skill and behavior of students coming with different competence levels and backgrounds and hence successful in attracting reputed employers for on-campus placement. In addition, reputed industries are involved in training the students and faculty to enrich their competence by filling the gap if any.

Following table provides the research activities that are in place under different departments:

DEPARTMENT	AREAS OF RESEARCH
Computer Science and Engineering	Image Processing
	Networks
	Robotics
	Cryptography
	Wireless Sensor Networks
	Data Mining
	Big Data Analytics
Information Science and Engineering	Data Mining
	Grid/Cloud computing
	Parallel computing
	Internet of things
	Cyber Security
<b>Electronics and Communication</b>	VLSI Design
Engineering	Embedded Systems
	Signal/Image processing
	Electronics and Communication
	MEMS Design and Fabrication
Mechanical Engineering	Materials and Design
	CAD/CAM/CAE
	CFD
	Manufacturing
<b>Electrical and Electronics Engineering</b>	Renewable Energy and Smart Grid
	Power System Operation and Control
	MEMS and Nano Materials in
	Renewable Energy
Civil Engineering	Concrete and Alternative Materials;
	Structural Analysis and Design;
	Structural Behavious of RCC and
	Steel Elements;
	Computational Solid Mechanics, IFM
	Functionally Graded Materials
	Laminated composites
	Soil Mechanics
Aeronautical Engineering	Computational Fluid Dynamics;
	Heat Transfer;
	Composite Materials;
	Bio –Fuels
	Production Process
Mathematics	Bio Fluid Mechanics, Numerical
	Methods
	Graph Theory,;
	Number Theory

Chemistry	Organic Chemistry
	Membrane Technology
	Corrosion Studies
Physics	Thin films
	Material science
	Photovoltaic Cells
	Trace Elements

In addition to research at department level the <u>Institute has established 5 unique state of</u>
<u>the art Multidisciplinary Centres of Excellence (CoE)</u> in different emerging areas of
Science & Technology to promote collaborative Research & Development. These
multidisciplinary research Centers of Excellence are as follows



Sl. No	Name	Coordinator
1.	Centre for Robotics Research	Dr Jharna Majumdar
2.	Centre for Small Satellite Research	Dr S Sandya
3.	Centre for Computational Fluid Dynamics	Dr Sekhar Majumdar
4.	Centre for Nano Materials and MEMS	Dr Veda Sandeep Nagaraj
5.	Centre for Design Engineering and Process Simulation	Dr Kiran Aithal S

In addition to these NMIT is also involved in the following academic innovation and entrepreneurship activities:

- Innovation and Entrepreneurship Development Centre, established in the year 2010, funded by the Department of Science and Technology (NSTEDB), New Delhi to the tune of Rs. 45 lakhs.
- NMIT finances every year, five innovative B.E projects each receiving Rs 1.00 Lakh per project.
- NMIT has established an Innovation Club supported by Visvesvaraya Technological University and Govt. of Karnataka with seed money of Rs. 5.00 Lakhs.
- NMIT has established Business Incubator supported by MSME (Micro, Small and Medium Enterprises), Govt. of India.
- A Master Trainers' National Skills Development Center has been established in association with Govt. of Karnataka, Govt. of India, Public Sector Undertakings like ONGC, GAIL, Five Nationalized Banks etc. and is located in NMIT Campus.

### Anusandhana Journal

A peer reviewed biannual journal **Anusandhana** is published by the college. ANUSANDHANA aims to publish state-of-the-art research articles pertaining to the emerging areas of Science, Engineering and Management. ANUSANDHANA serves as a platform to share research contributions, solutions to problems as well as to identify new areas for future research. The Journal provides opportunities to members of the faculty and researchers of Institutions of higher education across the country to publish their research findings, leading to interaction particularly in interdisciplinary areas. It is published biannually.

### IMPORTANT CONTACT DETAILS

Sl. No	Name and designation	Contact No.
1.	Dr.H C Nagaraj	080-22167803
	Principal	
2.	Prof Ranganatha Setty	080-22167822
	Dean ( academic)	
3.	Dr. Jharna Majumdar	080-22167892
	Dean R&D, Prof & Head CSE (PG)	
4.	Wardens-Boys Hostels	
	1.Mr Rajesh N	9448912098
	2.Mr-Srinivas N	9611494607
5.	Wardens- Girls Hostels	
	1.Dr. Srilatha Rao	9900407008
	2.Ms Sneha Shetty	9620064684
6.	Mrs. Chandrakantha Sharma	9448464517
	Counsellor	
7.	Dr. Abdul Sattar	8951531221
	HOD-Physics & First year coordinator	
8.	Examination Section	080-22167879

9.	Prof . Rohit Punja, 09820409881	
	Administrator, NMIT, Foreign Students	
10.	Mr. Srikanth Kotian	9448102070
	Admission for CET & COMEDK and	
	Scholarships	
11.	Mr. Gangadhar K C	8123381280
	Senior Librarian	
12.	Mr. Rajashetty	080-22167804
	Accounts Officer	
13.	Mrs Sony Malli	080-22167804
	Establishment Officer	
14.	Mr. Mallikarjun Gowda	9343862544
	Security officer	
15.	Mr. Benny Kumar	9663627731
	Transport- Officer	
16.	Aveksha Hospital	080-67590000
		9900072001

### **GOVERNING COUNCIL**

Sl. No.	Name	Designation	Position
1.	Mr. N V Hegde	President, Nitte Education Trust and Chancellor, Nitte University, Mangalore.	Chairman
2.	Prof. N R Shetty	Chairman, Karnataka State Universities Review Commission, Government of Karnataka and Advisor, NET	Member
3.	Mr. Vishal Hegde	Industrialist, Trustee, NET	Member
4.	Mr. Rajendra M	Director (Finance & Planning), NET	Member
5.	Dr. P N Singh	Former Director, NITK, Surathkal	Member
6.	Dr. K D Nayak	DS & Director General, DRDO, New Delhi	Member

7.	Dr. S Mohan	Former Professor, IISc, Bangalore	Member
8.	Dr. L M Patnaik	Advisor, Technical, NMIT, Former Vice Chancellor, Defence Institute of Advance Technology, Pune Adjunct Prof and INSA Senior Scientist, NIAS, Bangalore	VTU Nominee
9.	Dr. K Sudha Rao	Advisor ,Administration &Management, NMIT National Fellow: ICSSR, New Delhi Member, Karnataka Knowledge Commission, Bangalore Former VC, KSOU, Mysore.	Member
10.	Dr. R.P Dahiya	Vice Chancellor, Deenabandhu Chhotu ram University of Science and Technology, Murthal	UGC Nominee
11.	Dr. G Pundarika	Principal, Govt. Engineering College, Ramanagara	State Government Nominee
12.	Mr Rohit Punja	Administrator, NMIT	Member
13.	Prof. Ranganatha Setty	Dean (Academic), NMIT	Member
14.	Dr. K Venkatesh Rao	Professor, Dept. of CSE, NMIT	Member
15.	Dr. H C Nagaraj	Principal, NMIT	Member Secretary

### **ACADEMIC COUNCIL**

Sl. No.	Name	Designation	Position
1.	Dr H C Nagaraj	Principal, NMIT	Chairman
2.	Prof Ranganatha Setty K A	Dean Academic, NMIT	Member Secretary
3.	Dr. L M Patnaik	Advisor (Technical, NMIT), Former Vice Chancellor, Defence Institute of Advance Technology, Pune	Special Invitee (Governing Council Nominee)

		Adjunct Prof and INSA Senior	
4.	Dr. K Sudha Rao	Scientist, NIAS, Bangalore  Advisor (Administration &Management, NMIT)  National Fellow: ICSSR, New Delhi  Member, Karnataka  Knowledge Commission,  Bangalore  Former VC, KSOU, Mysore.	Special Invitee (Governing Council Nominee)
5.	Dr Jharna Majumdar	Dean R & D, NMIT	Member
6.	Dr. Thippeswamy M N	Prof and Head, CSE, NMIT	Member
7.	Dr. Sanjay H A	Prof and Head, ISE, NMIT	Member
8.	Dr Sandya S	Prof and Head, ECE, NMIT	Member
9.	Dr. H M Ravi Kumar	Prof and Head,, EEE, NMIT	Member
10.	Dr. Kiran Aithal S	Prof and Head,, ME, NMIT	Member
11.	Dr. Bharathi Ganesh	Prof and Head, CV, NMIT	Member
12.	Dr S Venkateswaran	Prof and Head, , AE, NMIT	Member
13.	Dr Indira R	Prof and Head, Mathematics, NMIT	Member
14.	Dr Srilatha Rao	Prof and Head, Chemistry, NMIT	Member
15.	Dr Abdul Sattar S	Prof and Head, Physics, NMIT	Member
16.	Dr Harish Babu	Prof and Head, MBA, NMIT	Member
17.	Dr Prasad Naik Hamsavath	Prof and Head, MCA, NMIT	Member
18.	Dr Sekhar Majumdar	Professor, ME, NMIT	Member
19.	Dr P G Mukunda	Professor, ME, NMIT	Member
20.	Prof. Mahaveera Swamy	Professor ,ECE, NMIT	Member
21.	Dr janakiraman	Professor ,MBA, NMIT	Member
22.	Dr A N Shantharajappa	Controller of Examinations, NMIT	Member
23.	Dr K R Venugopal	Principal, UVCE, Bangalore	Member (Governing Council Nominee)

24.	Dr P Narayana Reddy	Former Principal, UVCE, Bangalore	Member (Governing Council Nominee)
25.	Dr Navakantha Bhat	Professor, ECE, IISc, Bangalore	Member (Governing Council Nominee)
26.	Dr K Gopa Kumar	Professor and Chairman, Centre for Electronics Design and Technology, IISc, Bangalore	Member (Governing Council Nominee)
27.	Dr Jayawanth H Arakeri	Professor and Chairman, Dept. of ME, IISc, Bangalore	Member (Governing Council Nominee)
28.	Dr Govindarajan	Professor & Chairman, SERC, IISc, Bangalore	Member VTU Nominee
29.	Dr M Channa Reddy	Professor (Retd.), EEE, UVCE, Bangalore	Member VTU Nominee
30.	Dr B R Srinivasmurthy	Professor (Retd.), IISc, Bangalore	Member VTU Nominee

### **UGC GUIDELINES**

### UGC - XII Plan guidelines (2012-2017) for the autonomous colleges:

**Objectives are:** The National Policy on Education (1986-92) formulated the following objectives for autonomous colleges. An autonomous college will have the freedom to:

- Determine and prescribe its own courses of study and syllabi, and restructure and redesign the courses to suit local needs;
- Prescribe rules for admission in consonance with the reservation policy of the state government;
- Evolve methods of assessment of students' performance, the conduct of examinations and notification of results;
- Use modern tools of educational technology to achieve higher standards and greater creativity; and
- Promote healthy practices such as community service, extension activities, projects for the benefit of the society at large, neighborhood programmes, etc.

Relationship with the parent university, the state government and other educational institutions: Autonomous colleges are free to make use of the expertise of university departments and other institutions to frame their curricula, devise methods of teaching, examination and evaluation. They can recruit their teachers according to the existing procedures (for private and government colleges). The parent university will accept the methodologies of teaching, examination, evaluation and the course curriculum of its autonomous colleges. It will also help the colleges to develop their academic programmes, improve the faculty and to provide necessary guidance by participating in the deliberations of the different bodies of the colleges.

### The roles of the parent university are:

- To bring more autonomous colleges under its fold;
- To promote academic freedom in autonomous colleges by encouraging introduction of innovative academic programmes;
- To facilitate new courses of study, subject to the required minimum number of hours of instruction, content and standards;
- To permit them to issue their own provisional, migration and other certificates;
- To do everything possible to foster the spirit of autonomy;
- To ensure that degrees/diplomas/certificates issued indicate the name of the college;
- To depute various nominees of the university to serve in various committees of the autonomous colleges and get the feedback on their functioning; and
- To create separate wings wherever necessary to facilitate the smooth working of the autonomous colleges.

### The state government will assist the autonomous colleges by:

- Avoiding, as far as possible, transfer of teachers, especially in colleges where academic innovation and reforms are in progress, except for need-based transfers;
- Conveying its concurrence for the extension of autonomy of any college to the Commission within the stipulated time of 90 days after receipt of the review committee report, failing which it will be construed that the state government has no objection to the college continuing as an autonomous institution;
- Deputing nominees on time to the governing body of government colleges and other bodies wherever their nominees are to be included.
- All three stake holders, the parent University, the State Govt. and UGC have to play a
  very harmonious and pro active role as facilitators in the growth and development of
  the autonomous institutions in letter and spirits.

### **VTU GUIDELINES**

Keeping in view the challenges faced by the technical education system in the country, and the challenges faced by the world over Visvesvaraya Technological University's autonomous cell developed "Autonomous College Statute, 2006" was framed under Section 43(a) (amendment 2006) of the Visvesvaraya Technological University Act (1994) of Karnataka. The following guidelines have been formulated by the. Autonomy Cell of the "Visvesvaraya Technological University. The same was assented to by Hon'ble. Governor of Karnataka on 15/12/2007. VTU SATUTES ON AUTONOMUS COLLEGES (AMENDED) during 2011. Autonomous colleges that are under VTU are guided by 2011 statutes which has facilitated autonomous colleges to develop its own policy, plan and implement programs keeping view the 2011 amended statutes of the VTU to achieve excellence and progress.

### **Objectives of the Statute**

- To Grant autonomy provisionally to eligible engineering colleges with the concurrence of the Government of Karnataka and the University Grants Commission, New Delhi whereby;
- The colleges have academic freedom which includes framing their own schemes of study, curricula and student evaluation. The colleges can revise their curricula as and

when it is called for. This enables the colleges to modernize their curricula continuously which helps the students to get good and quick placements;

- The colleges can include add on courses during vacation;
- The colleges can conduct special supplementary semesters for weak students;
- They can have better interactions with local industries;
- There will be healthy competition among autonomous colleges to excel.;
- The colleges can avail grants from funding agencies for development,

### Governance and Functioning of autonomous colleges:

Governance of autonomous College is carried out as per statute and `Guidelines for Implementation of Autonomy`. Governing Body of the autonomous college, among others, has a nominee of the University. It lays down policies and procedures for Governance of the college carried out through the principal of the college. Academic Council: is the apex academic body of the college responsible for approval of schemes of study, syllabi, examinations and evaluation methods, declaration of results, recommendation of candidates to the University for award of degrees etc. it has a nominee of the University.

**Boards of Study:** The college constitutes different Boards of Studies for different branches of engineering. The BOS's are responsible for framing of schemes of study and detailed curricula, academic rules etc. The BOS's have a University nominee each. Other bodies like Finance Committee, Recruitment Committee help in administration of the college.

### **Guidelines for Implementation of Autonomy:**

VTU has constituted a committee consisting of all the autonomous college principals with the main agenda of developing guidelines for implementation of autonomy in colleges. NMIT principal is also a member of this committee

It is in consultation with the principals of these autonomous colleges, a set guideline has been evolved for systematic implementation of autonomy. Committee meets frequently to discuss problems and issues that arise from time to time in implementing autonomy and for issuing guidance for overcoming the same.

### Norms for Change of Branch as per VTU/AICTE Guidelines

- Change of Branch is permitted in the beginning of IIIrd semester (2<sup>nd</sup> year B.E);
- Students admitted under SNQ quota are not eligible for change of branch;
- Branch change shall be available only to meritorious students and shall not be considered as a matter of right and is permitted if the strength in any branch is not falling 75% of the prescribed intake. Only those students who have passed in all subjects (Including non credit courses) are eligible to apply for change of branch. Change of branch should be completed within 10 days of announcement of I & II semester (1<sup>st</sup> year) result.
- Branch change can be made only against vacancy (v) defined as:

$$V = I - (Reg + Rep)$$

Where I = The prescribed intake

Reg= No of regular students promoted to 3<sup>rd</sup> Semester

Rep= No of students from previous batches become eligible to join 3<sup>rd</sup> semester

- Branch change shall not be permitted to any course if (Reg + Rep) > I
- Branch change is strictly according to merit list prepared by the college on the basis of total marks obtained in the 1<sup>st</sup> year Semester End Examination;

### **INSTITUTION CHANGE (Change of College)**

Student should find out the **equivalence of subjects** provided by the two departments;- to which the student wants to enroll and from where he/she is coming from. The **following document along with a covering letter** to the Principal of NMIT, Bangalore needs to be submitted in the Principal's Office:

- No Objection Certificate obtained from where he/she was pursuing the course;
- No Objection Certificate from Nitte Meenakshi Institute of Technology, Bangalore;
- Approval letter for change of college from VTU.

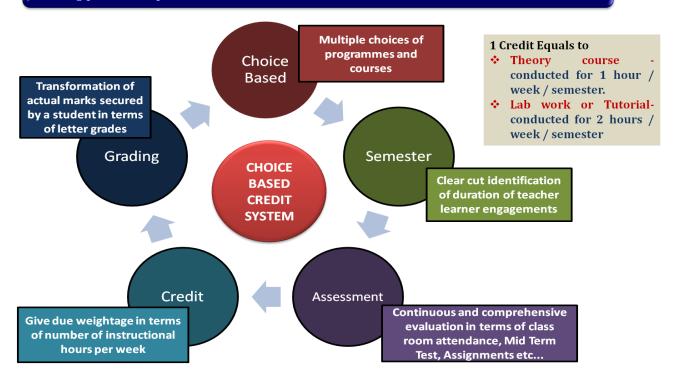
### **NMIT REGULATIONS**

### Academic Regulations - Autonomous Programmes

Following the VTU guidelines NMIT has formulated its own Statutes in the interest of the students which has the approval of its GC and AC in addition to VTU.

- 1. As NMIT is free to make changes in the existing Curriculum, Scheme of Evaluation, while fulfilling the minimum academic standards the BOS of NMIT has accommodated suitable changes. NMIT follows credit system, with letter grades and numerical grade points average, for achievement testing in the examination.
- 2. **As suggested in the VTU guidelines NMIT** academic year is divided into 3 segments:
  - a. Two Main semesters.
  - b. One supplementary semester.
- 3 Duration of each Main Semester will be 19 weeks and that of a Supplementary Semester will be 8 weeks;
- 4. In each semester, there will be various provisions for students like registration of courses in the first week of the semester, dropping the courses in the middle and withdrawal from courses towards the end, all being under the advice of Faculty Advisors. These facilities are expected to ensure proper monitoring of students by faculty advisors, leading to their improved learning capabilities and minimizing their chances of failure in the courses registered;
- **5.** In credit system, each subject is assigned with credits. A student can take courses of credit weightage, for meeting the requirements of the degree programme, such courses together with their grades and the credits earned will be included in the grade card issued by the college at the end of each semester and they form the basis for determining the students' academic performance in that semester;

**ONE CREDIT** is assigned to each unit of learning after a student completes the teaching learning process as prescribed for that unit and successful in its assessment.



### 6. Course load

A student can register for the course work, with a minimum course load being 20 credits and a maximum course load 30 credits per semester, the average course load for a semester being 25 credits.

- This facility will enable the student to suitably plan his/her course load in each semester to follow, by choosing it to be between >=20 and <=30 credit limits, based on faculty advice and his/her academic performance in the previous semester.
- This helps fast learners (or outstanding students) to accelerate their programme by registering and maintaining up to the maximum (30 credits) course load in each succeeding semester, based on their academic performance in the preceding and also in the current semesters; such students are to be able to complete the total requirements of the programme (200 credits) in a shorter time period i.e. 7 semesters in all.
- Similarly, slow learners (or weak students) are to register only for the minimum (20 credits) number of credits in each succeeding semester and strive to maintain good performance in all the courses registered and complete the total requirements for the programme (200 credits) at a slower pace, say 9-10 semesters in all.
- **7.** 200 credits have to be earned by a student to obtain the B E degree and lateral entry student (diploma) have to earn 150 credits.
- **8.** In credit system, students are assessed in two parts
  - a. Continuous Internal Evaluation (CIE).
  - b. Semester End Examination (SEE).

CIE will be conducted by the subject teacher all through the semester; which includes midterm tests, weekly/ fortnightly class tests, assignments, quiz, seminar, projects etc. The breakup of CIE and SEE is as follows:

THEORY	
Continuous Internal Evaluation (CIE)	
Mid Sem Exam (MSE) 1	15 Marks
Mid Sem Exam (MSE) 2	15 Marks
Assignment, Test Based on assignment, Mini Projects, Experimental work/ Tutorials (Submission of Drawing Sheets in case of CAED / CMD / Electrical Machine Drawing)	10 Marks
Surprise Test, Quiz, Seminar, Mini Projects, Experimental work	10 Marks
Semester End Exam (SEE)	50 Marks
<u>Grand Total</u>	100 Marks
PRACTICALS	
Continuous Internal Evaluation (CIE)	
Mid Sem Exam	15 Marks
Records and Continuous Assessment	30 Marks
Viva-Voce, Surprise Test, Quiz (Objective Type)	05 Marks
Semester End Exam (SEE)	50 Marks
Grand Total	100 Marks

SEE will be conducted at the end of the semester, on dates to be fixed at the college level.

**9.** A grade is basically a qualitative measure(alphabet) giving the performance of a student in a Subject such as Outstanding(S), Excellent(A), Very good(B), Good(C), Average(D), Poor(E), and Fail/Unsatisfactory (F), based on the raw marks obtained by the student(includes both CIE & SEE).

### Grade Point Scale:

Grade	S	A	В	C	D	Е	F
Grade Point	10	9	8	7	05	04	00
Marks Obtained out of 100	≥ 90	75-89	60-74	50-59	45-49	40-44	< 40

There will be no re-examination for any course in the credit system, to take care of student who has failed, Student would require to re-register for the course when it is offered again (either in a main or supplementary sem) and fulfill the Passing Standards laid down to earn the specified credits.

### 10. Mandatory (Non-Credit) Learning Courses:

The performance of the student in these courses is based on his continuous Internal Assessment only and there is NO Semester End Exam for these courses.

The attendance requirement in these courses is 85% just like any other credited course.

For a pass in these courses the requirement is that he/she should score ≥40% in the internal marks (CIE marks). Depending on his score in CIE, grade will be given similar to that of a credited subject.

The grades (grade points) will not be considered for calculation of SGPA/CGPA.

The performance of the student in these courses will not be considered for the vertical progression.

If the student fails to secure minimum attendance and/or minimum prescribed marks in CIE, he/she will be awarded NE grade/ F grade such students have to re-register for such courses again in the subsequent main semester/supplementary semester and put in the minimum prescribed attendance and earn the pass grade in CIE.

Without passing in these courses the student will not be eligible for the award of the degree.

### 11. Add/ Drop / Audit / Withdrawal options

- A student has the option to ADD courses for registration till the date specified for late registration, subject to the registration clause 5.
- A student has the option to DROP courses from registration until one week after the mid-semester examination without being mentioned in the Grade card. Such course to be taken up for study and reregistered by these students at a later time. He can drop up to the minimum credits specified for the semester, in registration clause 5.
- A student can register for auditing a course, or a course can even be converted from credit to audit or from audit to credit, with the consent of faculty advisor and course Instructor until one week after the mid-semester exam. However, CORE courses shall not be made available for audit. It is not mandatory for the student to go through the regular process of evaluation in an audit course. However, the student has to keep the minimum attendance requirement, as stipulated by the corresponding DUGC for getting the 'U' grade awarded in a course, failing which that course will not be listed in the Grade Card.
- A student can withdraw from a course at the end of the semester (before CIE submission to the exam section) with mention in the Grade Card (Grade 'W'); such courses to be taken up for study and reregistered by these at a later time. He can withdraw up to the minimum credits specified for the semester.
- **12.** The Transitional Grades 'I', 'W' and 'X' would be awarded by the teachers in the following cases. These would be converted into one or the other of the letter grades (SF) after the student completes the course requirements.

Grade 'I': Awarded to a student having satisfactory attendance at classes and meeting the passing standard at CIE, but remained absent from SEE for valid & convincing reasons acceptable to the College, like Illness or accident, which disabled him/her from attending SEE, A calamity in the family at the time of SEE, which required the student to be away from the College; In addition to the norms the following procedure has to be followed to avail the benefit of I Grade:

- The Student / Parent / Guardian has to inform the Principal / Dean Academic / Controller of Examination / HOD, prior or on the day of examination about the inability of the student to attend the examination.
- After informing the authorities, should furnish the supporting documents within two days of the concerned examination.

The decision of assigning 'I' grade for such candidate will be at the discretion of the Principal / Controller of Examination based on the validity of the initial information provided and the

supporting documents. Under no circumstances 'I' Grade will be awarded if initial information / supporting documents are not furnished within specified time.

Grade 'W': Awarded to a student having satisfactory attendance at classes, but withdrawing from that course before the prescribed date in a semester under Faculty Advice;

Grade 'X': Awarded to a student having **attendance** >= 85% and CIE rating >=60% in a course, but SEE performance observed to be poor, which could result in an overall F Grade in the Course. However X grade is not applicable to laboratory courses.

By the end of an academic year, during the supplementary semester all the temporary grades will have to be converted into one of the regular grades (S,A,B,C,D,E or F). The temporary grades cannot be carried to the next academic year.

- A student having X Grade in a subject and failing to pass the subject in the immediate next exam will be the automatically awarded an F grade / Not appearing for the immediate exam will automatically considered to X grade.
- In the supplementary semesters no provision to award X grade, irrespective of the percentage of attendance and the CIE marks.
- A student having I grade in a subject failing to pass in the immediate next exam will be automatically awarded an F grade/ not appearing for the immediate exam will be automatically converted in to F grades.
- Once a subject has been awarded F grade, it cannot be again awarded any temporary grade in the subsequent exams, it can only be converted into one of the eligible pass grades (S,A,B,C,D,E) based on the performance of the student in the subject in the subsequent exam, else it continues to be in F Grade.
- In the supplementary Semester, no provision for the award of 'I' grade.

### 13. Passing Standards

CIE	50 Marks	≥ 40% (i.e.20 Marks)
SEE	50 Marks	≥ 40% (i.e.20 Marks)

- A student will not be allowed to take up the SEE, if the CIE is less than 40 %.
- A student will be categorized in Not Eligible (NE) status which will amount to F grade in the course in the following cases,
  - 1. Not allowed to take SEE for not fulfilling minimum attendance requirement.
    - 2. Not allowed to take SEE for not fulfilling the minimum CIE requirement
    - 3. Absent for SEE.
- There shall be no re-examination for any course in the credit system to take care of such students:
  - a. Who have absented themselves from attending CIE or SEE without valid reasons; or
  - b. Who have failed (secured 'F' grade) to meet the minimum passing standards prescribed for CIE and/or SEE; or
  - c. Who have been detained for want of attendance; or
  - d. Who have withdrawn ('W' grade)

Such students shall be required to re-register for the course(s) for study and go through CIE and SEE again and obtain a grade equal to or better than 'E'.

**14.** Grade point average is a credit index used for calculating Semester Grade Points Average (SGPA) and the Cumulative Grade Point Average (CGPA), both of which are important performance indices. SGPA &CGPA are calculated as below:

**SGPA** =  $\Sigma$  (Subject Credit X Grade Point) for all the Subjects registered in the current semester /  $\Sigma$  (Subject Credit) for all the Subjects registered in the current semester (Excluding Transitional Grades I).

**CGPA** =  $\Sigma$  (Subject Credit X Grade Point) for all the Subjects registered upto the end of the current semester /  $\Sigma$  (Subject Credit) for all the subjects registered but excluding subjects with 'F' Grade upto the end of the current semester (Excluding Transitional Grades I, X).

### 14. a. Grade Card

A separate grade card will be issued after every Odd semester exam/Even semester exam/makeup exam/supplementary exam that he/she has appeared.

### 14. b. Makeup Examination

The makeup examination facility is available to the students who may have missed to attend the SEE of one or more course in a semester for valid reason and given the "I" grade by the competent authority after every Odd/Even semester End Exam.

Students having the "X" grade shall also be eligible to take advantage of this facility.

The makeup examination will be held after the announcement of main (Odd/Even Semester) examination results.

The standard of the makeup examination is same as that of the main examination.

After the makeup examination all the temporary grades (I/X grades) will be converted into a regular grade like S, A, B, C, D, E, F.

Students having temporary grades (I/X) who do not make use of the makeup examination, their temporary grades shall automatically converted in to F grade.

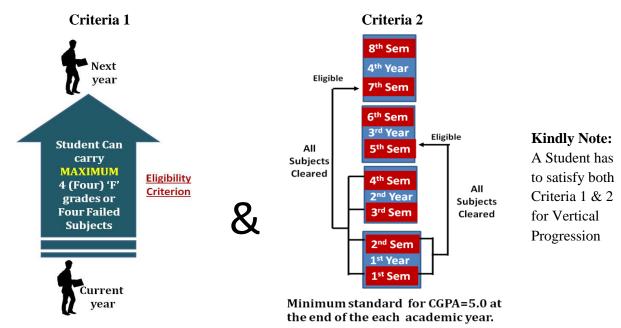
After each makeup exam all the pending temporary grades will be converted to F grades. Separate grade card is issued for the makeup exam.

### 15. Vertical Progression

It would also be necessary to lay down uniform minimum standards for the vertical progression of students from current academic year to the next academic year. This would be helpful in facilitating the mobility of students from one College to another and also in avoiding any confusion among the students. The prescribed standards for vertical progression are.

- A student can carry a maximum of 4 (four) 'F' grades/ four subjects of the current year of study to become eligible for admission to the next year of studying.
- Should have passed all the first and second semester courses to become eligible for the admission for fifth semester and can carry a maximum of four subjects of second year.
- Should have passed all courses of first to fourth semesters to become eligible for the admission for seventh semester and can carry a maximum of four subjects of third year.

• Minimum standard for CGPA=5.0 at the end of the each academic year.



**16.** Sometimes, it would be necessary to provide equivalence of these averages, viz., SGPA and CGPA with the percentages and/or Class awarded as in the conventional system of declaring the results of University examinations. This can be seen from Table which reproduces the approach of the Council for this purpose:

### Percentage Equivalence of Grade Points (For a 10-Point Scale)

Grade Point	Percentage of Marks
$\geq$ 5 and < 6.75	Second class
$\geq$ 6.75 and $<$ 7.75	First class
≥ 7.75	FC with Distinction

Conversion of grade point into a percentage is given by % Marks = (Grade point - 0.75) x10

### 17. Supplementary Semester

- Supplementary Semester is primarily to assist Weak and /or failed students through
  make up courses. In the Autonomous scheme, students having F grade in any of the
  subjects cannot directly write the supplementary exams. They have to re-register for
  such subjects and earn the required CIE and attendance then take the supplementary
  SEE.
- A student shall be allowed to register for a maximum of 20 *credits* in a supplementary semester.
- The supplementary semester shall be utilized primarily to facilitate the failed students to attend the courses in which they have failed and not for launching any new courses for *credit*. However, a Department shall be free to arrange any 'Add-On' courses for its students during this semester.

- The academic activity in the supplementary semester shall be at double the rate as compared to a normal semester; e.g., 1 *credit* of course work shall require two hours/week in the class room, so that the contact hours are maintained the same as in a normal semester. It shall also be necessary to fulfill the requirements of CIE and SEE for all the courses like in a normal semester.
- Students intending to avail this facility shall have to register for the courses offered by paying the prescribed fees within the stipulated time.
- Temporary grades such as I/W/X will not be awarded during supplementary semesters.

### 18. Attendance

- It is mandatory for students to have 100% attendance. However, the candidate has to have a minimum 85% attendance in each subject/course with a provision of condoning 10% of the attendance by Principal for reasons such as medical grounds, participation in University level sports, cultural activities, seminars, workshops and paper presentation etc.
- A candidate having shortage of attendance in one or more subject shall have to repeat those courses.
- Students desirous of leave of absence for less than two weeks during a semester shall apply for it in advance to the Head of the Department giving reasons & supporting documents, if any, and get approval prior to leaving the campus.

### 19. Termination from the Programme

A student shall be required to leave the College without the award of the Degree, under the following circumstances:

- Failure (Getting F Grade) and not passing a course/subject to earn credit for the same, in spite of five successive attempts;
- Absence from attending classes for more than six weeks continuously in a semester, without the prior approval from the competent authorities.
- Failing to secure CGPA  $\geq$ 5.0 at the end of any semester for the first time, to attract a warning before approval to continue in the following semester. However, a student failing to secure CGPA  $\geq$ 5.0 on three consecutive occasions would be asked to discontinue the programme and leave the college.
- Failure to complete a full time 4 year BE programme in 8 years and in 6 years for lateral entry students.

### 20. Degree Requirements

- Minimum Earned Credit Requirement for B E Degree is 200 and 150 for lateral entry students.
- Completed all the prescribed credit requirements for the award of Degree in each of the courses, like Theory, Laboratory, Studio, Workshop, Seminar and Project Work;
- Satisfactory completion of all Mandatory Learning courses.
- Obtained a CGPA of >= 5.00 at the end of the semester in which he/she completes all the requirements for the award of Degree;
- Paid all the dues to the College including the Department, Hostels, Library and other units:

- No case or disciplinary action pending against him/her.
- The Maximum duration for a student for complying to the Degree Requirement is EIGHT years from the date of first registration for his first semester and SIX years for lateral entry students.
- The Maximum duration for a student for complying to the Degree
- The requirement is EIGHT years from the date of first registration for his first semester and SIX years for lateral entry students.

### 21. Declaration of Ranks

a. Ranks are awarded in each branch of Engineering based on the CGPA secured by the candidates (considering I to VIII semester subjects for students admitted to I semester of Engineering and III to VIII semester subjects for Lateral Entry students admitted directly to III semester).

Provided the candidate

- Has completed the entire course in the college itself.
- Has passed all the subjects in first attempt only, including the mandatory subjects with a CGPA of at least 7.75(FCD) or more.
- Has not repeated/rejected/withdrawn/secured I, F, W, X, NP grades in any of the subjects in the entire course.
- Has not discontinued the program for any period during the course of study.
- Has not been awarded any punishment for being involved in malpractice or indiscipline during the course of study in the college.
- b. A minimum of 10 candidates should have appeared for the 8th semester examination in that branch of Engineering.
- c. Total no. of ranks shall be 10% of total no. of candidates appeared in the 8<sup>th</sup> semester program in that branch of Engineering subject to a maximum of 5 ranks if the sanctioned intake of the branch is 60 and a maximum of 10 ranks if the sanctioned intake of the branch is 120 or more in the considered batch at admission.

### 22. Conduct during Examination

- a. Only one main answer book will be issued and normally no additional Books are permitted.
- b. The candidate should write his/her seat number and give other information like examination, semester, subject, subject code etc., against the space provided on the title page of the answer book.
- c. The candidate shall not write his/her name/USN or put any identification mark inside any part of the answer book, which may disclose his/her identity which will be treated as malpractice and liable for penalization.
- d. The question numbers should be mentioned in the margin only.
- e. The candidate shall write answers on both the sides of sheets of the answer book. All rough work must be done in the space provided at the end of the answer book. Answers must be written using blue ink (ball pen or ink pen). If there is a change in ink, the same shall be attested by the Room Superintendent on the facing sheet of the answer script at the top.
- f. Answer book should be handed over personally to Room Superintendent before leaving the examination hall.
- g. No. candidate shall be permitted to go to toilet during the period of examination.
- h. The candidate should not take any books/notes, log table, scribbling pads, Cell phones, programmable calculators, Pen Drive, or any kind of reference material into the

- examination hall. The candidate should make sure that he/she has no unauthorized book or paper in the examination hall with him/her or in his/ her desk. He/she should have only articles permitted like Identity Card, Hall Ticket /Admission Ticket. The candidate should not write anything on the Admission Ticket or Identity Card or Calculator should not have any writings other than officially printed.
- i. A warning bell will be given 10 minutes before the commencement of the examination when all the candidates should take possession of their seats, another bell will be given at the beginning of the examination when question papers will be distributed and the students should start writing the answers. No candidates shall be admitted 30 minutes after the commencement of the examination and also shall be allowed to leave the examination hall before 45 minutes of since the commencement of the examination. No candidate should leave his/her seat during last 10 minutes. Warning bell will be given 10 minutes before the closing time and final bell is given at the end of the examination. Then all the candidates should stop writing or revising the answers and should handover the answer book to the Room Superintendent.
- j. The candidates should see that, the Room Superintendent has appended his/her signature at the specified space on the answer book as and when he/she received the answer book.
- k. Smoking and taking tea or coffee or cold drink in the examination hall is strictly prohibited. However, drinking water will be supplied on request.
- l. Any candidate appearing for the examination is liable to be charged with committing malpractice in the following cases:
  - I. Bringing to the examination hall or being found in possession of portions of a book, manuscript, Cell phones, Programmable Calculator Pen Drive, digital watch or any other material or matter.
  - II. Having any written matter on scribbling pad, Question Paper, Admission Ticket,
  - III. Calculator, Palm, Hand, Leg, Hand Kerchief, Clothes, Socks, Instrument Box, Identity Card, Scales etc.
  - IV. Disclosing identity by writing any words or by making any peculiar marks or by writing USN on the pages other than the facing sheet in the answer scripts while answering.
  - V. Copying from the material or matter or answer of another candidate or similar aid or assistance is rendered to another candidate within the Examination Hall.
  - VI. Communicating with any candidate or any other person inside or outside the examination hall with a view to take assistance or aid to write answers in the examination.
  - VII. Making any request of representation or offers any threat for inducement or inducing to bribery to Room Superintendent or and any other official or officer of the college for favors in the examination hall or to the Examiner in the answer script.
  - VIII. Smuggling out or smuggling in or tearing off of the answer script sheets or supplementary sheets or inserting papers written outside the examination hall into the answer book or running away along with the answer script from the examination hall or premises.
    - IX. Impersonating or allowing any other person to impersonate to answer in his / her place in the examination hall.
    - X. Supply of copying material inside or from outside the examination hall.
    - XI. Bringing mobile phone to the examination hall. Unruly behavior inside or near the examination hall.

# 23. Penalties and punishments to the students involved in malpractice during the examination

Nature of Malpractice	The Penalty to be Imposed
1.Revealing the identity of the candidate	A fine not less than Rs.2500/- and/or to deny the benefit of the performance of that subject in which the candidate has revealed his/her identity.
2. Possession of Manuscript / printed or typed matter, books or notes and written matter on the calculator, instrument box, etc., or having any other written matter on the person (For Example, palm, hand, leg clothes, socks etc.,)	To deny the benefit of performance of the examinations of all subjects for which the candidate has appeared (both attended and to be attended)
<ul> <li>3. Detection of identical answers scripts of different candidates or allowing a candidate to copy from his/her answer scripts.</li> <li>4. Appeal to the examiner with money as enclosures to the answer book / use of</li> </ul>	To deny the benefit of performance of the examination of all subjects for which the candidates have appeared.  To deny the benefit of performance of all subjects of the semester examination for
abusive / abusive language or threatening remarks in the answer book	which the candidates have appeared (both attended and to be of the particular examination conducted including arrear examinations)
5. Found giving or receiving assistance at the examination, passing the question paper with written answers / formulae / answer script / additional sheet / graph sheet / drawing sheet for the purpose of copying.	To deny the benefit of performance of the examination of all subjects for which the candidates have appeared (both attended and to be, of the particular examination conducted, including arrear examinations) debar them for a further number of chances extending up to three more examinations
6. Destroying the documentary evidence.	To deny the benefit of performance of the examination of all subjects for which the candidates have appeared (both attended and to be of the particular examination conducted, including arrear examinations) and/or debar them from taking any examination for one year. Such candidates shall re-join after one year.
7. The insertion of additional sheets / graph sheets / drawing sheets, use of answer book which are not issued at the examination hall	To deny the benefit of performance of the examination of all subjects for which the candidates have appeared (both attended and to be of the particular examination conducted, including arrear examinations) debar them for taking any examination for one year. Such candidates shall re-join after one year.
7. In case of Impersonation or found guilty of deliberate prior arrangements to cheat in the examination.	To deny the benefit of performance of the examination of all subjects for which the candidates have appeared (both attended and to be, of the particular examination conducted, including arrear examinations)

	debar them for a further number of chances extending up to six more examinations. (For the person who has impersonated the punishment shall extend up to reprimanding)
8. Abusing, threatening, manhandling the examination authorities at the examination hall or in the premises of the examination center, as well as misconduct of a very serious nature.	To deny the benefit of performance of the examination of all subjects for which the candidates have appeared (both attended and to be of the particular examination conducted, including arrear examinations) debar them for a further number of chances extending up to five more examinations depending of the degree of misconduct.
9. Any other malpractices connected with the Examination	The committee can recommend suitable
the Examination	penalties and punishment.

### 24. Examination Result and Appeal on Grades

- a. The results will be announced within one week from the last examination.
- b. The facility of re-totaling, revaluation and photocopy of the answer scripts is only for theory examination where answer scripts are valued only once (valued by single examiner). The candidate can apply for any number of papers of theory examination.
- c. A candidate shall submit an application to the Examination section in the prescribed format for re-totaling, revaluation and photocopy of the answer scripts by paying the prescribed fee within three days from the announcement of the results.

### 25. Grace Marks Policy

Grace marks shall be awarded to specified limits only in the cases where such grace marks would enable a candidate to pass either in a subject/ theory/practical or the whole examination.

- 25.1. Grace Marks shall be awarded to a subject/Theory/practical to a maximum of 1 (One) mark if, after the grace marks added , the candidate gets minimum prescribed marks in the theory/practical and passes in the subject.
- 25.2. A candidate shall be eligible to a maximum of 2 (Two) grace marks, provided
  - a) He/She has failed in only one subject of the examination.
  - b) Passes the whole examination by such grace marks.
  - c) Gets minimum prescribed grade in the paper / practical and satisfies aggregate for
  - d) Passing by such grace marks provided not graced as per 25.1.

### 26. Internship/Minor Projects/Self study

Internship/Minor Projects/Self study are 2 credit student centric activity within the requirement of 200credits for the degree program.

### 26.1 Internship

- a) Internship has to be carried out by the student during summer vacation in an industry / R&D organization / in house.
- b) Duration of internship preferably is to be six weeks but not less than four weeks.

- c) Before taking up of the internship, student should submit a detailed report to the department on the work to be taken during the internship, permission letter from the organization where the internship to be carried out indicating the scope of the internship.
- d) Student should submit attendance certificate indicating the actual percentage of attendance duly signed by respective authorities.
- e) An internship completion indicating salient learning outcome of the internship by the student duly signed by the respective authorities along with the detailed report has to be submitted to the department.
- f) The student should be assessed by the committee formulated at the departmental level for CIE.
- g) SEE be conducted jointly by an internal / external examiner through viva voce and power point presentations.

### **26.2 Minor Projects**

- a) The minor project to be identified by the students (should not be repetition of any mini project or final semester project undertaken by the students) and approved by the DUGC.
- b) The project selected should be such that the student has to put in at least 96 hours of work equivalent to 2 credits.
- c) Max. no. of students in the minor project could be 4.
- d) Student should submit the project proposal with expected learning outcomes and get approval from the DUGC.
- e) Student has to submit the detailed project report along with the learning outcomes from the minor project.
- f) The department will arrange for internal evaluation for CIE.
- g) SEE be conducted jointly by an internal / external examiner through viva voce and power point presentations.

### 26.3 Self study

- a) The value added course should be selected such that, the topic is not covered in any of the courses studied for the award of degree.
- b) The value added course should be approved by the DUGC.
- c) The project selected should be such that the student has to put in at least 96 hours of work equivalent to 2 credits.
- d) The department has to formulate a scheme for evaluation for CIE component.
- e) Each candidate has to submit a detailed report of the self study along with the learning outcomes from the course.
- f) Candidate will be evaluated for SEE jointly by an internal / external examiner through viva voce and power point presentations.

### 27. Fast Learner/Slow Learner

NMIT is empowered to grace the academic program for students who are excellent in academics and also who are slow learners. In case of excellence in academics or slow in managing with the peers, the following can be adopted to complete the course:

1. A Student can register for the course work, with a minimum course load being 20 credits and a maximum course load of 30 credits per semester, the average course load for a semester being 25 credits.

- 2. This facility will enable the student to plan his/her course load in each semester to follow, by choosing it to be between >=20 and <=30 credit limits, based on faculty advice and his/her academic performance in the previous semester.
- 3. This helps fast learners (or outstanding students) to accelerate their programme by registering and maintaining up to a maximum (30 credits) course laid in each succeeding semester, based on their academic performance in the preceding and also in the current semesters; such students who are able to complete the total requirements of the programme (200 credits) in a shorter time period i.e., 7 semesters in all.
- **4.** Similarly, slow learners (or weak students) are to register only for the minimum (20 credits) number of credits in each succeeding semester and strive to maintain good performance in all the courses registered and **complete the total requirements for the programme (200 credits) with a maximum of 10 semesters.**

#### 28. Bridge courses for lateral entry students

5 additional courses are offered for lateral entry students during the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> semester. The following are the courses offered:

- Bridge Maths-1 and Environmental Studies/ Constitution of India and professional ethics is offered in the 3<sup>rd</sup> semester
- Bridge Maths-2 and Constitution of India and professional ethics/ Environmental Studies is offered in the 4<sup>th</sup> Semester
- Communicative English is offered in the 5<sup>th</sup> Semester

#### 29. Resolution of Disagreements

The principal will have the final say in the event of any disagreement in the interpretation of text in this handbook.

#### **OTHER REGULATIONS**

#### STUDENTS DISCIPLINE

Students admitted to this college for the purpose of qualifying academic credit are responsible for his / her achievement and success. He / she shall pursue the academic career with all sincerity commitment and honesty. Students should bear in mind that college education is different from school education and hence day to day discipline in their studies is essential for their progress and it gets accumulated over the period to get the final grade / credit etc.

Students are responsible for their actions. Students should take care that their actions do not cause harm or damage to members of the college community or physical assets. When a student is charged with the violation of any law in a situation in which college is not involved, the college has no obligation to assist, but may afford to the student such assistance as appropriate and practicable.

#### FORMAL GRIEVANCE PROCESS

A formal grievance process may be initiated in person by meeting the warden / HoD/ principal in in writing to the Grievance Redressal Cell. For matters involving faculty, the grievance should be directed to the Principal only. The college strongly encourages submission of grievances in writing after meeting with the concerned person(s). The formal grievance must identify and include the following information.

- Complaints and the date signed
- Name of the accused individual, his / her position / status
- Contact information, if known
- Clear and concise description of the alleged incident(s), when and where it occurred.
- Description of all informal efforts, if any, to resolve the issue(s) with the person involved.
- Supporting documentation and evidence; and
- Names of the witnesses who may have direct and relevant information about the specific allegation. (With accompanying addresses, email addresses a telephone number)

#### FALSE AND MALICIOUS COMPLAINTS

False and malicious accusations of sexual and other harassment as opposed to complaints, which even if erroneous, are made in good faith, may call far appropriate disciplinary action.

#### **GRIEVANCE HEARING**

The grievance hearing panel appointed by the advisor NMIT will conduct a hearing and will impose prompt remedial and disciplinary action against any person(s) responsible for causing the reported grievance.

#### **RAGGING**

Ragging is a social evil which can have an ill effect on the student community. This may have a psychological, mental, emotional, physical or other effect on a student. To curb this NMIT has taken several steps. With respect to the Reference to clause (g) of sub – section (I) of Section 26 of the University Grants Commission Act, 1956, and AICTE notification vide curricular no. F. No. 37-3/legal /AICTE/2009 dated 25/03/2009, all regulations will be followed strictly in the institute to root out ragging in all its forms, by prohibiting it by law, preventing its occurrence by following the provisions of these Regulations and punishing those who indulge in ragging as provided in these Regulations and the appropriate law in force.

Ragging constitutes one or more of any of the following acts

- a. Any conduct by any student or students, whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student;
- b. Indulging in rowdy or undisciplined activities by any student or students, which causes or is likely to cause annoyance, hardship, physical or psychological harm or to raise fear or apprehension thereof in any fresher or any other student;
- c. Asking any student to do any act which such student will not in the ordinary course do and which has the effect of causing or generating a sense of shame, or torment or

- embarrassment so as to adversely affect the physique or psyche of such fresher or any other student;
- d. Any act by a senior student that prevents, disrupts or disturbs the regular academic activity of any other student or a fresher;
- e. Exploiting the services of a fresher or any other student for completing the academic tasks assigned to an individual or a group of students.
- f. Any act of financial extortion or the forceful expenditure burden put on a fresher or any other student by students;
- g. Any act of physical abuse, including all variants of it: sexual abuse, homosexual assaults, stripping, forcing obscene and lewd acts, gestures, causing bodily harm or any other danger to health or person;
- h. Any act or abuse by speaking words, emails, posts, public insults which would also include deriving perverted pleasure, vicarious or sadistic thrill from actively or passively participating in the discomfiture to a fresher or any other student;
- i. Any act that affects the mental health and self-confidence of a fresher or any other student with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student.

#### **PUNISHMENTS:**

Actions to be taken on students who indulge in ragging are

- a. For every incident of ragging a First Information Report (FIR) will be filed with the institutional authorities with the local police authorities. There will be no exception.
- b. Depending upon the nature and the gravity of the offence as established the possible punishments for those found guilty of ragging shall be any one or any combination of the following:
  - (i) Cancellation of admission.
  - (ii) Suspension from attending the classes.
  - (iii) Withholding/withdrawing scholarship/fellowship and benefits.
  - (iv) Debarring from appearing in any test/examination or other evaluation process.
  - (v) Suspension/Expulsion from the hostel.
  - (vi) Rustication from the institution for period from 1 to 4 semesters.
  - (vii) Expulsion from the institution and consequent debarring from admission to any other institution.
  - (viii) Collective punishment: when the persons committing or abetting the crime of ragging are not identified, the institution shall report to collective punishment as a deterrent to ensure community pressure on the potential raggers.

Two committees have been formed to monitor and curb the ragging in the campus 24x7 under the chairmanship of Principal, namely

- Anti ragging squad
- Grievance Redressal Cell

#### **DRUG FREE ZONE**

Ministry of social justice and empowerment, United Nations office on drugs and crime has jointly recognized NMIT as drugs free zone. NMIT in association with Narcotics control bureau, zonal unit, Bangalore, ministry of home affairs, Govt. Of India are organizing several awareness camps in the campus to educate the students about the ill effect of the drugs, implement appropriate responses to drug related incidents, with an emphasis on precaution

thru drug education to form procedures for managing drug related incidents, including illegal drugs, alcohol, tobacco and misuse of over the counter and prescribed medications and includes provision of advice on supporting students who may have drug related problems.

#### **RESPONSIBILITIES OF STUDENTS (Do's and Dont's)**

- All students must conduct themselves, within and outside the precincts of the institution, in a manner befitting the students of a national institution of high repute,
- Students must take steps to get information from official sources such as circulars and notices. Students must not rely on updates from second-hand or unofficial sources. Students are expected to note deadlines specified in these circulars and notices and also expected to take action on or before these deadlines. If the student faces any challenge in taking timely action before the deadline, the student is expected to seek help well in advance (more than 10 days) of the deadline. If a student misses a deadline and does not seek help in advance, a lenient view may be taken for exceptional cases.
- Students must wear prescribed uniform while in the campus and also display college ID card issued by the College

The following acts of omission and /or commission by the students within or outside the precincts of the college shall constitute gross violation of code of conduct and hence are punishable

- Lack of courtesy and decorum, indecent/inappropriate behavior.
- Willful damage to property of the Institution/Hostel
- Willful harm to members of the college community.
- Possession, consumption or distribution of alcoholic drinks or any kind of hallucinogenic drugs, smoking or substance abuse.
- Damage to or unauthorized possession of library material, like books.
- Unauthorized hacking of computer systems, cybercrime and other such activities.
- Use of Mobile phone in the college Academic area.
- Unauthorized fund raising and promotion of sales.
- Any other activities considered by the college as grossly inappropriate.
- In each case above, the punishment shall be based on the gravity of offense covering from reprimand, levy of fine, expulsion from the hostel, debar from examination, rustication for a period, to outright expulsions.
- The reprimanding authority for an offense committed by students in the Hostels and in the Department or the classroom shall be, the Warden of the Hostels and the Head of the concerned Department.
- A student will be completely and solely responsible for all his/her possessions, including his/her Laptop/Computer/Electronic gadgets/ ornaments/ cash etc. The institute will not be responsible for any loss/damage incurred.
- A Student must attend classes regularly.
- A student must not indulge in unethical practices like communal violence, racism, strikes, gender discrimination
- A student must not indulge in malpractice during exams/tests;
- Those who stay at the hostel must maintain timings and adhere to instructions/rules given by the warden;
- Student must
  - o Not litter and must keep the campus clean;

- o Complete academic tasks like record completion, assignments in time;
- o Respect his teacher / elders/ parents etc;
- O Study from the prescribed text books / reference books;
- Not sit and loiter in corridors

#### INTERNATIONAL STUDENTS

NMIT has been granted an additional 15% seats by AICTE. These additional seats are exclusively for students who fall under the categories of Foreign Nationals, PIOs and Children of Indians working in Gulf countries. NMIT is recognized under the Ministry of Human Resource Development (MHRD) for admissions under the Foreign students' quota. Students from Nepal, Bangladesh, UAE, Iran, Nigeria, Sri Lanka and Thailand are pursuing their studies under the above schemes.

A separate wing is provided for the foreign students in the hostel, rooms with single, twin sharing facility are available. The foreign students are required to have valid passport and visa valid at least for 6 months. They need to renew the same within 14 days of expiry.

As soon as they report to college, within 14 days, they need collect a bonafide letter from Principal and report to Foreign Regional Registration office in Bangalore. This has to be repeated every year 14 days before expiry of VISA. This process is applicable to all foreign nationals except those who are from Nepal.

The students are not permitted to cook food in the hostel as in house dining facility is available for the students.

#### ADDITIONAL FACILITIES

#### A. CURRICULAR:

#### 1. MENTORING OF STUDENTS

Every student is assigned a faculty advisor / mentor (hereafter called mentor) from the start of the first year. The mentor will talk to the student / parent on a regular and recurring basis. The student is expected to proactively meet the mentor if she/he has any queries or if he/she has any problems. The mentor will share his / her phone number with the student and the parent. The mentor will help the student in academic or other matters during his/her four years at NMIT. The mentor will maintain records of all interactions with the student and his/her parents.

The mentor will guide the student on matters related to academics. If the student finds a particular subject difficult he can be advised to withdraw the subject and take it up during supplementary semester. By doing so he will be able to concentrate well on other subjects during the regular semester. On the other hand if a student is a fast learner he can be advised to take up more subjects in a semester and complete the course in 7 semesters itself. If there are any issues pertaining to indiscipline the faculty advisor / mentor will contact the parent and inform of the same. If a student needs to take time off from college he will need to inform and take signature of the faculty advisor / mentor. A student should discuss all academic, college, hostel / mess or personal issues including health with his / her mentor. The

faculty advisor / mentor will work with Principal, Warden, Student Counselors/ Doctors or Dean of Student Welfare to seek help and resolve issues.

Every mentor will post comments / suggestions to the students in the website link of Gurukul. The link to this online portal can be accessed through the college website <a href="www.nmit.ac.in">www.nmit.ac.in</a>. Students and parents can access the portal using username and password.

If a student misses a class for three consecutive hours, an automated sms will be sent to the parent and mentor whose mobile number is registered in the website.

Overall the mentor will act as Student Welfare Officer and as the Student's role model.

#### 2. MY GURUKUL: Student Knowledge Portal:

My-Gurukul is a comprehensive online student information and knowledge management collaborative portal for most efficient and effective means of communication to all stake holders of academic institutions. Some of the key features are:

- It helps the system to facilitate and monitor 360 degree view of student performance including academic and non-academic;
- Various dashboards are provided for students, parents, faculty, HOD's and Principal for monitoring the performance of students;
- Automated Examination process;
- Parents are well informed about the students' Performance such as attendance, marks, etc.



#### How to Access to My-Gurukul

- > Open College Website: www.nmit.ac.in
- Click on the MY GURUKUL-Student Knowledge Portal
- > Type unique user name and password which is provided by the college during admission:
  - **USER NAME:** NMIT-Admission Number (Ex: NMIT-17708)
  - **PASSWORD:** combination of first three letter of your name and date of birth
  - format dd mm yy (Ex: If the student name is Girish and his date of birth is 20/07/91 then the password is GIR200791)

#### Once login is successful, you will find following menu:

#### To View at:

- Personal information click at My Profile
- Academic calendar of events click at .Institution calendar
- Academic holidays of the institution click at Institutional holidays
- College events details click at **Event**
- To check alerts, given from Principal/HOD /Staff etc click at Alerts
- Semester class time table, click at **Time Table**



# 3. LIST OF DEPARTMENTAL ASSOCIATIONS, CLUBS & STUDENT CHAPTERS

#### Student Chapters, Clubs, Associations at the Department Level

SINO	DEPARTMENT	ASSOCIATION NAME	
1	Aeronautical Engineering	FALCON	
2	Civil Engineering	Association of Consulting Civil Engineers (India) – ACCE(I) Student Chapter  Institute of Engineers – IE-Student Chapter	
		Indian Concrete Institute – ICI Student Chapter	
3	Computer Science &	CRYPTEC, CSI Student Chapter, IE Student Chapter	
	Engineering		
4	Electronics &	IRIS-Techno Cultural Forum, IEEE NMIT student	
	Communication Engineering	branch	
5	Electrical & Electronics	TESLA, IEEE PES Chapter	
	Engineering		
6	Information Science &	SANGYARTHAM	
	Engineering		
7	Mechanical Engineering	YANTRA	
		Society of Automotive Engineers (SAE)	

#### **Literary Forum**

NMIT students have various activities conducted under the banner of literary forum. They hold events such as JAMs, debates, MUNs, BPs, poems and essays. The students take active part in all these events and exhibit their talent.

#### **NMIT** clubs

#### NMIT Dance Club

The NMIT Dance Club has two teams, Jhankaar and Sangarsh. Both have bagged several laurels in various Inter Collegiate Competitions.

#### Music Club

The students form the teams and are actively involved in all the events which take place at NMIT. They also participate in various competitions.

#### NMIT Theatre Club

The NMIT theatre Club has been a very active association. It consists of the English team – Invictus, the Hindi team – Goonj and the Mad Ads Team.

#### Art Club

The Institute has a ver active Art club. The club support students in creating various models, paintings and art.. Students exhibit excellent talent and make the events more colourful in the art form.

#### NMIT Adventure Club

The club was started in the year 2014. Students actively take part in it. They experience exhilarating memories to take it forward and they have great fun.

#### 4. LIBRARY AND BOOK BANK FACILITY



Library activities are completely automated and all transactions take place through bar-coded technology. Library is kept open from 8.30 AM to 8.30 PM during working days and 10 AM to 2 PM on Sundays and holidays.

NMIT has the State-of-the-Art Library having an array of Books with well trained, polite, helpful Library Staff. The Library System consists of Central Library, Departmental Libraries and Reference section collectively which supports teaching, research and extension activities of the Institute. Library and Information Centre has a variety of video cassettes, and CD-ROMs pertaining to different disciplines. The Library has subscribed more than 130 National journals and 8700 International Journals. Library activities are completely computerized using bar-code technology.

### **Working Hours:**

	Monday to Friday	Saturday	Sundays &
			General Holidays
<b>Circulation Section</b>	8.30 AM-4.25 PM	8.30 AM-1.25 PM	-
Reference Section	8.30 AM-10.00 PM	8.30 AM- 5.00 PM	10.00 AM-2.00 PM

#### **Provision of borrowing Books from the Library:**

Every student after admission to the Institute is entitled to borrow 2 books from the Library. Books are issued to the members for a period of 2 weeks and a penalty of Rs.2/- per day, per book will be charged for the delayed period. In addition to this, students can join Book Bank scheme to borrow additional books and they can retain these books till the end of the semester examination and the related scheme is as follows.

## **Book Bank Scheme**

Plan	No. of additional Books	* Amount to be paid	
		(in Rs.)	
Plan 1	2	2000.00	
Plan 2	4	4000.00	

\*This amount is not refundable. The Book Bank Scheme is for 4 years. After opting this scheme, discontinuation or withdrawn cannot be considered and the amount is neither refundable nor adjusted.

#### SC/ST Book Bank Scheme:

Students belong to SC/ST category can borrow from the SC/ST Book Bank. Books will be issued on first come first serve basis coupled with availability of books.

#### **Library Services:**

- OPAC Search facility for readers
- Reprographic Services at nominal charge
- Inter-Library Loan (ILL) facility with National Aerospace Laboratories
   (NAL) and British Council Library (BCL).
- The Institute is the member of VTU consortia.
- Digital Library has 40 computers with internet facility.
- E-log register- keeps the details of all the students and faculty who have utilized the library on day-to-day basis.

#### **Special Features:**

- Users can search the Library collection from anywhere even through cell phone. While searching a Title, image of the cover page of that book will be displayed, that makes easy to recognize the particular book. http://210.212.203.69/
- User can access Courseware i.e.. Video Lectures, Lecture Notes of E-Vidya E-resource open courseware (OCW) of NPTEL (National Programme for Technology Enhanced Learning) http://210.212.203.69:8181/html/NPTEL/

- Institutional Repository-DSpace: Freely available (Open Source) software
  has been installed and E-Books, soft copies of Question papers, Lecture
  Notes are indexed, preserved and made available to access. Newspaper
  clippings on Institution's achievements are archived.
  <a href="http://210.212.203.69:8080/jspui/">http://210.212.203.69:8080/jspui/</a>
- Calibre is Free Book Indexing software where more than 2000 Text and Reference E-books are indexed. The E-books can be accessed/ downloaded from <a href="http://192.168.50.10:8080/">http://192.168.50.10:8080/</a> in the campus only. These can be searched by Author, Title, Subject and Language.

Through VTU consortia, we have subscribed to E-journal and E-Book databases.

#### **E-journal Databases:**

Sl.No.	E-journal Database	No. of E-journals	Web-address
1	IEEE-IEL Online	Journals-275	www.ieeexplore.ieee.org
		Conf. Proceedings- 1400	
		Standards-3043	
2	Science Direct/Elsevier	Journals-288	www.sciencedirect.org
3	Springer	Journals-680	www.link.springer.com
4	ASCE	Journals-35	www.ascelibrary.org
5	Taylor & Francis	Journals-535	www.tandfonline.com
6	Proquest	Journals-5170 + Management Case Studies	www.search.proquest.com
	Knimbus	Aggregator	

### **E-Book Databases:**

Sl.No.	E-Book Database	No. of E-Books	Web-address
1	CRC	259	www.crcnetbase.com/ www.crcpress.com/

2	Taylor & Francis	781	www.tandfonline.com/
3	Springer	13004	www.link.springer.com/

#### **Browsing Centre and Language Lab**

**Internet browsing centre is open from 9.00 a.m to 8 p.m.** Wi-Fi facility is available in the hostel after college hours. We have a Language Lab which would support student to learn and communicate in English more fluently.

#### 5. TRAINING & PLACEMENT CELL

This department helps students to acquire employment relevant skills in order to pursue their career goals with challenging roles in the industry. **The Training & Placement Department** has an important role to play in student's future and an indispensable pillar of the Institute. Placements provide an "OPPORTUNITY" to students to demonstrate their knowledge acquired over years for applicability in the real world. This department continuously strives to help students in pursuing their career goals by acquiring employment seeking skills and ultimately to attain desired employment.

We recognize the power and strength of our method of education to our engineers in providing ample placement avenues in the industries. Our college placement cell is a place to create and develop positive thoughts to our prospective engineers. We trust "To reap the benefits tomorrow, we need to sow the seeds today "and we act upon it. We strive hard to transform the talent pool through continuous training programme by experts in the respective area to meet the expectation of the industries. The robust and proactive Training & Placement Cell is a team of experienced experts in the order to groom the students in the best of their capabilities

The Training & Placement Cell maintains liaison with various Industries/Organizations. These organizations are invited to the institution for campus recruitments so that students get career offers before they graduate from the college.

#### **Objectives of this department are as follows:**

- The main objective is to create a platform where industries can come and select fresh talents from the campus.
- ➤ Work with faculty members, department heads and administration to integrate career planning with academic curriculum.
- Empower students with life long career decision making skills.
- ➤ Providing resources and activities to facilitate the career planning process.
- Act as an interface between students, alumni, and the employment community.
- Awareness in the students regarding future career options coordinating summer training/internship programme.
- > Bridging gap between Industry and Academia.

#### **B. FECILITIES:**

#### 1. HOSTEL:

Separate hostels are available for boys and girls.. Twin sharing and triple sharing rooms are available. In house dining facility is available at the hostel. All hostels are provided with Wi-Fi facility after the college hours. A bus to Yelahanka and back is provided for the hostel students after 5.30. Hostel has an MOU with Aveksha hospital for all medical emergencies.

#### 2. COUNSELING CELL

Counseling facility is available at NMIT. An experienced Professional counselor is available on Thursdays in her office from morning till evening. She will also be available for parents to discuss about their ward. Students can discuss their problems /issues with her as well as their class teachers/mentors

#### 3. TRANSPORTATION

Fleets of buses are available from different corners of Bengaluru city to ferry the students and faculty. Details can be availed at Transport office at the entrance of NMIT. A bus is available for hostel students at 5.30p.m from the campus to city/Yelahanka. Students can avail the facility by paying appropriate fees and obtain bus pass from the transport office.

#### 4. SPORTS

NMIT encourages sports and extracurricular activities for the students. There is a sports department headed by physical director. Indoor games like Table tennis, Badminton, Chess, Carom are available. Outdoor games like Basket ball, Foot ball, hand ball Hockey are available. Expert coaches are available for all the games. Separate Gym facility is available for both girls and boys.

#### 5. MEDICAL CENTRE

The medical centre provides the needs of students and staff of NMIT by providing emergency medicines and first aid. A nurse is available during day time and a doctor visits regularly. College has signed an MoU with Aveksha Hospital, and students can avail the facilities.

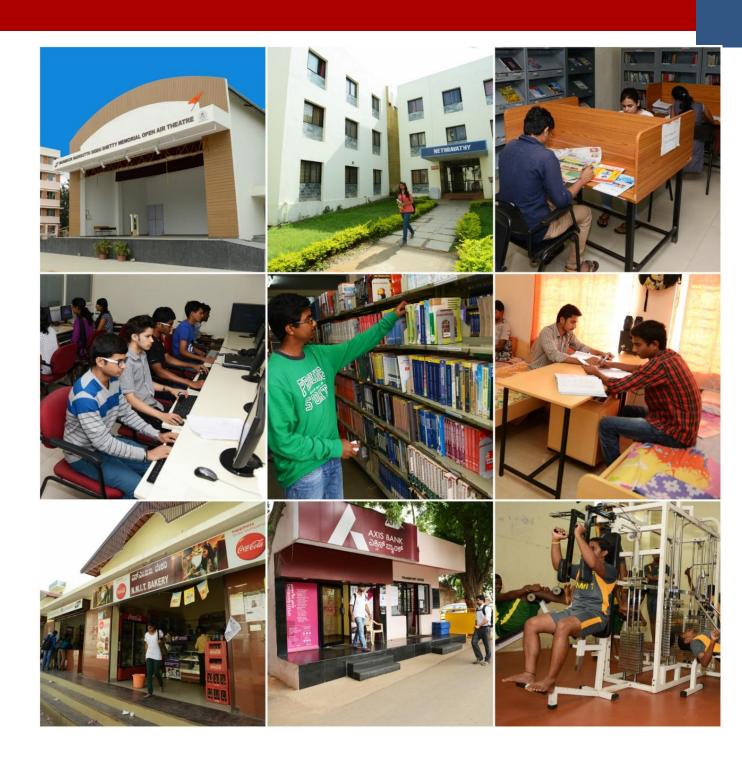
#### 6. MULTIPURPOSE CO-OPERATIVE SOCIETY

The society caters to the everyday needs of the students and staff of NMIT. Stationary items, Drawing materials, general items and snacks are sold within the campus at a reasonable price. Uniforms for the workshop and for first year students are sold in the society. Mobile recharge is also available

#### 7. CAFETERIA

The canteen serves both vegetarian and non-vegetarian food for day scholars. A bakery and Nandini milk parlor are available in the campus.

The other facilities available are Gym, ATM facility, Open Air Theatre, Generators with total capacity of 820KVA (320KVA + 500KVA) is available to ensure 24 hrs power supply, Xerox and printing.



#### C. CO CURRICULAR:

# 1. NATIONAL CADET CORPS (NCC) 1/(2) COY,1 KAR SIGNAL REGIMENT, NCC

Nitte Meenakshi Institute of Technology (NMIT) had introduced technical wing of National Cadet Corps (NCC) right from the inception of the college. NCC at NMIT comes under 1 Karnataka Signal Regiment (Technical Wing of NCC) in Bangalore 'A' group. The cadets are given a lot of opportunities to showcase their talent and improve their career prospects. Every NCC camp that the cadets attend not only boosts their self esteem but also moulds their personalities to shape them into future leaders of our country. As an add-on, NMIT is the first Engineering College in Karnataka to offer NCC as an elective course with credits to the students.

The cadets from NMIT have been active in all the camps and won laurels. This year two of the cadets from NMIT were chosen to represent Karnataka and Goa Directorate in the Republic Day Camp (RDC) after a rigorous selection process. Senior Under Officer (SUO) Mayank Kumar Choubey was selected to give guard of honor for Prime Minister and other VVIPs during the RDC. Sergeant (Sgt) Aman Kumar Ranjan was the commentator for the Vice President, Defence Minister, Chiefs of Army Staff, Naval Staff, Air Staff and other VVIPs during their distinguished visits to the camp on different days.

This stellar opportunity catapulted both the cadets to achieve more than that could have been imagined by other. Sgt Aman Kumar Ranjan is selected as a part of the prestigious Youth Exchange Program (YEP). The aim of YEP is a country-to-country exchange of cadets belonging to NCC/equivalent Govt/Youth Organizations of friendly countries and participation in various activities and appreciation of each other's socio-economic and cultural realities as the Indian Ambassador.

NCC in NMIT has motivated many students in the college to take-up career in the armed forces. NMIT has also contributed young engineers as commissioned officers into the Indian army, Navy and Airforce. These cadets in-turn come back to the institution to provide motivation for the budding cadets. Their success provides sources of motivation and initiative and lights a path for aspiring cadets to join the armed forces.

This year Karnataka and Goa Directorate recognized the Nitte Meenakshi Institute of technology as the Best Institution for the Year 2016-17 under Senior wing Category.

Apart from the regular Institutional training and Camp training, NCC cadets are given opportunities to organize and participate in various activities of Social Impact. Some of the major activities planned and executed by the cadets of NMIT are Blood Donation camps, Adopting a village, Campaign on Gender equality, Road Safety Awareness, Swatch Bharat, Digital Transaction awareness Program, Anti drugs campaign, Yoga Classes etc. To promote physical fitness and mental alertness and inculcating spirit of adventure every year trekking/Hiking programs are organized.

The enrolment for the Academic Year 2016-2017 is as follows:

	Boys	Girls
Ist Year NCC	16	09
II Year NCC	22	06
III Year NCC	15	12
Total	53	27

#### **Achievements of NMIT Cadets in Camp:**

- First Place Firing Competition 1 Kar Signal Regt CATC II
- First Place Throwball Competition 1 Kar Signal Regt CATC II

- First Place Group Dance Competition 1 Kar Signal Regt CATC II
- Second Place Football CATC V
- Second Place Group Song Competition CATC V
- Third Place Drill Competition CATC V
- First Place- Group Song CATC VI
- First Place Drill Competition CATC VI
- Recommendation for ALC received for three cadets from BLC camp- Aman Kumar Ranjan, Prateek Mehta and Shubham Sharma
- First Place Drill Competition 1 Kar Signal Regt CATC VI
- First Place Firing Competition 1 Kar Signal Regt CATC VI
- First Place Group Song Competition 1 Kar Signal Regt CATC VI
- Silver Medal Firing Competition CDT JASMEET SINGH MANN CATC VIII
- First Place Theme Dance Competition 1 Kar Signal Regt CATC VIII
- Second Place Group Dance 1 Kar Signal Regt CATC VIII
- Third Place Group Song 1 Kar Signal Regt CATC VIII
- Best Camp Senior CSUO MAYANK KUMAR CHAUBEY CATC VIII
- CSUO MAYANK KUMAR CHAUBEY got selected for ALL INDIA GUARD of HONOUR – Republic Day Camp(RDC) 2017- Delhi(DG NCC Camp)
- Gold Medal ALL INDIA FLAG AREA COMPETION Republic Day Camp(RDC) 2017
- Gold Medal Best Cadet Competition CPL AMAN KUMAR RANJAN -IGC, Mysore 2016
- CPL AMAN KUMAR RANJAN got selected for voice of DIRECTORATE GENERAL NCC OF INDIA to address chief guests.
- CPL AMAN KUMAR RANJAN got selected for YOUTH EXCAHNGE PROGRAM

#### <u>Institutional Achievement:</u>

Each of the directorates confers awards to their constituent institutions based on the support extended by the Institution for NCC activities and performance of the cadets and their participation in various activities. This year NMIT-NCC was the runner up for Best Institute Award in the Karnataka and Goa Directorate in the Senior Wing category.



Receiving "Best Institution-2016-17" Trophy from Air Cmde. C.Rajeev, Deputy Director General, Karnataka & Goa Dte NCC NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY, YELAHANKA, BENGALURU - 560064

#### **Achievements from NCC cadets**



**JUO. Aman Kumar Ranjan** represented Karnataka & Goa Directorate NCC in Republic Day Camp- 2017 and during the RDC he was the commentator for the Vice President, Defence Minister, Chiefs of Army Staff, Naval Staff, Air Staff and other VVIPs during their distinguished visits to the camp on different days. JUO. Aman Kumar Ranjan is selected as a part of the prestigious Youth Exchange Program (YEP) were he will be the ambassador from India to other friendly nation.

The aim of YEP is a country-to-country exchange of cadets belonging to NCC/equivalent Govt/Youth Organizations of friendly countries and participation in various activities and appreciation of each other's socio-economic and cultural realities as the Indian Ambassador.



**CSUO. Mayank Kumar Choubey** represented Karnataka & Goa Directorate NCC in Republic Day Camp and he was selected to give guard of honor for Prime Minister and other VVIPs during the RDC. He received gold medal in ALL INDIA FLAG AREA COMPETITION.

#### 2. NATIONAL SERVICE SCHEME (NSS)

NSS unit is active under Mr. Hemanth Kumar, Assistant Professor of Mechanical department, NMIT, Bangalore. They have organized various programmes under this banner to help the needy in the nearby village in the outskirts of NMIT. Few of the other highlights of the work carried out are listed below:

#### > Swachh Bharath

NSS has taken initiative on Swachh Bharath movement by conducting frequently in the NMIT campus and also at NITTE INTERNATIONAL SCHOOL with the support of Dr. Harish Bhatt, Ecologist, IISC, Bangalore, Dr.H C Nagaraj, Principal, Prof. Rangnatha Setty, Dean Academic, Mr.Karunakar Rai, Principal, Polytechnic, Mr.Mallikarjun Gowda, Dr.Madhusudhan, Ms.Shailaja, receptionist and NMIT staff.

#### **Blood Donation Camp**

NSS organized Blood Donation camp with the support of Rashtrothana blood bank and Rotary blood bank on 26th February 2016 in the college premises. Over 400 units were collected. Dr. H C Nagaraj, Principal, NMIT presided over the camp.

Academic, NMIT presided over the function.



#### > Youth Awareness Program

NSS organized youth awareness program on behalf of Swami Vivekananda Jayanti on 12th January 2016 in the college premises. Dr. T S Venkatesh was the guest of honor. Prof. Rangnatha Setty, Dean

#### > Eye Awareness

NSS has taken initiative on eye donation awareness by conducting walkathon in the college premises on 15<sup>th</sup>February 2016.Professor Girish GK, Department of Electronics and communication, NMIT and professor Avinash, Mechanical department, presided over the event.

#### ➤ Visit to orphanage, Blind School and Mentally challenged school

NSS visited and provided lunch to the blind school children which was sponsored by Dr. Venkatesh ,HOD Computer science department, NMIT .The old clothes ,newspapers and books were also distributed with the help of all NMIT students and staff.

#### > Donate to Educate

NSS donated Rs.10,000/- towards education with the help of Jagruthi members(Dr.P G Mukunda and family) and NSS members to Mr.Murali, Student of Kamala Bhai PU college.

NSS NMIT participated in the Street play, during ANAADYANTA 2016 to give awareness on social problems.

#### ➤ National level Youth EDP 2016 for 40 selected students

NSS unit of NMIT also conducted EDP program for five days, Entrepreneur development program from March 11<sup>th</sup> to 15<sup>th</sup> 2016 with the support of Dr. Manjunath, Director PGDM, Dr.Rangnathshetty, Deanacademic, NMITDr. Rajesh, professor, PGSM, NMIT, Dr. Jayramshetty, professor, PGDM, NMIT, Dr.KiranAithal, HOD Mechanical department, NMIT and Dr. Desai Gowda, Professor, Mechanical Department, NMIT presided over the program.

Youth wing of Red Cross society& Rotaract Club is also active in the campus. They organize the Blood Donation camp in association with the NSS Unit

#### 3. SPORTS ACTIVITIES

Nitte Meenakshi Institute of Technology has created excellent infrastructure for promoting sports activities for the benefit of students, it has both Outdoor and Indoor facilities, It has multipurpose 200m track and a hockey Field .Further, it has provided good facilities for other Outdoor/Indoor games such as, Football, Cricket, Basketball, Volleyball, Ball Badminton, Shuttle Badminton and Throwball. In case of Indoor games, the college has created good facilities for games such as Table Tennis, Carrom and Chess. The College is taking part in the zonal, Inter zone and Varsity Level Tournaments. Before Participating in these events, our teams are being trained by the Specialist coaches.

NMIT has achieved outstanding success in various sports & games events during the year 2016-2017. The VTU Basketball Bangalore North zone, Inter zone and team selection trails was conducted in our campus from 06th to 11th sept, 2016 VTU Bangalore North zone Kabaddi tournament was conducted on 11th and 12th April 2017.

Some the achievements are presented below

#### STUDENTS ACHIEVEMENTS FOR THE YEAR 2016-2017

Sl No	TOURNAMENT	EVENT NAME	DATE OF TOURNAMENT	ORGANIZED COLLEGE	RESULT
01	St, PAUL CUP 2016	VOLLEY BALL	2 <sup>nd</sup> &3 <sup>rd</sup> Sept 2016	SPGCE	WINNERS
02	VTU BANGALORE NORTH ZONE	BASKET BALL	6 <sup>th</sup> &7 <sup>th</sup> Sept 2016	NMIT	WINNERS
03	VTU BANGALORE NORTH ZONE	BADMINTON	21 <sup>st</sup> &22 <sup>nd</sup> Sept2016	BMSCE	RUNNER- UP
04	VTU INTER ZONE	BADMINTON	24 <sup>th</sup> to 26 <sup>th</sup> Sept 2016	RYMEC	3 <sup>rd</sup> PLACE
05	VTU BANGALORE NORTH ZONE	T T (WOMEN)	28 <sup>th</sup> &29 <sup>th</sup> Sept 2016	RLJIT	RUNNER- UP
06	INTERNATIONAL SPORTS FEST	BASKET BALL	4 <sup>th</sup> &5 <sup>th</sup> Sept Oct 2016	PES UNIVERSITY	WINNERS
07	M R RAMAIAH TROPHY STSTE LEVEL	BASKET BALL	18 <sup>th</sup> to20th Oct 2016	MSRIT	RUNNER- UP
08	KALANJALI	FOOTBALL	21 <sup>st</sup> &22 <sup>nd</sup> Oct	Sir MVIT	RUNNER-

	SPORTS 2	2016		2016		UP
09	VTU ZONE	SINGLE	TAEKONDOW	16 <sup>th</sup> &17 <sup>th</sup> Oct 2016	YDRIT	ONE GOLD
10	DEVDHA	N CUP	VOLLEY BALL	31 <sup>st</sup> to 2 <sup>nd</sup> Jan 2017	CHRIST UNIVERSITY	RUNNER- UP
11	KREEDO 2017	TSHAVA	FOOT BALL	3 <sup>rd</sup> to6th Feb 2017	BMSCE	RUNNER- UP
12	KREEDO' 2017	TSHAVA	BASKETBALL	3 <sup>rd</sup> to6th Feb 2017	BMSCE	RUNNER- UP
13	VTU ZONE	NORTH	VOLLEY BALL	30 <sup>th</sup> &31 <sup>st</sup> Mar 2017	BMSIT	WINNERS
14	VTU ZONE	INTER	VOLLEY BALL	31 <sup>st</sup> &1 <sup>st</sup> Apr 2017	BMSIT	4 <sup>th</sup> place
15	VTU ZONE	NORTH	FOOT BALL	3 <sup>rd</sup> &4 <sup>th</sup>	ACHARYA IT	WINNERS
16	VTU ZONE	INTER	FOOT BALL	18 <sup>th</sup> &19 <sup>th</sup> 2017	VTU BELAGAVI	WINNERS

Sl No	Event	State/Nat/Int	Date	Participant
01	BASKETBALL		6 <sup>th</sup> to 11 sept 2016	1,Monish N
			18 <sup>th</sup> to 20 <sup>th</sup> Oct	2,DARSHAN V M
	1 M S RAMAIAH		2016	3 AKSHAY M
	MEMORIAL	STATE		4, ROHITH K
			2 <sup>nd</sup> TO	5, JAIRAM K A
	2, OMAN	STATE	6 <sup>TH</sup> Mar2017	6, NIKHILESH R
	MATHUEY	INTER	4 <sup>th</sup> & 5 <sup>th</sup>	7, GOWTHAMREDDY
		NATIONAL	Sept 2016	8 AJAY SRINIVAS
	3, PES SPORTS		6 <sup>th</sup> to 11 <sup>th</sup> Sept	9, MANISH M
	4, VTU		2016	10, SHREESHS K S
		UNIVERSTY		11, CHETAN K
				12HARSHPREET SINGH
02	Volleyball	State	2 <sup>nd</sup> &3 <sup>rd</sup> Sept 2016	1, PRASANNA R
				2, GAURAV G C
				3 AKSHAYA M G
				4 PRATHEESH M
				5 AMOGHAVARSHA
				6 RAKSHITH
				7 PRAJWAL SHETTY
				8 SANJAY Y D
				9 TRIJAY V
				10 SHASHIKIRAN R

			31 <sup>ST</sup> March to	11 NANDAN R
		UNIVERSITY	03 <sup>rd</sup> Apr 2017	CHANDRASHEKAR
03	Football	State	21 <sup>st</sup> &22 <sup>nd</sup> Oct 2016	1 NAVANEETH A G 2 TAKSHAK RAWAL 3 BISHESH SHARMA 4 JAYABALA M 5 GAURAV PRABAKAR 6 DARSHAN S H
		State	2 <sup>nd</sup> to 6 <sup>th</sup> March 2017	7 AKHIL DEV M 8 MUSAB A KHAN 9 SUNIL S RAO 10 UJWAL HEGDE 11 PRAJWAL RAMAN 12 YATHISH KARKERA
		UNIVERSITY	18 <sup>th</sup> &19 <sup>th</sup> Apr 2017	13 KARTHIK NAIR 14 SAKETH N 15 ARPITH CHACKO 16 AGNEL JOBY 17 SACHIN C S 18 ANUDEEP M
04	Table Tennis	State	28 <sup>th</sup> &29 <sup>th</sup> Sept 2016	1 SOWMYA K 2 SHALINI S 3 RASHMI M 4 HARSHITHA R
05	Netball	National	Represented VTU	DIVYA V
06	Taekwondo	Natoinal	Represented VTU	SOUJANYA
7	Athletics	State	15 <sup>th</sup> to 18 <sup>th</sup> Nov 2016	1 SAJAY KRISHANAN 2 SHREYAS S 3 TAKSHAK RAWAL 4 DARSHAN S H 5 SAKETH N 6 SIDDESH H R 7 SHISHIRA A V 8 KAILASH M 9 SANDEEP K 10 ABHILASH M N 11 CHANDANA R V 12 SURUCHI KUMARI 13 ANNIPRIYA 14 DEEPA B M 15 MAHIMA
08	Badminton	State	24 <sup>th</sup> to26th Sept 2016	1 NIRANJAN POWAR 2 ADITYA VASHIST 3 PRANAV S 4 NITHIN KUMAR 5 TEJAS





#### **EXAMINATION PROCESS**

#### **Process of Semester End Examination (SEE)**

Admission Process to be Completed with online data entry in MY GURUKUL Portal

Registration for the current semester in first 3 days of the semester on payment of Tuition and other fees

Attend all the Classes regularly to get an attendance of ≥ 85%

Attend all the components of the Continuous Internal Evaluation (CIE) to score  $\geq 20$  (out of 50)

Submit the Examination Application form along with the duplicate Fee paid receipt in time to

Autonomous section and get an acknowledgement

If the above requirements are met , Collect the admission ticket before the start of SEE by showing the College Identity card.

Then the student is eligible to attend the Semester End Examination (SEE)

Results will be announced in One weeks time after the last examination.

(Minimum Passing marks will be 40)

Students intend to apply for Revaluation(RV) / Photocopy of the Answer book / Re totaling can apply on paying the prescribed fee and submit the respective forms along with duly paid duplicate copy of the fee receipt to Autonomous office within 3 days of the result announcement

PLEASE NOTE: The sample forms for registration, exam form, hall tickets and grade card are made available at <a href="https://www.nmit.ac.in">www.nmit.ac.in</a> – click on autonomous.

#### Requirements for Students to take-up the Exam

- Students should have attendance **Greater than or Equal to 85%** to be eligible for Semester End Examination
- Continuous Internal Evaluation CIE (Internals) marks should be **Greater than or Equal to 20**
- Submit the Examination application form in time to Autonomous office with Xerox copy of the Exam fee paid receipt.

#### • Students Should

- o Collect the Admission card / Hall ticket on specified date.
- o Carry the College Identity card to examination hall. Without ID card they will not be allowed inside examination hall
- Carry Admission Card/Hall ticket to examination hall. Students not carrying the Admission card / Hall ticket will not be allowed to enter Examination hall.
- Not carry the cell phone or any other Electronics Gadgets to the Examination hall.
- o Not carry any kind of Chit or text in any form to the examination hall.
- Submit the Revaluation/Photo Copy/ Re totaling forms along with photocopy
  of prescribed fee paid receipt to the autonomous office within 3days of the
  announcement of the result.

#### LIST OF NMIT STAFF

#### **Department Wise Academic Staff**

#### 1. DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl.No	Name	Designation	Qualification
1.	Dr. Thippeswamy M N	Prof. & Head	B.E(CSE), M.Tech (CSE), Ph.D (UKZN, South Africa)
2.	Prof. Ranganatha Setty K A	Prof. & Dean (Academic)	B.Sc (Engg) M.Sc (Engg.) M.Tech (CST)
3.	Dr. Jharna Majumdar	Dean R&D, Prof & Head CSE (PG)	B. E.(ECE), PGDCT(CSE), Ph.D
4.	Dr. Krishna Rao Venkatesh	Prof.	B.E (ELECT), M.E, Ph.D (CS; Concordia University)
5.	Dr. Nalini N	Prof.	B.E (CSE), M.Tech, Ph.D
6.	Dr. Saroja Devi H	Prof.	B.E.(Elect), M.E(Elect), Ph.D(IISc)
7.	Mrs.Vijaya Shetty S	Assoc.Prof	B.Tech, M.Tech (CSE), (Ph.D)
8.	Mrs. Archana Naik	Assoc. Prof.	B. E.(CSE), M.Tech (CSE)

0	Du Duiti Michae	Assas Drof	B.E (ISE), M.Tech (CSE),
9.	Dr Priti Mishra	Assoc. Prof.	Ph.D (MVGU, Rajasthan)
10.	Mr. N. Srinivasa	Asst. Prof.	B. E(CSE), M.Tech
10.	Wir. N. Stillivasa	Asst. Pioi.	(CSE),(Ph.D)
11.	Mr.Afroz Pasha	Asst. Prof.	B. E.(CSE), M.Tech
11.	WII.AIIOZ Fasila	Asst. Fior.	(CSE)
12.	Mrs. Chaitra H.V	Asst. Prof.	B. E.(CSE), M.Tech
12.	Wits. Chaina 11. V	Asst. Fior.	(CSE)(Ph.D)
13.	Mrs.Uma R	Asst. Prof.	B.E. (CSE),M.Tech
13.	Wits.Offia K	Asst. 1101.	(CSE),(Ph.D)
14.	Mrs.Shruthi B V	Asst. Prof.	B.E. (CSE), M.Tech
14.	Wis.Sinuan D V	Asst. 1101.	(CSE),(Ph.D)
15.	Mr.Mohan B A	Asst. Prof.	B.E. (CSE), M.Tech
13.	WII.Wiolian B A	Asst. 1101.	(CSE)(Ph.D)
16.	Mr.Nagaraj S R	Asst. Prof.	B.E (ECE), M.Tech (CSE)
10.	Wil. Naguraj D IX	71551. 1101.	(Ph.D)
17.	Mrs.Jagdevi N Kalshetty	Asst. Prof.	B.E. (CSE), (M.Tech)
17.	Wits.Jaguevi iv Raishetty	71331. 1 101.	(CN)
18.	Mrs.Ramyashree B R	Asst. Prof.	B.E. (CSE), M.Tech
10.	Mishtaniyasinoe B Te	11000.1101.	(CSE)(Ph.D)
19.	Mrs.Ramya Srikanteswara	Asst. Prof.	B.E (ECE),M.Tech(CN)
20.	Mrs.Sujatha Joshi	Asst. Prof.	B. E.(CSE),M.Tech
	1,220,000,000,000	110000 1 1010	(CSE),(PhD)
21.	Mrs.Kavya B S	Asst. Prof.	B. E.(CSE), M.Tech
	inisitat ja 2 c	11000.1101.	(Sftware. Engg.)
22.	Mrs.Sushma M	Asst. Prof.	B. E(CSE), M.Tech (CSE)
23.	Mrs.Nirmala J Saunshimath	Asst. Prof.	B.E.(CSE),M.Tech(CSE)
	1,110,11,111,111,111	110000 1 1010	(Ph.D)
24.	MrE G Satish	Asst. Prof.	B. E.(ISE), M.Tech
			(CNE),(Ph.D)
25.	Mrs.Poornima M S	Asst. Prof.	B. E.(CSE), M.Tech
			(CSE)
26.	Mr. Santhosh Kumar K L	Asst. Prof.	B.E (CSE), M.Tech (CSE)

27.	Mes Asha H.V.	Asst. Prof.	B. E.(CSE), M.Tech
21.	Mrs.Asha H V	ASSI. PTOI.	(SE.),(Ph.D)
28.	Mrs.Meenakshi	Asst. Prof.	B.E(ISE), M.Tech (CNE)
29.	Mrs.Sowmya M R	Asst. Prof.	B.E (CSE), M.Tech (CSE)
30.	Mrs.Shobana T S	Asst. Prof.	B.E (CSE), M.Tech (CNE)
31.	Mrs.Shobha	Asst. Prof.	B.E (CSE), M.Tech (CNE)
32.	Mrs.Deepa Kumari	Asst. Prof.	B.E (ISE), M.Tech (CNE)
33.	Ms.Shilpa Ankalaki	Asst. Prof.	B.E (CSE), M.Tech (CSE)
34.	Ms.Manasa S Gowda	Asst. Prof.	B.E (CSE), M.Tech (CSE)
35.	Mrs.Napa Lakshmi	Asst. Prof.	B.E (CSE), M.Tech (CSE),
33.	Wits.ivapa Laksiiiii		(Ph.D)
36.	Ms.Mamatha Bai B G	Asst. Prof.	B.E (ISE), M.Tech (CSE)
37.	Mrs.Ushashree	Asst. Prof.	B.E (CSE), M.Tech
38.	Ms.Sneha N	Asst. Prof.	B.E (ISE), M.Tech (CSE)
39.	Ms. Sharmila Shanthi Sequeira	Asst. Prof.	B.E (CSE), M.Tech
40.	Ms. Supriya P	Asst. Prof.	B.E (CSE), M.Tech (SE)
41.	Ms. Pratheeksha Hegde	Asst. Prof.	B.E (CSE), M.Tech
42.	Mr Chethan	Research Assistant	B.E (ECE), M.Tech (ES)
43.	Mr. Suraj	Research Assistant	B.E (ECE), M.Tech (ES)
44.	Dr Raghu G	Adjunct Prof.	Ph.D (CSE)
45.	Dr Madhusudhan	Adjunct Prof.	Ph.D (CSE)

# 2. DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

Sl.No	Name	Designation	Qualification
	Dr. Coniov II A	Prof. & HOD	B.E (EEE), M.Tech (CSE), Ph.D
1.	Dr.Sanjay H A	Prof. & HOD	(IISc,)
2.	Dr.Shantharajappa A N	Prof.	M.Sc (Maths), Ph.D
3.	Dr.N G Goudru	Prof.	M.Sc(Maths), M.S, M.Tech, Ph.D
4.	Dr.PrashanthaGogoi	Prof.	B. E(CSE), M.Tech(Inf.Tec) Ph.D

5. Mr.D B Srinivas Assoc. Prof. B. E(CSE), M. E. (CSE) (Ph.D)  6. Mr.Karunakar Rai B Assoc. Prof. B. E(ECE), M.S (ISE), M.Tech (VLSI) (Ph.D)  7. Mr. K. Adithya Shastry Assoc. Prof. B. E(CSE), M.Tech(CSE) (Ph.D)  8. Ms.Ashwini J P Assoc. Prof. B. E(CSE), M. Tech(CSE) (Ph.D)  9. Mrs.Vidyadevi G Biradar Assoc. Prof. B. E(ISE), M. Tech(CSE), (Ph.D)  10. Ms.M.Lakshmi Asst. Prof. B. E(ISE), M. Tech(CSE)  11. Mr.Chandrasekar B N Asst. Prof. B.E(ISE), M.Tech (CSE)(Ph.D)  12. Ms.Bini Y Baby Asst. Prof. B.E(IT), M.Tech (CSE)  13. Mr.Manjunatha B A Asst. Prof. B.E.(CSE), M.Tech (CSE)(Ph.D)  14. Mr.Rohit H P Asst. Prof. B.E.(CSE), M.Tech (CSE)(Ph.D)  15. Ms.Lakshmi H Asst. Prof. B.E(ISE), M.Tech (CSE)(Ph.D)	
6. Mr. Karunakar Rai B Assoc. Prof. (VLSI) (Ph.D)  7. Mr. K. Adithya Shastry Assoc. Prof. B. E(CSE),M.Tech(CSE) (Ph.D B. Ms. Ashwini J P Assoc. Prof. B. E(CSE),M. Tech(CSE)(Ph.D G. Mrs. Vidyadevi G Biradar Assoc. Prof. B. Tech(CSE),M.Tech(CSE),M.Tech(CSE),M.Tech(CSE),M.Tech(CSE),M.Tech(CSE)  10. Ms.M.Lakshmi Asst. Prof. B. E(ISE),M. Tech(CSE)  11. Mr.Chandrasekar B N Asst. Prof. B.E(ISE), M.Tech (CSE)(Ph.D G. Ms.Bini Y Baby Asst. Prof. B.E(IT), M.Tech (CSE)  12. Ms.Bini Y Baby Asst. Prof. B.E(CSE),M.Tech (CSE)(Ph.D G. Mr.Manjunatha B A Asst. Prof. B.E.(CSE),M.Tech (CSE)(Ph.D G. Mr.Rohit H P Asst. Prof. B.E.(CSE), M.Tech (CSE)(Ph.D G. Mr.Rohit H P Asst. Prof. B.E.(CSE),	
8. Ms.Ashwini J P Assoc. Prof. B. E(CSE),M. Tech(CSE)(Ph.D 9. Mrs.Vidyadevi G Biradar Assoc. Prof. B.Tech(CSE),M.Tech(CSE),(Ph.D 10. Ms.M.Lakshmi Asst. Prof. B. E(ISE),M. Tech(CSE)  11. Mr.Chandrasekar B N Asst. Prof. B.E(ISE), M.Tech (CSE)(Ph.D 12. Ms.Bini Y Baby Asst. Prof. B.E(IT), M.Tech (CSE)  13. Mr.Manjunatha B A Asst. Prof. B.E.(CSE),M.Tech (CSE)(Ph.D 14. Mr.Rohit H P Asst. Prof. B.E.(CSE), M.Tech (CSE)(Ph.D 14. Mr.Rohit H P Asst. Prof. B.E.(CSE), M.Tech (CSE)(Ph.D 14. Mr.Rohit H P Asst. Prof. B.E.(CSE), M.Tech (CSE)(Ph.D 14. Mr.Rohit H P Asst. Prof. B.E.(CSE), M.Tech (CSE)(Ph.D 15	
9. Mrs.Vidyadevi G Biradar Assoc. Prof. B.Tech(CSE),M.Tech(CSE),(Ph. 10. Ms.M.Lakshmi Asst. Prof. B. E(ISE),M. Tech(CSE)  11. Mr.Chandrasekar B N Asst. Prof. B.E(ISE), M.Tech (CSE)(Ph.D)  12. Ms.Bini Y Baby Asst. Prof. B.E(IT), M.Tech (CSE)  13. Mr.Manjunatha B A Asst. Prof. B.E.(CSE),M.Tech (CSE)(Ph.D)  14. Mr.Rohit H P Asst. Prof. B.E (CSE), M.Tech (CSE)(Ph.D)	1
10. Ms.M.Lakshmi Asst. Prof. B. E(ISE), M. Tech(CSE)  11. Mr.Chandrasekar B N Asst. Prof. B.E(ISE), M.Tech (CSE)(Ph.D)  12. Ms.Bini Y Baby Asst. Prof. B.E(IT), M.Tech (CSE)  13. Mr.Manjunatha B A Asst. Prof. B.E.(CSE), M.Tech (CSE)(Ph.D)  14. Mr.Rohit H P Asst. Prof. B.E (CSE), M.Tech (CSE)(Ph.D)	١
11. Mr.Chandrasekar B N  Asst. Prof.  B.E(ISE), M.Tech (CSE)(Ph.D)  12. Ms.Bini Y Baby  Asst. Prof.  B.E(IT), M.Tech (CSE)  13. Mr.Manjunatha B A  Asst. Prof.  B.E.(CSE), M.Tech (CSE)(Ph.D)  14. Mr.Rohit H P  Asst. Prof.  B.E (CSE), M.Tech (CSE)(Ph.D)  15. Mr.Rohit H P  Asst. Prof.  B.E (CSE), M.Tech (CSE)(Ph.D)	.D)
11.  12. Ms.Bini Y Baby  Asst. Prof.  B.E(IT), M.Tech (CSE)  13. Mr.Manjunatha B A  Asst. Prof.  B.E.(CSE),M.Tech (CSE)(Ph.D  14. Mr.Rohit H P  Asst. Prof.  B.E (CSE), M.Tech (CSE)(Ph.D	
13. Mr.Manjunatha B A  Asst. Prof. B.E.(CSE),M.Tech (CSE)(Ph.D  14. Mr.Rohit H P  Asst. Prof. B.E (CSE), M.Tech (CSE)(Ph.D	
14. Mr.Rohit H P Asst. Prof. B.E (CSE), M.Tech (CSE)(Ph.D.	
14.	
15. Ms.Lakshmi H Asst. Prof. B. E(ISE),M Tech(NIE)	)
16. Ms.Deepika K M Asst. Prof. B. E(ISE), M.Tech (CNE)(Ph.D	)
17. Ms.SumithraAmith Asst. Prof. B. E(CSE),M.Tech(CSE)	
18. Ms. Yashaswini H M Asst. Prof. B. E(CSE), M. Tech(CSE)	
19. Mr.Preetham N Asst. Prof. BE(CSE),M.Tech(CSE)	
20. Ms.Roopa R Asst. Prof. B. E(CSE),M.Tech(CSE)	
21. Mr.SanketSarangSalvi Asst. Prof. B. E(CSE),M.Tech(CNE)	
22. Mr.Rangavittalla S R Asst. Prof. B.E (ISE), M.Tech (CNE)	
23. Ms.Arathi Rao Asst. Prof. B.E (ISE), M.Tech (IT)	
24. Mr.Thimmaraju Asst. Prof. B.E (ISE), M.S (Nano)	
25. Ms.Navya C Asst. Prof. B.E (CSE), M.Tech (CNE)	

26.	MsTulasi Srinivas	Asst. Prof	B.E (CSE), M.Tech (CSE)
27.	Ms.Vani S	Asst. Prof	B.E (ECE), M.Tech (CNE)
28.	Mr Pramod Jain	Asst. Prof	B.E (ECE), M.Tech (CNE)
29.	Ms. Mrudula Shenoy	Asst. Prof	B.E (CSE), M.Tech (SE)
30.	Ms. Disha D N	Asst. Prof	B.E (CSE), M.Tech (CSE)
31.	Mr. Kiran B R	Asst. Prof	B.E (CSE), M.Tech (CSE)
32.	Mrs. Akshatha	Asst. Prof	B.E (CSE), M.Tech (CNE)

# 3. DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Sl.No	Name	Designation	Qualification
	Dr. H. C. Nagaraj	Principal	B. E.(ECE), M. E. (Commn
1.	Dr. Tr. C. Tvagaraj	Timoipui	Systems), Ph.D (IIT, Madras)
2.	Dr.S Sandhya	Prof. & Head	B.E(Ele), PhD (IISc)
3.	Dr. H S Prasantha	Prof.	B.E(ECE),M.Tech(EES), Ph.D
4	Prof. G. H. Sarma	Prof.	M. Tech (Elect. Devc.Tech.)
4.			(IIT,B'bay)
5.	Prof. MahaveeraSwamy	Prof.	B.E (Electro), M.Tech (Electro)
6.	Mr.SitaramYaji	Prof.	B.Tech(ECE), M.E (EE) IISc
7.	Dr. S L Pinjare	Prof.	PhD, IIT Madras
8.	Dr.Raghunandan	Prof.	M.Tech, Ph.D (IISC, Bangalore)
	Prof. Sanker Dasiga	Prof	B.Tech(Ele. Engg.), M.Tech
9.	2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		(Intg. Electro Circuits)

10.	Dr Rukmini T S	Prof	M.Sc, Ph.D
11.	Dr Lalitha Y S	Prof	M.E, Ph.D
12.	Ms.Smitha G Prabhu	Assoc. Prof.	B.E (EEE), M.Tech(VLSI)
13.	Mrs. Manjula B M	Assoc. Prof.	B. E.(ECE),M. Tech.(Electro) (Ph.D)
14.	Mr. Rajesh N	Assoc. Prof.	B. E.(ECE), M.Tech.(DEC),(Ph.D)
15.	Mrs. MadhuPatil Prakash	Assoc. Prof.	B. E.(ECE), M.Tech.(Digital Comm.) (Ph.D)
16.	Dr.Veda Sandeep Nagaraj	Assoc. Prof.	B.E(ECE), M.Tech (VLSI), Ph.D
17.	Mr.PrasannaPaga	Assoc. Prof.	B. E.(ECE), M.Tech (Ind.Elec) (Ph.D)
18.	Mrs. Sowmya Madhavan	Assoc. Prof.	B. E.(ECE), M.E.(Commn.), (Ph.D)
19.	Mrs.Naina R Karkal	Assoc. Prof.	B.E (ECE), M.Tech (VLSI)
20.	Mr.Shashidhar K S	Assoc. Prof.	B.E(ECE), M.Tech (I.E), (Ph.D)
21.	Mrs.Varsha Prasad	Assoc. Prof.	B.E(ECE),M.Tech (VLSI Design) (Ph.D)
22.	Mrs.Seema Sreekumar	Asst. Prof.	B.E (ECE), M.Tech(VLSI)
23.	Mrs.Deeksha R Shetty	Asst. Prof.	B.E (ECE), M.Tech(DC)
24.	Mrs.AyeshaSiddaqua	Asst. Prof.	B.E(ECE),M.Tech(Comm.Sys)
25.	Mrs.Rekha K Phadke	Asst. Prof.	B. E.(ECE), M. Tech.(Digital Comm.) (Ph.D)

26.	Mrs.Kushalatha M R	Asst. Prof.	B.E (ECE) M.Tech
27.	Ms.Pramodhini R	Asst. Prof.	B.E (ECE),M.Tech (DCN)
28.	Mrs.Bhuvaneshwari V M	Asst. Prof.	B.E(ECE),M.E (Comp. & Telecom) (Ph.D)
29.	Mr.Badarla Sri Pavan	Asst. Prof.	B.E (ECE), M.Tech (DC)
30.	Mr.Girisha G K	Asst. Prof.	B. E.(ECE), M. Tech.(VLSI Design) (PhD)
31.	Ms.Beena S Rai	Asst. Prof.	B.E (ECE).(M.Tech)
32.	Ms.Divya G	Asst. Prof.	B.E(ECE), M.Tech(DE)
33.	Ms.Lathakumari K R	Asst. Prof.	B.E (ECE), M.Tech
34.	Ms.Sowmya J	Asst. Prof.	B.E(ECE), M.Tech
35.	Ms.Deeba Lakshmi	Asst. Prof.	B.E (ECE),M.Tech (DCN)
36.	Ms.Shyalaja S	Asst. Prof.	B.E (ECE),M.Tech (VLSI)
37.	Mr.Rudresh K J	Asst. Prof.	B.E (ECE),M.Tech (DE)
38.	Mrs.Raji P	Asst. Prof.	B.Tech (Electr), M.Tech (DC)
39.	Mrs.Binu B Singh	Asst. Prof.	B.E(ECE), M.Tech(Electro), (Ph.D)
40.	Ms.Chaitra K N	Asst. Prof.	B.E(ECE), M.Tech(EC)
41.	Mr.Anandteerth S Mathad	Asst. Prof.	BE, MTech, (PhD)
42.	Mr.KannanT	Asst. Prof.	B.E., M.Tech (VLSI)
43.	Mr.Arun Kumar K	Asst. Prof.	B.E (ECE), M.Tech (VLSI)
44.	Ms Nithya	Asst Prof	B.E (ECE), M.Tech (VLSI)
45.	Ms. Prajna K B	Asst Prof	BE, MTech

46.	Ms. Rashmi R Kulakarni	Asst Prof	BE, MTech
47.	Ms. Savithri Hande	Asst Prof	BE, MTech
48.	Ms. Rekha S M	Asst. Professor	MTech
49.	Mr. Divyanshu	Asst. Professor	MTech
50.	Ms. Stuthi	Asst. Professor	MTech
51.	Mr. Somnath Singh	Asst. Professor	BE
52.	Ms. Munde Ramadevi	Asst. Professor	ВЕ

# 4. DEPARTMENT OF MECHANICAL ENGINEERING

Sl.No	Name	Designation	Qualification
1.	Dr.Sudheer Reddy J	Prof. & Head	B. E.(Mech), M.E (Mech.Engg.), Ph.D
2.	Dr. Kiran Aithal	Prof.	B. E.(Mech), M. E. (Machine Design), Ph.D
3.	Dr.P G Mukunda	Prof.	B. Sc. (Hons, Chem), M. Tech. (Ferrous Metallurgy), Ph. D
4.	Dr.Sekhar Majumdar	Prof.	B. E.(Mech), M.E (Mech.Engg.), Ph.D
5.	Dr. V R Kabadi	Prof.	B. E.(Mech), M.Sc(Engg.) (ME), Ph.D
6.	Dr. P. Balachandra Shetty	Prof.	B. E.(Mech), M. E.(Prod. Engg., Air Armt),Ph. D
7.	Dr. Madhusudhan	Prof.	B. E.(Mech), M. Tech.(Heat Power Engg.) Ph.D

	Dr. Desai Gowda H S	Prof.	B. E.(Mech), M. E. (Engg.Design)
8.	Di. Desai Gowda 113	1101.	Ph.D
9.	Dr Muralidhara B K	Prof.	BE, MTech, Ph.D
10.	Dr. S. Seetharamu	Prof.	BE, M.Tech (Foundry Technology)(IISc), PhD (Fracture Mechanics)(IISc)
11.	Prof. K. Srikantha Prabhu	Assoc. Prof.	B. Tech.(Mech), M. Tech. (Engg. Mgt.)
12.	Ms.Rashmi M V	Asst. Prof.	B. E.(Mech), (MBA)
13.	Mr.Ravi Prakash M	Assoc. Prof.	B. E.(Mech), M. Tech. (Thermal Pow.)
14.	Mrs.Smruti Rekha Sen	Assoc. Prof.	B. E.(Mech), M. Tech. (Mfg.Prod. & Sys) (Ph.D)
15.	Mr.Chethan K S	Asst. Prof.	B. E.(Mech), M.Tech (Thermal) (Ph.D)
16.	Mr.Hemanth Kumar N	Assoc. Prof.	B. E.(Mech), M.Tech (Mfg. Sc)
17.	Mr.Manjunath H N	Asst. Prof.	B. E.(Mech), M.Tech (Thermal) (Ph.D)
18.	Mr.Ramesh Babu N	Asst. Prof.	B. E.(Mech), M. Tech. (Machine Design) (PhD)
19.	Mr.Praveen Kumar S	Asst. Prof.	B. E.(Mech),M.Tech (Mfg. Sc ),(PhD)
20.	Mr.Arun Kumar G L	Asst. Prof.	B. E.(Mech), M.Tech. (Thermal) (Ph.D)
21.	Mr.Sunil Kumar H S	Asst. Prof.	B. E.(Mech), M. Tech. (Machine Design) (Ph.D)

	Ma Dada Noil M	A ast Dusf	B. E.(Mech), M. Tech.
22.	Mr.Rudra Naik M	Asst. Prof.	(Mechatronics),(Ph.D)
22	Mr.Pavan K N	Asst. Prof.	B. E.(Mech), M.Tech
23.		11000.1101.	(Thermal)(Ph.D)
24.	Mr.Praveen B A	Asst. Prof.	B. E.(Mech), M.Tech (CIM) (Ph.D)
25.	Ms.Krupa R	Asst. Prof.	B. E.(Mech), M.Tech (Thermal)
26	Mr.Shiv Pratap Singh	Asst. Prof.	B. E.(Mech), M.Tech (Machine
26.	Yadav	11550.1101.	Design) (PhD)
27.	Mr.B S Surendra	Assoc. Prof.	B. E.(Mech), M.Tech (Machine
21.	2000	110000111011	Tools)
20	Mr.Prashanth N	Asst. Prof.	B. E.(Mech), M.Tech (Prod. Engg &
28.	2,212,230,230,21	1 100 1 1 0 1 1	System Tech)
29.	Mr.Sachin B	Asst. Prof.	B. E.(Mech), M.Tech (CIM) (PhD)
30.	Mr.Rachith S N	Asst. Prof.	B. E.(Mech), M.Tech (Thermal)
21	Mr.Suresh K R Asst. Prof.	Asst. Prof.	B. E.(Mech), M.Tech
31.			(Manufacturing) (Ph.D)
22	Ms.Yashawini Sudarshan	Asst. Prof.	B. E.(Mech), M.Tech
32.	2.25, 2.65, 4.7, 2.2.	1 200 1 1 0 1 0	(Manufacturing Tools and Systems)
33.	Mr.Avinash L	Asst. Prof.	B. E.(Mech), M.Tech ( Machine
33.			Design)
2.4	Mr.Chethan S	Asst. Prof.	B. E.(Mech), M.Tech ( Machine
34.			Design)
25	Mr.Mahadeva Prasad	Asst. Prof.	B. E.(Mech), M.Tech (Machine
35.			Design)
25	Mr.Sriram Mukunda	Asst. Prof.	B. E.(Mech), MS (Automobile),
36.	WIF.STIFAIII WUKUNGA	A551. I IUI.	M.Tech (Mfg.Engg.) (Ph.D)

37.	Mr.Harish Kumar L	Asst. Prof.	B.E (ME), M.Tech (Thermal)
38.	Mr.Kotgi Kotresh	Asst. Prof.	B.E (ME), M.Tech (Machine Design)
39.	Ms.Niveditha	Asst. Prof.	B. E.(Mech), (M.Tech) (Thermal)
40.	Mr.Charan Kumar D	Asst. Prof.	B. E.(Mech),(M.Tech) (Thermal)
41.	Mr.Ganashyam Gore	Adjunct Faculty	B.E (Mech)
42.	Mr.Manikanta Reddy	Asst. Prof.	B. E.(Mech)
43.	Mr Nithin U Aithal	Asst. Prof.	BE, MTech
44.	Mr. Pramod S	Asst. Prof.	BE, MTech
45.	Mr Girish Prasad	Asst. Prof.	BE, MTech
46.	Mr Vikram Kedambadi Vasu	Asst. Prof.	BE, MTech

# 5. DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Sl.No	Name	Designation	Qualification
1.	Dr.H M Ravi Kumar	Prof. & Head	B.E (EEE), M. E. (Power Systems) Ph.D (IIT,Bombay)
2.	Dr.H L Suresh	Prof.	B.E, M.Tech, Ph.D
3.	Ms.Vasudha Hegde	Assoc. Prof.	B. E.(EEE), M.Tech (Comp.appl. & Ind.drv), (Ph.D)
4.	Ms. Veena S	Assoc. Prof.	B. E.(EEE), M.Tech (VLSI and Embedded Systems ) (Ph.D)
5.	Ms. Sridevi H R	Asst. Prof.	B. E.(EEE), M.Tech (Power Electronics) (Ph.D)

6.	Mr.Parthasarathy V	Assoc. Prof.	B. E.(EEE), M.Tech (Power Sys)(Ph.D)
7.	Ms Siridevi N C	Asst. Prof.	B.E (EEE), M.E (Contr & Instr)
8.	Mr.Ch V Ramesh	Asst. Prof.	B.E (EEE) M.Tech. (Power Electronics ) (Ph.D)
9.	Ms.Samanvitha N	Asst. Prof.	B.E(EEE) M.Tech (AutomT. & Robotics), (Ph.D)
10.	Ms.Sowmya Raman	Asst. Prof.	B.E (EE),M.Tech (Instru & Contr)
11.	Ms.Sujatha Shivashimpeger	Asst. Prof.	B.E (EEE),M.Tech (CAID)
12.	Mr.Yashaswi. K.C	Asst. Prof.	B.E (EEE), M.Tech (Med. Ele)
13.	Ms.Meenalochani	Asst. Prof.	B.E (EEE), M.Tech (PE)
14.	Mr.Sudeep Shetty	Asst.Prof.	B.E(EEE), M.E (PE)
15.	Mr.Nagaraj M J	Asst. Prof.	B.E (EEE), M.Tech (VLSI and Embedded Systems)
16.	Ms.Chaitra Hebbar J	Asst. Prof.	B.E (EEE), M.Tech
17.	Mr Anand S	Asst. Prof.	BE, MTech
18.	Ms Shruthi Gatade	Asst. Prof.	BE, MTech

# 6. **DEPARTMENT OF CIVIL ENGINEERING**

Sl.No	Name	Designation	Qualification
1.	Dr.Bharathi Ganesh	Prof. & Head	B.E(Civ), M.E(Stru), Ph.D(Stru)
2.	Col. B V Ramachandra	Prof.	B.E.
3.	Dr.Ramachandra Reddy	Prof.	M.Sc (Geology), Ph.D
4.	Dr.Praneesh R N	Prof.	B.E(Civ), M.Tech(Stru), Ph.D
5.	Dr.N Vidyavathi	Prof.	Ph.D (Env)

6.	Dr R Nagendra	Prof.	BE(Civil Engg), ME (Structures), Ph.D (Structural Engg)
7.	Prof. Rajkumar Pillai	Prof.	BE(Civil Engg), PGD in Business Management from Doncaster University UK
8.	Dr Durga Prasad	Prof.	B.E(Civ), M.Tech(Stru), Ph.D
9.	Mr.Vasudev M V	Assoc. Prof.	B.E(Civ), M.E (Stru)
10.	Mrs.Archana Nayak	Assoc. Prof.	B. E. (Civil), M. Tech.(Envon.l Engg.)
11.	Mrs.Prathima G	Assoc. Prof.	B.E (Civ), M.Tech (Hgh.Tech) (Ph.D)
12.	Dr Shiju Easo John	Assoc. Prof.	B.E (Civ), M.Tech (ENV) Ph.D
13.	Mr.Muralidhara H	Asst. Prof.	B.E (Civ), M.Tech (Hgh.Tech)
14.	Mrs.Rashmi H R	Asst. Prof.	B.E (Civ), M.Tech (Env. Sci) (Ph.D)
15.	Mr.Vinay M	Asst. Prof.	B.E (Civ), M.Tech (Stru.Engg)
16.	Mr.Jairaj C	Asst. Prof.	B.E (Civ), M.Tech (Geo.Tech)(Ph.D)
17.	Mr.Kiran Umachagi	Asst. Prof.	B.E (Civ), M.Tech (Stru)
18.	Mrs.Lakshmipriya K V	Asst. Prof.	B.E(Civ), M.E (Geo. Tech)
19.	Ms.Umashankar Patil G H	Asst. Prof.	B.E (Civ),M.E (Stru)
20.	Mrs.Shwetha K G	Asst. Prof.	B.E (Civ),M.Tech(Stru Engg)
21.	Mr.Shreyas A V	Asst. Prof.	B.E(Civ), M.Tech (Stru)(Ph.D)
22.	Mr.Prashanth S P	Asst. Prof.	B.E(Civ), M.Tech (Stru)(Ph.D)
23.	Mr.Suraj Nayak U	Asst. Prof.	B.E(Civ), M.Tech (Stru)
24.	Mrs.Shruthi B S	Asst. Prof.	B.E(Civ), M.E (Earthqu)
25.	Mr.Sachin B	Asst. Prof.	B.E (Civ)
26.	Dr Santhosh L G	Asst. Prof.	B.E (Civ), M.Tech (RS& Gls) (Ph.D)
27.	Mr Mahesh Kumar C L	Asst. Prof.	B.E(Civ), M.Tech (Stru)
28.	Mr Vishwachethan	Asst. Prof.	B.E (Civ), MTech (Geo)
29.	Mr Nanjundi Prabhu	Asst. Prof.	B.E (Civ), MTech (Water Resource Engg)
30.	Mr Divith Kumar R P	Asst. Prof.	B.E (Civ), MTech (Struc)

31.	Ms Varsha Vishwanth	Asst. Prof.	B.E (Civ), MS (Geo Technology)
32.	Ms. Shoba L	Asst. Prof.	B.E (Civ), MTech (Struc)
33.	Mrs Bharti Prasad	Asst. Prof.	B.E (Civ), MTech (Water Resource Engg)

## 7. DEPARTMENT OF AERONAUTICAL ENGINEERING

Sl.No	Name	Designation	Qualification
			B.E (Mech),MSc (Engg) IISc, Ph.D
1.	Dr.S Venkateswaran	Prof. & Head	IISc, Dr.(Techn.)TU-
			Wien(Vienna, Austria)
			Ph.D., Aerospace Engineering (IISc),
2.	Dr. Kishore Brahma	Prof.	M.E., Aerospace Engineering( IISc,) B
			.Tech, Aeronautical Engineering
	Mr.Mahendra M A	Asst. Prof.	B.E(Mech), M.Tech (Aero),(PhD-
3.	WII.Manendia Wi A	Asst. Fior.	VTU)
4.	Mr.Nishant Desai	Asst. Prof.	B.E (Mech), M.Sc(Engg) (Aero)(UK)
	Mr.Harish H V	Asst. Prof.	B.E (Mech), M.Tech
5.			(Thermal)),(PhD-VTU)
6.	Mr. Vinayaka	Asst. Prof.	B.E(Mech), M.Tech
			B.E(Mech), M.Tech(Thermal),(PhD-
7.	Mr.Shrikanth H V	Asst. Prof.	VTU)
			,
8.	Mr.Siddalingappa.P.K	Asst. Prof.	B.E(Mech), M.Tech(Aero)
9.	Mr.Vinod L	Asst. Prof.	B.E(Mech), M.Tech (Aero)
10.	Mr.Venkatesh Kusnur	Asst. Prof.	B.E(Mech), M.Tech (Aero)
11.	Mr.Prashant Manvi	Asst. Prof.	B.E(Aero), M.Tech (Aero)
12.	Mr.Sridhar K	Asst. Prof.	B.E(Aero), M.E (Aero)

13.	Mr Santhosh Hosur	Asst. Prof.	BE, MTech

# 8. DEPARTMENT OF APPLIED SCIENCES 1. MATHEMATICS

Sl.No	Names	Designation	Qualification		
1.	Dr.Indira R	Prof. & Head	B.Sc, M.Sc.(Maths), Ph.D		
2.	Dr. Revathi B R	Assoc. Prof.	B. Sc., M. Sc. (Maths),Ph.D		
3.	Dr. Dhananjaya Murthy B V	Assoc. Prof.	B. Sc., M. Sc. (Maths) Ph.D		
4.	Mrs. Sumashree P	Asst. Prof.	B. Sc., M. Sc. (Maths)		
5.	Dr. Chandrakala S B	Asst. Prof.	B.Sc., M. Sc. (Maths) Ph.D		
6.	Mr.Jagadeesha S	Asst. Prof.	B.Sc, M.Sc (Maths)M.Phil,(Ph.D)		
7.	Dr.Padmavathi R	Asst. Prof.	B.Sc, M.Sc (Maths), Ph.D		
8.	Ms.Rashmi K R	Asst. Prof.	B.Sc, M.Sc (Maths)(Ph.D)		
9.	Ms.Sushma Puranik	Asst. Prof.	B.Sc, M.Sc (Maths) (Ph.D)		
10.	Ms.Sreekala C K	Asst. Prof.	B.Sc, M.Sc (Maths)(Ph.D)		
11.	Mr.Sreegourav K R	Asst. Prof.	B.Sc, M.Sc (Maths), (Ph.D)		
12.	Ms.Pallavi G	Asst. Prof.	B.Sc, M.Sc (Maths) (Ph.D)		
13.	Ms.Swathi H R	Asst. Prof.	B.Sc, M.Sc (Maths)		
14.	Mr. Pramod S	Asst. Prof.	B.Sc, M.Sc (Maths)		
2.CHEMISTRY					
15.	Dr. Srilatha Rao	Assoc. Prof. & Head	B. Sc., M. Sc. (Chem), Ph. D		

16.	Dr M.S. Thakur	Prof.	M.Sc , PhD
17.	Ms.Sowmyashree A S	Asst. Prof.	B.Sc, M.Sc(Chem)
18.	Dr.T Aravind	Assoc. Prof.	B.Sc, M.Sc(Chem) Ph.D
19.	Ms.Sadhana H Upadhaya	Asst. Prof.	B.Sc, M.Sc (Chem)
20.	Ms.Ganavi H S	Asst. Prof.	B.Sc, M.Sc(Chem)
21.	Dr.Raghu M S	Asst. Prof.	B.Sc, M.Sc (Chem) Ph.D
		3.PHYSICS	
	Du Chaile Ab Jul Cassa	Assoc. Prof &	M.C. M.Dkil Dk.D
22.	Dr.Sheik Abdul Sattar	Head	M.Sc, M.Phil, Ph.D
23.	Mrs. Jyothi G B	Assoc. Prof.	B. Sc., M. Sc. (Physics), (Ph. D)
24.	Mrs. Hitha B Shetty	Assoc. Prof.	B. Sc., M. Sc. (Phy) (Ph.D)
25.	Mrs.Kavitha Kamath	Asst. Prof.	B.Sc M. Sc. (Phy)
26.	Mr.Shivaprasad H B	Asst. Prof.	B.Sc, M.Sc (Phy), M.Tech (Material Engg.)
27.	Mr.Ashok Reddy G V	Asst. Prof.	B.Sc,M.Sc (Phy),M.Phil (Ph.D)
28.	Ms.Jyothi Gupta	Asst. Prof.	B.Sc, M.Sc (Phy)
29.	Ms.Chaitra J C	Asst. Prof.	B.Sc, M.Sc (Phy)
30.	Dr.Jeevan Kumar Padarti	Asst. Prof.	B.Sc, M.Sc PhD
31.	Dr.Habibuddin Shaik	Asst. Prof.	M.Sc,(Phy), PhD
32.	Ms.Bhavya R	Asst. Prof.	M.Sc (Phy)
	ı	4. HUMAN	TTIES
33.	Dr. Neha Jain	Assoc. Prof &	MA, M.Phil, PGDMCJ, MBA, Ph.D

		Head	
34.	Mrs.Akshatha Shetty	Asst. Prof.	B.Sc, M.Sc (Env.Sci)
35.	Dr.Vandana Rai	Asst. Prof.	BA, BEd, MA, M.Phil,, Ph.D
36.	Mr.Srinivas A	Asst. Prof.	B.A.,B.Ed,M.A (English), M.Ed (Ph.D)
37.	Dr.Varalaxmi Naik	Asst. Prof.	B.A, M.A, M.Phil , Ph.D
38.	Mrs.Divya Dhara	Asst. Prof.	M. A. (Litt.)

## 9. DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

Sl.No	Names	Designation	Qualification
1.	Dr.Harish Babu S	Prof & Head	B.Com.,MBA (Finance & Mktg), Ph.D
2.	Dr.Janakiraman	Prof.	MBA,Ph.D (Management)
3.	Dr.Jayasmita Rath	Assoc. Prof.	B.A, M.A, Ph.D
4.	Dr.Senthil Kumar R	Assoc. Prof.	B.Sc., PGDCA MBA (Mkt'g & HR) M.Phil,Ph.D
5.	Mr.N.Kiran Kumar	Assoc. Prof.	B.A., M.A.,MBA.(Mkt'g & HR), M.Phil, (Ph.D)
6.	Ms.Shilpa Ajay	Asst. Prof.	B.Com, MBA (HR),PGDMM, (Ph.D)
7.	Ms.Nayana S Desai	Asst. Prof.	BBM, MBA (Mktg)
8.	Ms.Malini T N	Asst. Prof.	BBM, MBA (HR &Mktg), (Ph.D)
9.	Ms.Jyothi G	Asst. Prof.	B.Com,MBA(Fin)
10.	Ms.Sumangala	Asst. Prof.	BBM(HR), MBA (HR)
11.	Mr Pavan G Kulakarni	Asst. Prof.	B.Sc, MBA, (Ph.D)
12.	Mr Devarth T S	Asst. Prof.	B.E, MBA, UGC-NET

13.	Ms. Bhanurekha Reddy	Adjunct Prof.	MBA
14.	Mrs. Deepika Rani K	Asst. Prof.	MBA

## 10. DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

Sl.No	Name	Designation	Qualification
1	Dr.Prasad Naik Hamsavath	Prof. & Head	MCA, M.Tech,
1.		11011 00 11000	(CSE),Ph.D
2.	Mrs.Geetha Priyadarshini	Assoc. Prof.	B. E. (CSE),MCA
2	Ms.Joy Lavanya	Asst. Prof.	B.E. (EC), M.S. (Medical
3.	1115.0 Oy Davanya	71950. 1101.	Software)
4.	Ms.Deepthi Shetty	Asst. Prof.	B.E. (CSE), M.Tech
4.	1		(CSE)
5.	Ms.Sowmya H N	Asst. Prof.	B.Sc, MCA
6.	Mr.Lakshminarayana B N	Asst. Prof.	B.Sc, MCA
7.	Mr.Mariyon Richard	Asst. Prof.	BCA, MCA
8.	Ms.Sushitha S	Asst. Prof.	B.Sc, MCA
9.	Mr.A V Navneeth	Asst. Prof.	B.Sc, MCA,M.Phil
10.	Ms.Vijayalakshmi Katti	Asst. Prof.	BCA,MCA
11.	Ms.Sowmya K	Asst. Prof.	BCA, MCA
12.	Ms.Smriti Rai	Asst. Prof.	B.Com, MCA
13.	Ms.Shwetha Dhareswar	Asst. Prof.	BSc, MCA

## 11. LIBRARY

1	Mr.Gangadhar K C	Librarian

2	Ms.Chethana V	Asst. Librarian
3	Mrs. Prathibha Naganagoudar	Asst. Librarian
5	Mr. Madhu S B	Asst. Librarian
6	Mr Arun Kumar T L	Asst. Librarian
7	Ms Kavya N	Asst. Librarian
8	Mrs. Vijayalakshmi Jayaram K	Library Assistant

## SCHOLARSHIP DETAILS

Sl.No	Name Of The Scholarship	Eligibility	To apply - visit the following websites
1.	SC/ST Fee Concession Scholarship	Only For <i>SC/ST</i> Such of the Students whose parents annual income is above 2.5 Lakhs  Such of the students whose parents annual income is below 2.5 lakhs	sw.kar.nic.in
2.	Back Ward Class Fee Concession Scholarship	OBC Students (Cat 1, 2A,3A,3B) whose Parents Annual Income is Below 1.0 Lakhs	Karepass.cgg.gov.in
3.	Minority students Scholarship	Minority Students (Muslims, Christians, Buddhists, Jains and Parsis)	http://www.momaschola rship.gov.in/
4.	Jindal Merit Scholarship	Merit Students	www.jindalscholarship.c om
5.	Prathibha Puraskar scholarship	Merit Students	Backwardclass.kar.nic.in
6.	Kittur Rani Channamma Scholarship	Only Meritorious Girl Students	http://www.dce.kar.nic.i

7.	Scholarship provided by	For Merit Students from low	Application to be
	Municipal Corporation	income groups	collected from their
			respective Municipal
			Corporation Offices

## STUDENTS' COUNCIL

## **Constitution of Students Council**

A Students Council is formed every year, under two faculty advisors, who will facilitate the smooth functioning of co curricular and extracurricular activities of the college. The HODs will nominate two students (one boy and one girl) from each class. In turn, among these representatives, the college will nominate Office Bearers for the Students' Council.

The selection is based on the following criteria:

- Students who have good academic record and cleared all the courses without any backlog
- Students who have involved in co-curricular activities and possess leadership qualities. .

Sl. No	Position
1	Convener of Student's Council (Final Year Student) along with two <b>F</b> aculty
	Advisors
2	Joint Convener of Student's Council (Pre Final Year Student )
3	Convener of Anaadyanta (Final Year Student) along with one Faculty Advisor
4	Joint Convener of Anaadyanta (Pre Final Year Student)
5	Coordinator for Sports Activities (Final Year Student) along with One Faculty
	Advisor
6	Coordinator for Placement Activities (Final Year Student) along with two Faculty
	Advisors
7	Convener for Cultural Activities (Final year Student) along with two Faculty
	Advisors
8	Joint Convener of Cultural Activities ( Pre Final year student )

## COMMITTEES & COMMITTEE INCHARGE

Sl No	Committee	Committee In charge
1.	Anti Ragging Committee	Dr H M Ravi Kumar
1	Anti Ragging Squad	Dr Sanjay H A
2	Anti Sexual Harassment Committee	Dr Nalini N
	Anti Sexual Harassment Squad	Dr Srilatha Rao
3	Grievance Redressal Committee	Prof K A Ranganatha Setty
4	Mal Practice Enquiry Committee	Dr H C Nagaraj
5	Internal Quality Assurance Cell	Dr Jharna Majumdar
6	Parents Relation Centre	Mrs. Sony Malli and
		Dr Varalaxmi Naik
7	Mentors	Every 15 students will be
		allocated one mentor
8	SC/ST and BCM Cell	Dr Varalaxmi Naik
9	Committee on Women's Security, Welfare and	Dr Vidyavathi
	Grievance Redressal	
10	Literary Committee	Dr Sekhar Majumdar
11	Cultural Committee	Dr Nalini N
12	Students Council	Dr. H. C. Nagaraj, Principal
13	Library Committee	Prof. Mahaveera Swamy
14	Research Council	Dr. L. M. Patnaik
15	Academic and Administration Audit Committee	Prof K Sudha Rao

# **COURSE CONTENT, SCHEME OF TEACHING AND EXAMINATION**

## FOR I AND II SEMESTER B.E. PROGRAMME (AUTONOMOUS SCHEME)

2017 - 2018

(COMMON TO ALL BRANCHES)

SEMESTER: I Physics Group

	1									<u>J</u> ~ ~	_	
S1	Course	Course Title	Course	rse Teaching Teaching Hours			Hours/w	s/week E:		Examination		Credits
No	Code		Type	Dept.	L#	T <sup>#</sup>	P <sup>#</sup>	S <sup>#</sup>	CIE*	SEE**	Total	Credits
1	17MAT11	Engineering Mathematics – I	BS^	MAT	4	1			50	50	100	4.5
2	17PHY12	Engineering Physics	BS^	PHY	4	1			50	50	100	4.5
3	17CIV13	Engineering Mechanics	EC <sup>\$</sup>	CV	4	1			50	50	100	4.5
4	17EME14	Elements of Mechanical Engineering & Workshop practice	EC <sup>\$</sup>	ME	4		2		50	50	100	5.0
5	17ELE15	Basic Electrical Engineering	EC\$	EEE	4	1	1		50	50	100	5.0
6	17PHL16	Engineering Physics Lab	BS^	PHY			3		50	50	100	1.5
7	17CIP17	Constitution of India & Professional Ethics	Hu <sup>@</sup>	HUM	2				100 <sup>+</sup>	-	-	_
8	17ENG18	Communicative English	Hu <sup>@</sup>	HUM	2				100 <sup>+</sup>	-	-	-
							Т	тотаі	300	300	600	25.0

SEMESTER: I Chemistry Group

	DD I DIC. I										Chempu	y Group
Sl	Course	Course Title	Course	Teaching	Tea	aching F	Hours/we	eek	]	Examinati	on	Credits
No	Code	Course Title	Type	Dept.	$L^{\#}$	$T^{\#}$	P <sup>#</sup>	S <sup>#</sup>	CIE*	SEE**	Total	Credits
1	17MAT11	Engineering Mathematics –I	BS^	MAT	4	1			50	50	100	4.5
2	17CHE12	Engineering Chemistry	BS^	CHE	4	1			50	50	100	4.5
3	17CCP13	Computer Concepts & C Programming	EC <sup>\$</sup>	CS/IS	4	1			50	50	100	4.5
4	17CED14	Computer Aided Engineering Drawing	EC <sup>\$</sup>	ME	2		4		50	50	100	4.0
5	17ELN15	Basic Electronics Engineering	EC <sup>\$</sup>	ECE	4	1			50	50	100	4.5
6	17CPL16	Computer Programming Lab	EC <sup>\$</sup>	CS/IS			3		50	50	100	1.5
7	17CHL17	Engineering Chemistry Lab	BS^	CHE			3		50	50	100	1.5
8	17CIV18	Environmental Studies	Hu <sup>@</sup>	HUM	2				100 <sup>+</sup>	-	-	-
							Т	OTAL	350	350	700	25.0

^BS- Basic Science, \$EC-Engg.Core, @Hu-Humanities,\*Continuous Internal Evaluation, \*\* Semester End Examination, #L-Lecture, T-Tutorial, P-Practical, S-Self Study

Note: One hour of Lecture = 1 Credit,

Two hours of Tutorials = 1 Credit, Two hours of Practical's = 1 Credit

<sup>+</sup>Non-credited Audit course, not considered for calculating the GPA and vertical promotion. However without securing the pass grade student will not be eligible for the award of the degree

SEMESTER: II

Sl	Course	Course Title	Course	Teaching	Те	aching F	Hours/w	eek	I	Examinatio	on	Cua dita
No	Code	Course Title	Type	Dept.	L#	T <sup>#</sup>	P <sup>#</sup>	S <sup>#</sup>	CIE*	SEE**	Total	Credits
1	17MAT21	Engineering Mathematics – II	BS^	MAT	4	1			50	50	100	4.5
2	17PHY22	Engineering Physics	BS^	PHY	4	1			50	50	100	4.5
3	17CIV23	Engineering Mechanics	EC <sup>\$</sup>	CV	4	1			50	50	100	4.5
4	17EME24	Elements of Mechanical Engineering & Workshop practice	EC <sup>\$</sup>	ME	4		2		50	50	100	5.0
5	17ELE25	Basic Electrical Engineering	EC <sup>\$</sup>	EEE	4	1	1		50	50	100	5.0
		ů ů			4	1	1					
6	17PHL26	Engineering Physics Lab	BS^	PHY			3		50	50	100	1.5
7	17CIP27	Constitution of India & Professional Ethics	Hu <sup>@</sup>	HUM	2				100 <sup>+</sup>	-	-	-
8	17ENG28	Communicative English	Hu <sup>@</sup>	HUM	2				100 <sup>+</sup>	-	-	-
							Т	OTAL	300	300	600	25.0

SEMESTER: II

Chemistry Group

S1	Course	Common Title	Course	Teaching	Tea	aching F	Hours/we	eek	I	Examinati	on	C 1'4 -
No	Code	Course Title	Type	Dept.	$L^{\#}$	$T^{\#}$	$P^{\#}$	S <sup>#</sup>	CIE*	SEE**	Total	Credits
1	17MAT21	Engineering Mathematics – II	BS^	MAT	4	1			50	50	100	4.5
2	17CHE22	Engineering Chemistry	BS^	CHE	4	1			50	50	100	4.5
3	17CCP23	Computer Concepts & C Programming	EC <sup>\$</sup>	CS/IS	4	1			50	50	100	4.5
4	17CED24	Computer Aided Engineering Drawing	EC <sup>\$</sup>	ME	2		4		50	50	100	4.0
5	17ELN25	Basic Electronics Engineering	EC <sup>\$</sup>	ECE	4	1			50	50	100	4.5
6	17CPL26	Computer Programming Lab	EC <sup>\$</sup>	CS/IS			3		50	50	100	1.5
7	17CHL27	Engineering Chemistry Lab	BS^	CHE			3		50	50	100	1.5
8	17CIV28	Environmental Studies	Hu <sup>@</sup>	HUM	2				100 <sup>+</sup>	-	ı	-
							Т	OTAL	350	350	700	25.0

<sup>^</sup>BS- Basic Science, \$EC-Engg.Core, @Hu-Humanities,\*Continuous Internal Evaluation, \*\* Semester End Examination, #L-Lecture, T-Tutorial, P-Practical, S-Self Study

**Note:** One hour of Lecture = 1 Credit,

 $Two\ hours\ of\ Tutorials=1\ Credit,$ 

Two hours of Practical's = 1 Credit

<sup>+</sup>Non-credited Audit course, not considered for calculating the GPA and vertical promotion. However without securing the pass grade student will not be eligible for the award of the degree

## **ENGINEERING MATHEMATICS - I**

Course Code : 17MAT11 Credits : 4.5 Hours/Week : 4+1+0 (L+T+P)**CIE Marks** : 50 Total hours **SEE Marks** : 50 : 65 Exam Hours : 03 **Course type** : Basic Sc.

## **Expected Course outcomes:**

- 1. Students will be able to find nth order derivatives in Cartesian and polar form and use the same to polar curves and Taylor series
- 2. Students will be able to differentiate functions with several variables and will be able to apply same to optimization
- 3. Students will be able to integrate functions of two and three variables and apply the concepts to find area and volume and also special functions
- 4. Students will be able to differentiate vector functions and apply the same for physical situations like finding flux, divergence, rotation etc
- 5. Students will be able to use least square methods and find the best fitting curves for given data.

Unit 1 10 hours

Polar curves, angle between tangent and radius vector, angle of intersection, pedal equation, derivatives of arc, radius of curvature.

Successive differentiation – nth derivative of standard functions, Leibnitz rule, Taylor's and Maclaurin series(without proof), L'Hospitals rule (statement only), Indeterminate forms using L'Hospitals rule – problems

Unit 2 10 hours

Partial derivatives, Homogeneous function, Euler's theorem, Total derivative, Implicit and composite function, Jacobian, Maxima and Minima for function of two variables, differentiation under integral sign- problems

Unit 3 10 hours

Reduction formula  $\int \sin^n x dx$ ,  $\int \cos^n x dx$  and  $\int \sin^m x \cos^n x dx$ , for multiple integrals - double and triple integration, application to find area and volume. Gamma and Beta functions- problems

Unit 4 10 hours

Differentiation of vectors, velocity and acceleration, Gradient, divergence and curl of a vector, solenoidal and irrotational vectors, Laplacian, vector identities, Curvilinear coordinates: Representation of vectors in cylindrical and spherical coordinates

Unit 5 12 hours

Curve fitting using least square method, straight line, parabolic and exponential curves, Regression lines, correlation, rank correlation, multiple linear regression, nonlinear regression.

#### **Text Books:**

- 1. Higher Engg. mathematicsby Dr. B S Grewal, 42<sup>nd</sup> Edition
- 2. Advanced Engg. Mathematics by Erwin E Kreyszig, 8<sup>th</sup> edition, Wiley.

## **Reference Books:**

- 1. Mathematics for science students by Louis Lyons, Cambridge university press, 2005
- 2. Vector calculus by P C Matthews, Springer, 2005

## **Assessment Method:**

#### CIE:

- 1. Three internals tests (each 30 marks) are conducted, average of best two tests marks will be considered.
- 2. Tutorials to be conducted for each topic for 10 marks.
- 3. Quiz/assignment based on practical application of differentiation and integration for 10 marks

## SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit.

					I	Program	Outcome	S				
	1	2	3	4	5	6	7	8	9	10	11	12
CO1	3	2										
CO2	3	2										
CO3	2	2	1									
CO4	2	2	1									
CO5	3	2	1									
CL	3	2	1									

## **ENGINEERING MATHEMATICS - II**

**Course Code** : 17MAT21 Credits : 4.5 Hours/Week **CIE Marks** : 4+1+0 (L+T+P): 50 : 50 **Total hours** : 65 **SEE Marks** Exam Hours : 03 : Basic Sc. Course type

#### **Expected Course outcomes:**

- Students will be able to solve ordinary and partial differential equations using different analytical methods.
- 2. Students will be able to solve transcendental and system of equations arising in engg. problems
- 3. Students will be able to model physical situations in terms of differential equations and solve them analytically.
- 4. Students will be able to use concept of differentiation and integration of complex functions to find transformations, poles and residues.
- 5. Students will be able to find the Eigen values and eigen vectors for given matrix and use the same for engg. problems

Unit 1 10 hours

**Differential equations**: Introduction of differential equations, recapitulation of variable separable and linear forms, Exact and equations reducible to these forms, Higher order linear differential equations with constant coefficients – finding complementary function and particular integral, Cauchy and Legendre equations, simultaneous equations, Method of variation of parameters.

11.11, 11.12, 13.4, 13.6, 13.8, 13.9, 13.11 (text book 1)

Unit 2 10 hours

**Series solution of ODE and applications:** Singularities, series solution by Frobenious method, Bessel equation, Solution of Bessel equation, Bessel function, Properties Legendre polynomials and Rodrigues formula Applications – Growth and decay, mixing problem, Newton's law of cooling, LC, LR and LCR circuits. 16.4, 16.5, 16.8, 16.11, 16.14, 12.5, 12.6, 12.8, 12.9, 14.2, 14.5. (Text book 1)

Unit 3 10 hours

**Partial Differential equations**- formation, separation of variables method, solution of Wave, heat and Laplace equations.

## Calculus of complex functions

Functions of complex variables, Analytic function, construction of analytic functions using CR equations, bilinear transformation, Laurent's series, Complex integration using Cauchy's integral formula 17.2, 17.4, 17.5, 17.9, 18.2, 18.4, 18.5, 18.7(text book 1) 20.3, 20.4, 20.5, 20.6, 20.8(4), 20.12, 20.13, 20.14, 20.16(3), 20.18, 20.19(text book 1)

Unit 4 10 hours

Linear programming- Basic concepts, Simplex and dual simplex method, M- method

Nonlinear programming- Single variable problems, local and global optima, sequential search, Fibbonocci search.

Unit 5 12 hours

**Linear algebra** -Rank of a matrix by reducing to echelon form, Normal form, Inverse of a matrix, Solution of linear system – Guass elimination method, Gauss Siedel method

Eigen values and Eigen vectors - Caley - Hamilton theorem, Gerschgorin theorem to obtain bound of Eigen values, Properties of Eigenvalues.

#### **Text Books:**

- 1. Higher Engg. mathematics by Dr. B S Grewal, 42<sup>nd</sup> Edition
- 2. Advanced Engg. Mathematics by Erwin E Kreyszig, 8<sup>th</sup> edition, Wiley.

#### Reference Books:

- 1. Differential equations by Shepley Ross, 3<sup>rd</sup> edition, Wiley, 2004
- 2. Theory and functions of a complex variable by Shanti Narayan, S Chand, 2001
- 3. Introduction to Partial differential equations by K Sankara Rao, PHI, 2004
- 4. Theory and problems of Complex variables, Murray R Spiegel, Schaum's outline series, Macgrawhill, 1981
- **5.** Numerical methods (for scientific and engg. Computation) by M K Jain, S R K Iyengar, R K Jain, 6<sup>th</sup> edition, New Age, 2012

#### **Assessment Method:**

#### CIE:

- 1. Three internals tests (each 30 marks) are conducted, average of best two tests marks will be considered.
- 2. Tutorials for 10 marks.
- 3. Quiz/assignment based on practical application of differentiation and integration for 10 marks

## SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit.

					]	Program	Outcome	s				
	1	2	3	4	5	6	7	8	9	10	11	12
CO1	3	2										
CO2	3	2	1									
CO3	3	2	1									
CO4	3	2	1									
CO5	3	2	1									
CL	3	2	1									

## **ENGINEERING PHYSICS**

**Course Code** : 4.5 : 17PHY12/22 Credits Hours/Week : 4+1+0 (L+T+P)**CIE Marks** : 50 **Total hours** : 65 **SEE Marks** : 50 Exam Hours : 03 Course type : Basic Sc.

## **Expected Course outcomes:**

Students will be able to

- 1. Describe & analyze the physical optical phenomena 'Interference in thin films' & 'Diffraction' and their applications.
- 2. Explain the generation of LASER beam, Signal Propagation through Optical Fibers and their applications in the different fields
- 3. Illustrate the characteristic properties and their applications of Dielectrics, Semiconducting materials and thermoelectric materials.
- 4. Analyze the discrepancy between classical estimates and laboratory observations of physical properties exhibited by materials at sub atomic level.
- 5. Describe MEMs and their applications.

Unit 1 10 hours

**Interference:** Introduction, Interference in thin films by reflection, Wedge shaped film, Newton's rings and problems.

**Diffraction:** Introduction, Fraunhofer diffraction at Single slit (Qualitative analysis), N-slit diffraction, Diffraction grating, Rayleigh's criterion for resolving power, Resolving power of grating, applications of grating, problems.

Unit 2 10 hours

**Lasers:** Introduction , Basicconcepts(absorption, spontaneous emission and Stimulated emission)Einstein coefficients and their relations, Population inversion, Lasing action, - Characteristicsof Lasers Working principle and components of  $CO_2$  laser and Semiconductor Laser, Applications of Laser in Industry, medicine, defense and Holography. Problems.

**Fiber Optics:** Introduction,Basic structure of optical fiber, Principle of optical fiber - Acceptance angle, acceptance cone and Numerical aperture - Types of optical fibers (Based on Material, Refractive index and Mode guiding) - Attenuation -Advantages and disadvantages of Optical fibers - Fiber optic Communication system - Fiber optic sensors, problems.

Unit 3 10 hours

**Thermoelectricity:** Seebeck effect, Peltier effect, Thomson effect, Total e.m.f. in a thermocouple power - Thermoelectric diagrams, Applications.

**Dielectric Properties:** Dielectric constant - polarization - Polarizability - Internal field - Clausius -Mossotti equation - Types of Polarization: Orientation, Ionic and Electronic Polarization- Dielectric loss- Classification of Dielectrics: Linear and Non-linear dielectrics, Tunable dielectrics, Piezo Electric transducers and its applications

Unit 4 10 hours

#### Basics of Quantum mechanics and electrical conductivity in metals

**Quantum Mechanics:** Introduction, Wave particle dualism, de-Brogile hypothesis, matter waves and their characteristic properties, Phase velocity, Group velocity and relations between phase velocity, group velocity and particle velocity- Schrodinger Time Independent wave equation – Eigen values and Eigen functions, Physical significance of wave function - Particle in a box (one dimensional), problems.

**Free electron theory of Metals:** Classical free electron theory –drawbacks- Quantum free electron theory – Fermi-Dirac distribution function and its dependence on temperature - Heat capacity and electrical conductivity through quantum considerations, problems.

**Introduction to Quantum Computing:** Introduction, Classical bit versus Quantum bit (Qubit), Physical realization of Qubits, Quantum Gates

Unit 5 12 hours

**Semiconductor Physics:** Introduction —carrier concentration and position of Fermi level in intrinsic semiconductors — Intrinsic conductivity and its Temperature dependence, extrinsic semiconductors (Qualitative analysis) — Biasing and breakdown mechanisms of PN junction — Hall Effect and its applications, problems.

**MEMS**: Introduction to MEMs, working Principle, Sensors-Acoustic sensor, optical sensor, pressor sensor, Actuators- actuation by thermal forces, electrostatic forces, shape memory alloys, electrostatic forces. Applications of MEMs-Micro grippers, Micro motors, Micro accelerometers.

#### **Text Books:**

- 1. Solid State Physics, R. J. Singh, Pearson Education India, 2012 [Unit:II, III, IV & V]
- 2. Optics, Ajay Ghatak, Mc Grawhill Education (2009) [Unit-I]
- 3. MEMs and Microsystems Design and Manufacture, Tai-Ran HSU, Tata Mc Graw-Hill edition (2002)

## **Reference Books:**

- 1. Semiconductor Physics and Devices: Basic Principle, Donold A Neamen 4<sup>th</sup> Edition, Mc Graw Hill, NewYork (2012).
- 2. Principles Of Engineering Physics 1, Md N Khan S Panigrahi, Cambridgr University Press India 2017.
- 3. Introduction to Solid State Physics" by Charles Kittle, Willey India Pvt.Ltd., Seventh Edition (2008)
- 4. Engineering Physics, V Rajendran Tata McGraw Hill (2011)
- 5. Quantum Computing, A Gentle Introduction, Eleanor G. Rieffel, Wolfgang Polak, Wolfgang H. Polak MIT Press (2014)
- 6. Springer Handbook of Lasers and Optics, Frank Träger, Springer (2012)
- 7. Introduction to Optics, Frank L Pedrotti, Leno M Pedrotti, Leno S Pedrotti, Pearson Education India, (2016)
- 8. Solid State Physics, S.O. Pillai, New age Publications (2010).

## **Assessment Method:**

#### CIE:

- 1. Three internals tests (each 30 marks) are conducted, average of best two tests marks will be considered.
- 2. Assignments/ Surprise tests /Oral presentation 10 Marks

3. Tutorials - 10Marks

#### SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit.

					I	Program	Outcome	S				
	1	2	3	4	5	6	7	8	9	10	11	12
CO1	3	2								1		
CO2	3	2								1		
CO3	3									1		
CO4	3	2								1		
CO5	3									1		
CL	3	2								1		

## **ENGINEERING MECHANICS**

 Course Code
 : 17CIV13/23
 Credits
 : 4.5

 Hours/Week
 : 4+1+0 (L+T+P)
 CIE Marks
 : 50

 Total hours
 : 65
 SEE Marks
 : 50

Exam Hours : 03 Course type : Engg. Core

#### **Expected Course outcomes:**

1. Describe the fundamentals of Engineering Mechanics.

- 2. Analyze the system of forces using principles of mechanics.
- 3. Calculate support reactions and internal member forces in Pin Jointed Plane frames
- 4. Compute Centroid, Centre of Gravity and Moment of Inertia for Distributed forces
- 5. Illustrate the concepts of rectilinear motion, projectiles, work, power & energy.

Unit 1 12 hours

**Concurrent system of forces:** Introduction to fundamentals of engineering mechanics, definition of a force, classification of system of forces, principle of transmissibility, resolution of a force, composition of forces, resultant and equilibrant. Triangle law of forces, polygon law of forces. Analytical method of determination of the resultant of the system of forces. Problems on the determination of resultant of concurrent coplanar system of forces.

**Non-concurrent system of forces:** Moment of a force, Varignon's theorem of moments, couples and their characteristics. Determination of magnitude, direction and position of resultant for non-concurrent coplanar system of forces. Example problems.

Unit 2

Equilibrium of system of forces: Definition, conditions of equilibrium for concurrent coplanar system of forces, Lami's theorem. Example problems.

Brief introduction to Civil engineering. Types of supports, loads and beams. Determination of support reactions for statically determinate beams and other simple structures.

Unit 3 10 hours

**Trusses:** Definition: Plane truss, space truss, determinate truss and indeterminate truss. Analysis of plane truss using method of joints and method of sections. Numerical examples.

**Friction:** Introduction, angle of friction, coefficient of friction, cone friction, limiting friction, types of friction, laws of static friction, Example problems related to impending motion on horizontal and inclined planes, wedge friction and ladder friction.

Unit 4 10 hours

Centroid and Centre of Gravity: Definition, derivation of expressions for centroidal distances of simple planar laminas like rectangle, triangle, quarter circle and semi-circle. Determination of Centroid for compound laminas. Moment of Inertia: Introduction, Definition, Theorems of perpendicular and parallel axis. Concept of axis of symmetry, derivations of expressions for moment of inertia of simple planar laminas like rectangle, triangle, circle and semicircle. Definitions of polar moment of inertia, radius of gyration, Determination of moment of inertia, polar moment of inertia, radius of gyration of compound laminas about centroidal axes and about any specified reference line.

Unit 5 12 hours

Introduction to rectilinear motion of a particle, projectiles, D Alembert's principle, super elevation, Work power energy, work energy equation and related problems

## **Text Books:**

- 1. B.K. Kolhapure, Elements of Civil Engineering & Engineering Mechanics, Eastern Book Promoters Belgaum [EBPB].2014
- 2. S.S Bhavikatti, Elements of Civil Engineering, New Age International Publishers.2015
- M N Sheshaprakash & Ganesh M Mogaveer, Elements of Civil Engineering & Engineering Mechanics, PHI. 2015
- 4. Engineering Mechanics-Statics and Dynamics by A Nelson, Tata McGraw Hill Education Private Ltd, New Delhi, 2009

#### **Reference Books:**

- 1. Meriam & Craige, Engineering Mechanics, John Wiley & Sons. Seventh edition.
- 2. Ferdinand P Beer and E Russel Johnson, Vector mechanics for Engineers (Statics and dynamics) McGraw Hill book company, New York. Tenth edition
- 3. K L Kumar, Veenu Kumar Engineering Mechanics, Tata McGraw Hill Publishers, New Delhi, Fourth Edition
- 4. Engineering Mechanics by S.Timoshenko, D.H.Young, and J.V.Rao, TATA McGraw-Hill Book Company, New Delhi

#### **Assessment Method:**

#### CIE:

- 1. Three internals tests (each 30 marks) are conducted, average of best two tests marks will be considered
- Minimum two Assignments/Model making Evaluated through rubrics for 10 marks. Average of two will be considered.
- 3. Tutorial classes and assessment are carried out on regular basis and evaluated for 10 marks. Average of the tutorials will be considered

## SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit.

					I	Program	Outcome	S				
	1	2	3	4	5	6	7	8	9	10	11	12
CO1	2	3										
CO2	2	3										
CO3	2	3										
CO4	2	3										
CO5	2	3										
CL	3	3										

## **ELEMENTS OF MECHANICAL ENGINEERING & WORKSHOP PRACTICE**

 Course Code
 : 17EME14/24
 Credits
 : 05

 Hours/Week
 : 4+0+2 (L+T+P)
 CIE Marks
 : 50

 Total hours
 : 78
 SEE Marks
 : 50

Exam Hours : 03 Course type : Engg. Core

#### **Expected Course outcomes:**

- 1. Students will be able to explain thermodynamic laws, steam properties, working principles of IC engines, refrigeration and air conditioning.
- 2. Students will be able to describe energy conversion through turbo machinery and power transmission system
- 3. Students should be able to explain machine tools and its operations, do the joining and sheet metal operations.
- 4. Students will be able to solve simple problems related to the steam properties, IC engines, and drives.

5. Students will be able to distinguish characteristics of different robot configurations and various engineering materials

Unit 1 10 hours

**Thermodynamics:** Basic concepts of thermodynamics, First and Second laws of thermodynamics, thermodynamic cycles (Carnot cycle, Rankine cycle, Otto cycle, Diesel cycle, Brayton cycle)

**Steam**: Formation, types, properties-Specific Volume, Enthalpy and Internal energy (Simple numerical on properties of steam).

Unit 2 10 hours

**Turbo machinery:** Classification, Construction and working principle of Steam Turbines: Impulse-De-Laval's turbine and reaction turbines- Parson's turbine (No compounding of turbines). Gas Turbines: Open cycle and closed cycle gas turbines .Water Turbines: Pelton wheel, Francis turbine and Kaplan turbine.Centrifugal compressor, Centrifugal pump, Blowers.

**Internal Combustion Engines:**Classification, I.C. Engines parts and terminology, principle and operation of 2 Stroke and 4 stroke Petrol engines, 4 stroke diesel engines with P-V diagrams. Performance parameters: indicated power, brake power, friction power, indicated thermal efficiency, brake thermal efficiency, mechanical efficiency, specific fuel consumption, simple numerical problems.

Unit 3 10 hours

Machine tools and Operations:Lathe operations-Turning, facing, knurling, thread cutting, drilling, Taper Turning by swiveling the compound rest.Drilling Operations- Boring, Reaming, Tapping, Counter Sinking, Counter Boring.Milling Operations- Plane milling, End Milling Operations: Face milling, Slot milling. (No sketches of Machine tools. Sketches to be used only for explaining operations). Introduction to CNC machines, Difference between Conventional and CNC machine.

Unit 4 10 hours

**Engineering Materials:**Properties of materials:Strength, Toughness, Hardness, Hardenability, Brittleness, Malleability, Ductility, Resilience, Fatigue, Creep and Slip. Types and applications of Ferrous & Nonferrous metals and alloys. Composites: Introduction, definition, classification and applications (Air craft and Automobiles).

**Robotics:**Introduction, classification based on robots configuration: Cylindrical, Cartesian, Articulated, SCARA and spherical. Application: Industrial automation and Home appliances. Advantages, and disadvantages

Unit 5 12 hours

**Belt drives:** Open & crossed belt drives, Definitions- slip, creep, velocity ratio, derivations for length of belt in open and crossed belt drive, ratio of tension in flat belt drives, advantages and disadvantages of V belts, simple numerical problems onlength of belt, ratio of tension and power transmission.

**Gear drives:** Types—spur, helical, bevel, worm, and rack and pinion. Velocity ratio, advantages and disadvantages over belt drives, Simple numerical problems on velocity ratio.

**Refrigeration and Air-Conditioning:** Refrigeration: Definitions- Refrigerating effect, Ton of Refrigeration, COP, Working principle of vapor compression refrigeration and vapor absorption refrigeration. Refrigerants: properties, list of commonly used refrigerants. Working principle of Room (window) and car air conditioner.

## Workshop Lab

**Fitting**: Two Fitting models.

06 hours

**Development and sheet metal work:** Models: Funnel, Tray, Transition Piece (Circular to hexagon/Pentagon, circular to square, square to a rectangle) (03 models). **06 hours** 

**Welding:** Soldering, Brazing and Welding: Definitions, classification and method of soldering, Brazing and welding. Differences between soldering, brazing and Welding

Butt Joint, Lap joint, T-Joint, V-Joint (with edge preparations) models have to be prepared with Calculation of electrode length required for welding.

05 hours

#### **Demonstration:**

09 hours

- a) Lathe Operations
- b) Milling Operations
- c) Drilling, Reaming, Tapping
- d) Working principle of Pelton wheel
- e) Working principle of Francis Turbine
- f) Working principle of Compressor
- g) TIG Welding
- h) Performance of IC Engine

i) Working principle car Air conditioner

#### **Text Books:**

- Basic Mechanical Engineering by N R Banapurmath, V S Yaliwal, 1<sup>st</sup> Edition, 2014, Vikas publishing house Pvt ltd Noida
- 2. Elements of Mechanical Engineering by V K Manglik, 1st Edition 2014, PHI publications.
- 3. Elements of Mechanical Engineering, M.Srinivasa Reddy,H.G.Shenoy and Sundaresh3<sup>rd</sup> Edition, Subhash Stores, Avenue Bangalore.

## **Reference Books:**

- 1. A Text Book of Mechanical Engineering Science, K R Gopalkrishna, 30th Edition, 2012, SubasPublishers, Bangalore
- 2. Elements of Mechanical Engineering, SKH Chowdhary AKH Chowdhary&Nirjar Roy, MediaPromotors and Publishers, Mumbai.
- 3. Industrial Robotics, Groover, McGrawHill 2003
- 4. Engineering Thermodynamics by P.K.Nag, Tata McGrawHill 2005

#### **Assessment Method:**

#### CIE:

- 1. Three internals tests (each 30 marks) are conducted, average of best two tests marks will be considered.
- 2. Workshop to be evaluated for 20 marks

#### SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit.

					I	Program (	Outcome	S				
	1	2	3	4	5	6	7	8	9	10	11	12
CO1	3	2							2			
CO2	3	2							2			
CO3	3	2							2	2		1
CO4	2	3										
CO5	3											
CL	3	3							2	2		1

## BASIC ELECTRICAL ENGINEERING

 Course Code
 : 17ELE15/25
 Credits
 : 05

 Hours/Week
 : 4+1+1 (L+T+P)
 CIE Marks
 : 50

 Total hours
 : 78
 SEE Marks
 : 50

Exam Hours : 03 Course type : Engg. Core

## **Expected Course outcomes:**

- 1. Students will be able to solve problems in DC circuits using Kirchhoff's laws, Single phase and three phase balanced circuits by understanding the concepts of impedance, phase angle and power factor.
- 2. Students will be able to explain the working of DC generators, DC motors and solve problems.
- 3. Students will be able to explain the working of Transformers, Alternators and Induction motors and solve problems.
- 4. Students will have the fundamental knowledge of Electrical measuring instruments, concepts of various types of lamps, domestic wiring and different types of Earthing.

Unit 1

**D.C.** Circuits:Ohm's Law and Kirchhoff's Laws (Not for Accessment). Analysis of series, parallel and series – parallel resistive circuits excited by independent voltage sources, Power and Energy in such circuits. Solution by Loop Analysis. Illustrative examples.

**Electromagnetism:Introduction to Electromagnetism (Not for Accessment).** Statically and dynamically induced emf. Concept of self-inductance, mutual inductance and coefficient of coupling. Energy stored in magnetic field. Illustrative examples.

**Domestic Wiring:** Two-way and three-way position control of a lamp. Elementary discussion on fuses. Necessity of earthing, Pipe and Plate Earthing. Concept of earth leakage current and ELCB. Electric Shock and precautions against it. Concepts of CFL, LED and Induction lamps.

Unit 2 10 hours

**DC Machines:** Working principle of DC machine as a generator and a motor. Types of DC Generator(Self and Separately Excited). Constructional features. Emf equation of generator, voltage build up. Illustrative examples on Emf Equation.

Principle of operation of DC motor, back emf and its significance, torque equation. Types of DC motors, Characteristics and applications. Necessity of a starter for DC motor. Illustrative examples on Back emf and torque.

Unit 3 10 hours

**Single-Phase A.C. Circuits:** Generation of sinusoidal voltage, Definition of average value, root mean square value, form factor and peak factor of sinusoidally varying voltage and current, phasor representation of alternating quantities. Analysis, with phasor diagrams of R, L, C, R-L, R-C and R-L-C elements (illustrative examples involving series, parallel and series-parallel circuits). Real power, reactive power, apparent power and power factor. Illustrative examples

**Measuring Instruments:** Construction and Principle of operation of dynamometer type wattmeter. Measurement of energy using single phase Induction type energy meter. Digital meter (Only block diagram approach)

Unit 4 10 hours

**Three Phase Circuits**: Necessity and advantages of three phase systems, generation of three phase power, meaning of Phase sequence, balanced supply and balanced load. Relationship between line and phase values of balanced star and delta connections. Power in balanced three-phase circuits, Measurement of power and power factor using two-wattmeter readings. Effect of load on wattmeter readings and power factor. Illustrative examples.

**Synchronous Generators**: Principle of operation. Types and constructional features. Emf equation. Concept of winding factor (excluding derivation of distribution and pitch factors). Illustrative examples on Emf Equation only.

Unit 5 10 hours

**Transformers:** Principle of operation and construction of single-phase transformers (core and shell type). Emf equation, losses, efficiency condition for maximum efficiency (Open circuit and Short circuit tests, equivalent circuit and phasor diagrams are excluded). Illustrative problems on Emf equation and Efficiency only.

**Three Phase Induction Motors:** Concept of rotating magnetic field, Principle of operation, Types and Constructional features, Synchronous speed, rotor speed, Slip, Frequency of the rotor induced emf. Applications of squirrel cage and slip ring motors. Necessity of a starter. Illustrative examples on slip calculations.

## **Laboratory Experiments:**

- 1. Domestic wiring- Control of Lamp by Two Way and Three Way
- 2. Measurement of power by two Wattcmeters method
- 3. Power factor improvement
- 4. Energy measurement
- 5. Star-Delta connection
- 6. Verification of Kirchhoff's Laws
- 7. Measurement of Inductance, Power and Power factor of a Series R-L circuit

## **Text Books:**

- 1. "Basic Electrical Engineering", D C Kulshreshtha, TMH, 2009 Edition.
- 2. "Electrical Technology", E. Hughes International Students 9th Edition, Pearson, 2005.

## **Reference Books:**

- 1. "Fundamentals of Electrical Engineering", Rajendra Prasad, PHI, Second Edition, 2009.
- 2. "Basic Electrical Engineering", M.V.Rao, Edition 2010.
- 3. "Fundamentals of Electrical Engineering and Electronics" B. L. TherajaS. Chand & Company Ltd Reprint Edition 2013

## **Assessment Method:**

#### CIE:

- 1. Three internals tests (each 30 marks) are conducted, average of best two tests marks will be considered.
- 2. Tutorials 10 Marks
- 3. Laboratory Experiments will be evaluated for 10 marks.

#### SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit.

					]	Program	Outcome	S				
	1	2	3	4	5	6	7	8	9	10	11	12
CO1	3	2	1									
CO2	3	2	1									
CO3	3	2	1									
CO4	3	2	1									
CL	3	3	2									

## **ENGINEERING PHYSICS LAB**

**Course Code** Credits : 05 : 17PHL16/26 Hours/Week : 0+0+3 (L+T+P)**CIE Marks** : 50 : 50 **Total hours** : 39 **SEE Marks** Exam Hours : 03 Course type : Basic Sc.

## **Expected Course outcomes:**

- 1. Illustrate and analyze the behavior of light in the phenomena of interference, diffraction and propagation through the optical fiber.
- Analyze experimentally the behavior of Ultrasonic waves in liquid media and charge discharging of capacitor.
- 3. Demonstrate the characteristic behavior of Zener diode, photo diode and transistor experimentally.
- 4. Analyze temperature dependence of electrical resistivity of intrinsic semiconductors.

## **Experiments:**

- Newton's rings: To determine the radius of curvature of given Plano convex lens by forming Newton's rings
- 2. **Parallel fringes:** To find the diameter of thin wire by forming parallel fringes.
- 3. **Diffraction grating:** To determine the wave lengths of mercury spectral lines by grating minimum deviation method.
- 4. **Torsional Pendulum:** To determine the moment of the given irregular body and also to determine the rigidity modulus of the material of the given suspension wire by setting up a Torsional Pendulum.
- 5. Numerical aperture: To determine the numerical aperture of step index optical fiber.
- 6. **Dielectric constant:** To determine the dielectric constant of given dielectric by capacitor charge and discharge method
- 7. **Photodiode Characteristics:** To study the V-I characteristics of photo diode for different light intensity in reverse bias condition
- 8. **Zener Diode Characteristics:** To study the V-I characteristics of Zener diode and find the reverse Zener break down voltage
- 9. **Transistor Characteristics:** To study the input and output characteristics of NPN Transistor in CE configuration and find the gain factor.
- 10. **Energy Gap:** To find the energy gap of a given thermistor.

## **Text Books:**

- 1. "Practical physics", G.L.Squires, Cambridge University Press, Cambridge, Fourth Edition (2001)
- 2. Practical Physics, RK Shukla& Anchal Srivasrava, New Age International (2008)

## **Assessment Method:**

#### CIE:

- 1. Observation-Evaluation of day to day performance in the laboratory 15 Marks
- 2. Record 15 Marks
- 3. Viva Voce 05 marks.

#### SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit.

					I	Program	Outcome	S				
	1	2	3	4	5	6	7	8	9	10	11	12
CO1	3	2										
CO2	3	2										
CO3	3											
CO4	3	2										
CL	3	2										

## **CONSTITUTION OF INDIA AND PROFESSIONAL ETHICS**

Course Code : 17CIP17/27

Hours/Week : 2+0+0 (L+T+P) CIE Marks : 100

Total hours : 26

Course type : Hu

## **Expected Course outcomes:**

1. To impart basic knowledge about the Constitution of India.

- 2. To educate the students about their obligations, responsibilities, privileges and rights, duties and get insights on administrative and judicial setup of the country.
- 3. Inculcate national and patriotic spirit among the students as responsible citizens of the country.
- 4. To impart knowledge about state and central policies, fundamental duties, electoral process, amendment procedure and emergency provisions.
- 5. Impart the ethical values, responsibilities and obligations of the professional to the society and the nation. Educate the engineering students about the scope and aim of professional ethics, their responsibilities, virtues like honesty, integrity and reliability, the risk and liability in engineering profession.

Unit 1 05 hours

Preamble to the Constitution of India. Fundamental Rights under part —III- Details of exercise of rights, Limitations and Important cases.

Unit 2 03 hours

Relevance of Directive Principles of State Policy under part-IV. Fundamental duties and their significance.

Unit 3 06 hours

Union Executive- President, Prime minister, Parliament and the Supreme Court of India, State Executive-Governor, Chief Minister, State Legislator, and high Courts

Unit 4 06 hours

Emergency provisions, Major Constitutional Amendment procedure — 42nd, 44th, 74th, 76<sup>th</sup>, 86th & 91<sup>st</sup>. Electoral process. Electoral process. Special Constitutional provisions. Powers and functions of Municipalities and Panchyats.

Unit 5 06 hours

Scope and Aims of Engineering Ethics. Responsibilities of Engineers and impediments, Honesty, Integrity, & Reliability. Risk, Safety and Liability in Engineering.

## **Text Books:**

- 1. "Constitution of India and Professional Ethics" by K R Phaneesh Sudha Publications.
- 2. "Constitution of India and Professional Ethics" by Dr.Umapathi K.L, Ramesh LChakrasali- Sahana Publications-2005

## **Reference Books:**

- 1. "Constitution of India and Professional Ethics" by K R Phaneesh Sudha Publications.
- 2. "Constitution of India and Professional Ethics" by Dr.Umapathi K.L, Ramesh LChakrasali- Sahana Publications-2005
- 3. Reference Books:
- 4. Das Basu: "Introduction to the Constitution Of India"-Prentice Hall of India, 19th/20/ Edn., 2001
- 5. "Engineering Ethics" By Charles E. Haries, Michael. S.Pritchard and Michael J.Robins- Thompson Asia, 2003.
- 6. "Introduction to Constitution of India" by M.V.Pylee, Vikas Publishing, 2002.

- 7. "Constitution of India- A Road to social revolution" by B.S.Lingaraj, Vidhyanidhi Prakashan, Gadag, 2006
- 8. Constitution of India, professional ethics and human rights. By Praveenkumar mellalli

#### **Assessment Method:**

#### CIE:

- 1. Three internals tests (each 30 marks) are conducted, best of two tests marks will be considered.
- 2. Minimum two Assignments evaluated through rubrics for 20 marks. Average of two will be considered.
- 3. Two written surprise tests conducted and evaluated for 20 marks. Average of these two will be considered.

PO	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2
CO1						3	2							
CO2						3	2		2			3		
CO3						3			2			3		
CO4						3	2					3		
CO5						3	2	3				3		
17CIP17/27						3	2	3	2			3		

## **COMMUNICATIVE ENGLISH**

Course Code : 17ENG18/28

Hours/Week : 2+0+0 (L+T+P) CIE Marks : 100

Total hours : 26

Course type : Hu

## **Expected Course outcomes:**

- 1. Student will able to recognise their basic personal and interpersonal communication skills, understand the importance of speaking and listening for better communication.
- 2. Learn the art of effective presentation skills, decision making, and group behaviour.
- 3. Student will able to use the software tool to have a better knowledge of performing well in an interview, and be prepared to face it with courage.
- 4. Demonstrate their writing skills, vocabulary and professional skills with confidence in the technical field.
- 5. Apply, exhibit overall personality, professionalism, leadership skills, positive attitude and body language.

Unit 1 02 hours

#### **Communication Skills**

## Speaking/Listening

- 1. Personal & Interpersonal Communication-Self Introduction/ Introducing others, Effective speaking.
- 2. Tips for Group Communication.
- 3. Manners & Etiquette, Confidence Building Skills.
- 4. Listening Skills-Art of Listening Patiently.

Unit 2 06 hours

## **Public Speaking skills**

- 1. Effective Presentation Skills/Speeches, Strategies: Planning, Occasion, Purpose, Material, Audience and thesis.
- 2. Extempore and Group Discussion- Meaning, importance and how it is conducted.
- 3. Importance of Group Discussion in an Interview as a selection criterion.
- 4. Attitude and behavior during GD session.

5. Debates, Role play, Group discussions, Arguments.

Unit 3 08 hours

## **Interview Skills: (various stages)**

- 1. Introduction of types of Interviews: Campus, on -site, Face to face, Telephonic, Video conferencing.
- 2. Skills and Attributes which most employers look for.
- 3. Interview question and answers.
- 4. How to prepare for facing an Interview, c) Before an Interview, (mental, psychological, physical preparation)
- 5. What to do after an Interview is over.
- 6. Factors responsible for failure in interviews
- 7. Conducting mock interview

Unit 4 06 hours

## **Writing Skills:**

- 1. Email drafting, --- plus email etiquette.
- 2. Resume writing along with covering letter.
- 3. Business correspondence/Letter writing.
- 4. Avoiding spelling mistakes and mispronunciations

Unit 5 04 hours

## Personality Development/Grooming Session:

- 1. Body Language: How to express your ideas effectively with proper body language.
- 2. Kinesics (Body movement) Personal appearance, Posture, Gesture, Eye contact, Facial expressions.
- 3. Proxemics (Physical space) difference between Intimate, Personal, Social, and Public space and how to use it meaningfully, in different situations.
- 4. Chronemix ((Use of time), Time resource and priority management, communicate professionalism with time mgt. skills.
- 5. Art of Handling people.
- 6. Leadership & Successful relationship at work place.
- 7. Memory Enhancement & Time management.
- 8. Overcoming worries & Criticism.
- 9. Healthy mind & Decision making.
- 10. Negotiation skills.

#### **Text Books:**

- Technical Communication Principals and Practices-Meenakshi Raman and Sangeeta Shama, Oxford university Press 2004
- 2. DANIEL JONES: English Pronouncing Dictionary
- 3. GOWERS
  - a. The Complete Plain Words
  - b. Fowler's Modern English Usage
- 4. HORNBY: Advanced Learner's Dictionary
- 5. JARRETT H: How to write English
- 6. WOOD F. T.
  - a. Current English Usage
  - b. A Remedial English Grammar for Foreign Students
- 7. S.R. INTHIRA & V SARASWATHI: Enrich Your English Book.
  - a. Communication Skills Book
  - b. Academic Skills Book
  - c. Communications Workbook
  - d. Academic Skills Workbook
  - e. Supplementary Reader (Oxford University Press/ EFLU, Hyderabad)

## **Assessment Method:**

#### CIE:

- 1. Three internals tests (60 Marks each) will be conducted, and the average of the best of two will be taken.(MSE I,MSE-II & MSE-III)
- 2. Language Lab for 20marks

3. Listening, Speaking, reading, writing assignments and mock interview session will have 10 marks each. Activities like Gds, presentations, resume writing ,letter writing etc. can also be conducted in this regard.(20 marks)

					I	Program	Outcome	S				
	1	2	3	4	5	6	7	8	9	10	11	12
CO1						1			1	3		1
CO2									3	2		
CO3					2	1			1	3		1
CO4									1	3		1
CO5						1		1		1		2
CL					2	1		1	2	3		1

## **ENGINEERING CHEMISTRY**

**Course Code** : 17CHE12/22 Credits : 4.5 Hours/Week **CIE Marks** : 50 : 4+1+0 (L+T+P)**Total hours SEE Marks** : 50 : 65 **Course type** Exam Hours : 03 : Basic Sc.

#### **Expected Course outcomes:**

- 1. Analyze different forms of energies and study the reaction mechanisms of batteries and fuel cells and apply the knowledge to design the batteries.
- 2. Recognize different forms of Corrosion, their significance and preventive measures and gain knowledge in different chemical techniques for water treatment and its analysis, desalination process used to produce potable water from brackish water.
- 3. Identify structures of solid crystals using Miller indices and to find applications of liquid crystals in electronic devices.
- 4. Apply the knowledge in the field of semiconductors, relevant theories and ideas in nonconventional sources of energy to provide solutions to our current and future energy problems.
- 5. Ability to analyze Nanoscience paradigm in terms of properties at nano scale dimensions and synthesize nano composites and materials for solving interdisciplinary problems in industries.

Unit 1 11 hours

## **Chemical energy sources:**

Introduction to energy, Fuels-definition, classification, importance of hydrocarbon fuels, Calorific value-definition, Gross and Net calorific value, (SI units). Determination of calorific value of a solid/liquid fuel using Bomb calorimeter. Determination of calorific value of a gaseous fuel using Bouy's calorimeter Petroleum cracking-Fluidized catalytic cracking, Reformation of petrol. Numericals.

## Conversion and storage of electrochemical energy:

Single electrode potential- definition, origin, sign convention. Derivation of Nerns't equation. Standard electrode potential- definition. Construction of galvanic cell-classification of primary, secondary and concentration cells. EMF of a cell-definition, notation and convention.

<u>Batteries</u>- Introduction to batteries, charging and discharging, characteristics of batteries, types, primary and secondary battery (Li –Ion)construction and working principle.

**Green Chemistry:** An overview of Green chemistry, twelve principles of green chemistry.

Unit 2 11 hours

## **Corrosion Science:**

**Corrosion**- definition, Chemical Corrosion and electrochemical theory of Corrosion, Types of Corrosion, Differential metal corrosion, Differential aeration corrosion(Pitting and water line corrosion) Stress corrosion, Factors effecting the rate of corrosion. Corrosion control: Design, Metal coatings-Galvanizing and Tinning, Cathodic Protection.

## **Environmental Chemistry and waste management:**

**Atmospheric pollution - Gaseous pollutants**: Oxides of carbon, nitrogen and sulphur, hydrocarbons; their sources, harmful effects and prevention; Green-house effect and Global warming; Acid rain; Particulate pollutants: Smoke, dust, smog, fumes, mist; their sources, harmful effects and prevention.

**Water pollution** -Impurities in the water, Definition- COD and BOD: Determination of different constituents in water- COD and DO. Numericals. Sewage Treatment, Potable water, Purification of water-, Electrodialysis, and Reverse osmosis.

**Waste management** –Introduction, various types of waste management, Solid waste management – non-hazardous and municipal.

Unit 3 10 hours

## **Crystal structure**

Introduction to crystal structure. Miller indices, Features of Miller indices, Packing fraction or atomic packing factor (APF) OR relative density of packing, Inter planar spacing, Expression for spacing between lattice planes, Solved Problems, Exercises

## Liquid crystals and their application:

Introduction, Classification thermotropic amd Lyotropic with examples Types of Mesophases-Nematic and Chiral nematic (chlolesteric) sematic and columnar with example. Application of liquid crystals in display systems .working of L.C.D.

<u>OLED'S</u>:Introduction to OLEDS, Types of OLEDS, OLED Structure, Working of OLEDS, current and future <u>OLEDS</u>

Unit 4 10 hours

## **Semiconductors:**

**Introduction to Semiconductors,** conductivity equation of pure semiconductors, defects in solids photocopying process.

<u>Renewable energy sources</u> -definition, history, importance of **renewable energy sources**, notational and international energy scenario, Main stream renewable technologies- solar energy (PV Cells dye sensitizer), Wind energy, Tidal energy, Hydro thermal and Applications of solar, Wind, Tidal, Hydro thermal energies.

Unit 5 06 hours

## Nanoscience:

Introduction- Overview of Nanoscience Theory, definitions and history – Properties at nanoscale. . Different classes of Nanomaterials –1D, 2D, 3D and 0D; **Nano Scale materials** – nano rods, nanotubes, Quantum dots, nanomembranes **Synthesis** by "Top-down" approach- Hydro thermal and Photolithography "Bottom up approach" – CVD, PVD, Solgel and precipitation methods.**Characterization:** Introduction, principle, working of Scanning Electron Microscope **Applications:** Nano Solar cells and Bio medical application –diagnosis using sensors and treatment of cancer using Gold nano particles.

#### Nano composites

Introduction- Overview of nanocomposites, classification Properties and Applications- Nanoclay-reinforced composites. Carbon nanotube-reinforced composites. Nanofibre-reinforcedcomposites, and Inorganic particle-reinforcedcomposites. Nanocomposites applications

## **Text Books:**

- 1. F.W. Billmeyer, John Wiley & Sons, Text book of Polymer Science 1994.
- 2. Benny Joseph, Environmental studies, Mc Graw-Hill publishing company 2004.
- 3. M.G. Fontana, Corrosion Engg, Mc Graw Hill Publication. 2005

## **Reference Books:**

- 1. Stanley and Co, Environmental Chemistry by Mc Graw Hill Publication, 2008.
- 2. G.L. Hornyak, J.Dutta, H.F. Tibbals, A.K.Rao, Introduction to Nanoscience, CRC Press, 2008.
- 3. A.Nabok, Organic and Inorganic Nanostructures, Artech House 2005.
- 4. Hari Singh Nalwa, Nanostructured Materials and Nanotechnology, Academic Press. 2015.
- 5. Gordon M Barrow Physical Chemistry Mc Graw Hill-Kagakusha, 1987.

## **Assessment Method:**

#### CIE:

- 1. Tutorials 10 Marks
- 2. Surprise tests/Assignment based tests 10Marks.
- **3.** Three mid examinations, 30 Marks each will be conducted and the Average of best of two will be taken.

#### SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit

		Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12	
CO1	3												
CO2	3												
CO3	3	2											
CO4	3	2											
CO5	3	2											
CL	3	2											

## **COMPUTER CONCEPTS AND C PROGRAMMING**

 Course Code
 : 17CCP13/23
 Credits
 : 4.5

 Hours/Week
 : 4+1+0 (L+T+P)
 CIE Marks
 : 50

 Total hours
 : 65
 SEE Marks
 : 50

Exam Hours : 03 Course type : Engg. Core

#### **Expected Course outcomes:**

- 2. Identify the working of key components of a computer system and describe the software development lifecycle
- 3. Will apply appropriate concepts of Data types, Constants, Variables, Declarations, Operators and Expressions in C for solving module of real world applications
- 4. Will use the concepts of control structures, looping statements and arrays in C
- 5. Illustrate and apply the concepts of functions and strings in C
- 6. Design and implement C programs using pointers, structures and unions to solve real world problems.
- 7. Apply file handling functions to develop record oriented applications

Unit 1 11 hours

**Introductory concepts**: Introduction to computers, What is a computer, block diagram of computer, computer characteristics, hardware vs software, how to develop a program, Software development lifecycle, structured programming, **Introduction to C programming**: Identifiers and Keywords, Data Types, variables, constants, structure of c program, Are Characters Signed or Unsigned?, Integer Overflow, Constants, variables and Arrays, Subscripts Start from Zero, Declarations, Expressions Statements, Symbolic Constants, Type Conversion.

Aptitude Test Topics from Let Us C: Data types, Constants, Variables, Declarations

Unit 2

**Operators and expressions:** Arithmetic operators, Unary operators, relational and logical operators, assignment operators, conditional operators. logicalOperators, Operators don't always have the precedence you want ,Expression Evaluation Sequence, Shift Operators, library Functions, Single Character Input —The getchar() , getchar returns an integer ,Single Character Output-The putchar() Function ,**Data Input and Output:** Preliminaries, Entering Input Data the scanf() function. Writing output —the printf() function. The gets and puts functions, interactive (conversational) Programming.

Aptitude Test Topics from Let Us C: Operators, Library functions, gets, puts, data input and output

Unit 3 10 hours

**Selection making decision**: Preliminaries, the two-way selection: multiway-selection, The Dangling else Problem, looping: the while statement, more looping: the do while statement, more **Repetition**: concepts of a loop, loops in c, the break and continue statement, the goto statement, Watching those semicolons, **Arrays:** using arrays in c, processing an array, arrays and functions, two dimensional arrays, multidimensional arrays, Aptitude Test Topics from Let Us C: **If, for, while, do while, switch, arrays** 

Unit 4 10 hours

**Functions**:-A brief overview, defining a function, user defined functions, function prototypes, passing arguments to a function, scope-gloabal and local; C Doesn't Always Cast Actual Parameters, recursion, **storage classes and type qualifiers**:storage classes- automatic variables, external (global) variables, static variables, type qualifiers-const and volatile, **Strings**: Defining a string, string manipulations functions,

Aptitude Test Topics from Let Us C: Functions, Recursion, program structure, strings

Unit 5 06 hours

**Pointers**:- Fundamentals, pointer declarations, passing pointers to a function ,pointers and one dimensional array, dynamic memory allocation, Pointers are not Arrays, operations on pointers, The Null Pointer is Not the Null String

**Derived Types-Enumerated Types, Structures and Unions**- Enumerated Types, structure, processing a structure, unions, **File Handling:** using binary files, reading and writing a data file, processing a data file, unformatted data files.

Aptitude Test Topics from Let Us C: Pointers, dynamic memory allocation, structure, files

#### **Text Books:**

- 1. Behrouz a. Forouzan, Richard f. Gilberg: computer science a structured programming approach using c
- 2. Andrew Koenig: C Traps and Pitfalls. Pearson Education, India 2006. http://www.literateprogramming.com/ctraps.pdf)
- 3. Byron 1 and Gottfried: Programming with C-|| edition Shaum's outlines

#### **Reference Books:**

- 1. Brian W. Kernighan and Dennis Ritchie: the C programming language second edition PHI, 1998.
- 2. Peter Norton: Introduction to Computer, 7th edition TATA MCGRAWHILL, 2010.
- 3. Yashvant Kanetkar:Let Us C,
- 4. Brian w Kernighan Dennis m Ritchie: The C Programming language

## **Assessment Method:**

#### CIE:

- 1. C Aptitude test 04 marks on each unit 20 Marks
- **2.** Three mid examinations, 30 Marks each will be conducted and the Average of best of two will be taken.

#### SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit

		Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12	
CO1	3								3	2			
CO2	2	2	3						3	2			
CO3	2	2	3						3	2			
CO4	2	2	3						3	2			
CO5	2	2	3						3	2			
CO6	2	2	3						3	2			
CL	3	2	3						3	2			

## **COMPUTER AIDED ENGINEERING DRAWING**

: 17CED14/24 **Course Code** Credits : 4 : 50 Hours/Week **CIE Marks** : 2+0+4 (L+T+P): 50 **Total hours** : 78 **SEE Marks Exam Hours** : 03 Course type : Engg.

Core

#### **Expected Course Outcomes:**

- 1. Students will able to apply the concept of theory of orthographic projection in solving problems of points and lines.
- 2. Students will be able to demonstrate and project the planes for different positions.
- 3. Students will be able to demonstrate and project the solids for different positions
- 4. Students will be able to improve their visualization skills so that they can apply these skills to develop a sketch into isometric and section the solids, draw the true shape of the section.
- 5. Students will able to demonstrate and sketch the drawings using software.

Unit 1 06 hours

**Introduction to Computer Aided Sketching**: Introduction, Drawing instruments and their uses, BIS Conventions, Lettering, Dimensioning, geometrical constructions and freehand practicing. Introduction to software, commands used for engineering drawing.

Unit 2 22 hours

## **Orthographic Projections**

Introduction – Planes of projection, reference line, and conventions employed.

Projection of Points- in all the four quadrants.

Projection of straight Lines (First angle projection) - True and apparent lengths, true and apparent Inclinations to reference planes, application problems (Chimney. Tripod, Flag post, Room problems) Orthographic projection of Plane surfaces (First angle projection)

Introduction, projection of triangle, square, rectangle, pentagon, hexagon and circular lamina.

Unit3 22 hours

#### **Projections of Solids**

Introduction, Projections of right regular prisms, pyramids, cylinder, cone and cube in different positions (Inclined to both HP and VP. No problems on octahedrons and combination of solids).

Unit4 28 hours

## **Sections of Solids**

Introduction to truncation and frustum, Section of solids like prisms, pyramids, cylinder and cone in simple vertical position by cutting planes inclined to HP and perpendicular to VP-true shapes of sections.

## **Isometric Projection**

Introduction, Isometric scale, Isometric projection of simple plane figures, Isometric projections of Tetrahedron, hexahedron (cube), right regular prisms, Pyramids, cylinders, cones, spheres, cut spheres and combination of solids (Maximum of two solids).

## **Text Books:**

- 1. 'Computer Aided Engineering Drawing' by K. R. Gopalakrishna, 32nd edition, 2005 Subash Publishers, Bangalore.
- 2. 'Engineering Drawing' by N D Bhat and V M Panchal, 37th Ed. 1996, Charotar Publishing.

#### **Reference Books:**

- 1. 'A Primer on Computer aided engineering drawing' 2006, published by VTU, Belgaum.
- 2. 'Fundamentals of Engineering drawing with an Introduction to Interactive Computer Graphics for Design and Production' Luzadder Warren J, Duff John M., Eastern Economy Edition, 2005 Prentice– Hall of India Pvt. Ltd., New Delhi.
- 3. 'Introducing Graphics' by Arnold J N, McGraw Hill Publications.

## **Assessment Method:**

## CIE:

- 1. Three internals tests (each 30 marks) are conducted, average of best two test marks will be considered.
- 2. Submission of drawing sheets/printouts will carry 10 marks.
- **3.** Two written Assignment / Assignment based tests / Surprise tests will be conducted and evaluated for 10 marks. The average of these two will be considered

## SEE:

- 1. SEE Question paper will consists of 3 parts
  - Part A Unit 2 for 40 Marks Only sketching.
  - Part B Unit 3 for 40 Marks Sketching (40% weightage) and Computer aided drafting(60% weightage)
  - Part C Unit 4 for 20 Marks Computer aided drafting

		Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12	
CO1	3	2											
CO2	3	2											
CO3	3	2			3								
CO4	3	2			3								
CO5	3	2			3								
CL	3	3			3								

## BASIC ELECTRONICS ENGINEERING

**Course Code** : 17ELN15/25 Credits : 4.5 Hours/Week : 4+1+0 (L+T+P)**CIE Marks** : 50 Total hours **SEE Marks** : 50 : 65 **Exam Hours** : 03 Course type : Engg. Core

## **Expected Course outcomes:**

- 1. Students will be able to analyze and implement basic building blocks of an electronic system.
- 2. Students will be able to apply and interpret principles of semiconductor physics in electronic devices and systems.
- 3. Students will be able to summarize the applications of electronic systems.
- 4. Students will be able to identify the need of using electronic devices in system development

Unit 1 11 hours

## Number system and Digital logic:

Introduction, Decimal, Binary, Octal & hexadecimal number system conversion, Compliments(only 2's,1's,10's & 9's compliment) Addition and Subtraction (Binary and Decimal numbersystem), Binary coded number, Boolean Algebra, Logic Gates .Introduction to CombinationalLogic: Half Adder, Full adder, .Introduction to Sequential circuits: Flip Flops(RSFF, JK FF,D FF, T FF) (only truth table)

T1 Ch: 1.2,1.3,1.4,1.5,1.6,2.1,2.3,2.4,2.7,4.1,4.3,6.1,6.2

Unit 2 11 hours

## **Semiconductor Diode and Applications:**

PN junction Diode, Characteristics and parameters, Diode approximations, Zener diode, ,Half wave Rectification, Full wave diode Rectification , Bridge rectifier, Half wave rectifier DC power supply, full wave rectifier DC power supply, numerical problems . Optoelectronics devices: Light Emitting Diode, Photo diode.

T2 Ch: 2.1, 2.2, 2.3, 2.9, 3.1, 3.2, 3.3, 3.4, 20.2

Unit 3 10 hours

## **Transistor:**

Bipolar Junction transistor, Transistor voltages and currents, Amplification, Common Base, Common Emitter and common Collector Characteristics (only input and output characteristics) numerical.

**Amplifiers:** Classification of Amplifiers, Single stage CE amplifier, Cascaded amplifier and capacitor coupled 2-stage CE amplifier.

Introduction to IC Technology: The IC era, Basic MOS transistor.

T2 CH: 4.1,4.2,4.3,4.5,4.6,4.7,9.5,12.1

Unit 4 10 hours

## Oscillators & Op-Amps:

Oscillator: Introduction to Oscillator, RC phase shift Oscillator, Hartley Oscillator, Colpitt Oscillator, Numerical.

Introduction to Operational Amplifiers: Ideal Op-Amp, Voltage follower, Non Inverting amplifier ,Inverting amplifier , Summing amplifier, Difference amplifier (circuits, derivations of output voltage and numerical).

T2 Ch: 14.1, 14.3, 14.4, 14.5, 14.6, 14.7, 16.1, 16.2, 16.3

Unit 5 06 hours

## **Introduction to Communication systems:**

Communication system: Introduction, Block diagram of communication system, Definition of modulation, need for modulation, Types of modulation, Amplitude modulation: concept, waveform (no derivation & problems), Frequency modulation: Concept & waveform (No derivation), Comparison between AM&FM, Super heterodyne receivers, **Optical Fiber Communication**: Block diagram, Advantage & Disadvantage of OFC cable, OFC construction.

**Cellular Telephone Concept**: Cellular telephone, Frequency reuse (no problems), Cellularsystem topology, Roaming & Hands off

T3 Ch: 13.5, 13.3, 13.6.1, 19.4, 19.5, 19.8, 19.9

#### **Text Books:**

- 1. "Digital Logic and Computer Design", Morris Mano ,PHI 2002
- 2. "Electronics Devices and circuits", David A. Bell, PHI, 2004
- 3. "Electronic Communications Systems", Wayne Tomasi, Fifth edition

## **Reference Books:**

- 1. "Principles of Electronics" , V K Mehta , S Chand publications ,  $2003\,$
- 2. "Basic VLSI design", Douglas A Pucknell & Kamran E, Third Edition (PHI)

## **Assessment Method:**

#### CIE:

- 1. Tutorials 10 Marks
- 2. Surprise tests 10Marks.
- **3.** Three mid examinations, 30 Marks each will be conducted and the Average of best of two will be taken.

## SEE:

- 1. Two Questions are to be set from each unit, carrying 20 Marks each.
- 2. Students have to answer 5 questions selecting one full question from each unit

		Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12	
CO1	3	1											
CO2	3	2											
CO3	3	2											
CO4	1	1	1										
CL	3	2	1										

## **COMPUTER PROGRAMMING LAB**

 Course Code
 : 17CPL16/26
 Credits
 : 3.0

 Hours/Week
 : 0+0+3 (L+T+P)
 CIE Marks
 : 50

 Total hours
 : 39
 SEE Marks
 : 50

Exam Hours : 03 Course type : Engg. Core

## **Expected Course outcomes:**

- 1. Design and implement C programs using operators and expressions
- 2. Design, analyse and interpret C programs using appropriate control structures
- 3. Analyse and implement C programs using functions, pointers, structures, unions and file handling
- 4. Analyse, design and implement module of real world applications

Sl No	List of Programs Part A
1	a. Secure life insurance company issues special returns to its customers on leap years. Given a year design a C program to find whether the customer is due for special returns or not using ternary operator.
	b. The tallest of the three pupils are to be selected for the basketball tournament being held in the university next year. Design a C program using branching statements to find the candidate selected for the tournament. (if else)
2	For producing a certain product in manufacturing company, suppose the total costs are represented by a quadratic equation. Design a C program to find the roots of the quadratic equation, for non-zero coefficients
3	A Person is making identical balloon arrangements for a party. He has X maroon balloons and Y white balloons. He wants each arrangement to have the same number of each colour. Design a C program to find greatest (GCD) & Least (LCM) number of arrangements using Euclid's algorithm to make use of every balloon.
4	A criminal leaves a four digit number as his calling card, Design an algorithm and develop a C program to test the four digit number left by the criminal is palindrome or not.
5	In google web search engine the user types a string. Design a C program to check if a sub string is present in the given string
6	The books in the library are randomly placed on the shelves. Design a C program that sorts the books based on ISBN  Use bubble sort to implement the program
7	Given a ISBN Design a C program to search and display the book if present in the library.  Use binary search to design the program
8	Design, develop and execute a program in C to read two matrices A(M x N) and B(p x q) and

	compute the product of A and B
9	You are given two envelopes, each containing money, Design, develop and execute a program in C
	to swap two envelopes using methods
	a. Call by value.
	b. Call by reference
	You have been asked to arrange a lucky draw in college and the person who picks a prime number
	always wins a prize. Design a C program to test if the participant has won or lost (Prime number)
10	The local government school needs simple recording software which accepts names of the students in
	random order prepares the nominal roll in alphabetical order. Help the school by designing a simple c
	program to sort the given names and display using sorted names using file handling functions.
11	In the university to maintain student database for result calculation, Using structures design a C
	program that accepts the details such as student rollno, student name and marks of three subjects of n
	students and prints theirs details along with their total marks.
	PART B
1	Mini project using C concepts like Arrays, Files, Structures and User Defined Functions

## **Text Books:**

- 1. Behrouz a. Forouzan, Richard f. Gilberg: computer science a structured programming approach using c
- 2. Andrew Koenig: C Traps and Pitfalls. Pearson Education, India 2006( http://www.literateprogramming.com/ctraps.pdf)
- 3. Byron 1 and Gottfried: Programming with C-|| edition Shaum's outlines

## **Assessment Method:**

## CIE:

- 1. Record-10Marks, Observation 05 Marks, Vivo on each experiment 05 marks
- 2. Mini project 10 Marks
- 3. Two tests, 20 Marks each will be conducted and the Average of two will be taken.

#### SEE:

- 1. Part A 40 Marks
- 2. Part B 10 Marks

		Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12	
CO1	1	2	3	2									
CO2	1	2	3	2									
CO3	1	2	3	2									
CO4		2	3	2					2	2	2	2	
CL	1	2	3	2					2	2	2	1	

## **ENGINEERING CHEMISTRY LAB**

**Course Code** Credits : 17CHL17/27 : 1.5 Hours/Week **CIE Marks** : 0+0+3 (L+T+P): 50 **Total hours** : 39 **SEE Marks** : 50 **Exam Hours** : 03 Course type : Basic Sc.

## **Expected Course outcomes:**

- 1. Identify the relationship between chemistry and other disciplines, and the applications of chemistry in the society
- 2. Carrying out different types of titrations for the estimation of pollutants, dissolved salts present in the water to get quick and accurate results.
- 3. Handle different types of instruments to measure pKa, Conductance, EMF, Viscosity with effective graphical interpretation.
- 4. Synthesize metal oxide Nanoparticles / polymer membranes for various industrial applications.
- 5. Develop laboratory skills for the purpose of collecting, interpreting, analyzing, and reporting chemical data (in written form).

Sl.No	NAMES OF THE EXPERIMENT
PART -	- I EXPERIMENTS
1	Estimation of total hardness of the given water sample
2	Estimation of CaO in the given cement solution
3	Synthesis of Metal oxide nano particles / polymer membranes
5	Estimation of COD of the industrial waste water sample
6	Estimation of Alkalinity of Natural sea water.
PART -	- II EXPERIMENTS
7	P <sup>Ka</sup> value of the weak acids
8	Potentiometric titrations of FAS agaist K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>
9	Condoctmetric titration of strong acid and weak acid against NaOH
10	Colorimetric estimation of Cu
11	Coefficient of viscosity of the organic liquids

		Program Outcomes												
	1	2	3	4	5	6	7	8	9	10	11	12		
CO1	2													
CO2	2	2												
CO3	2	2												
CO4	2	3												
CO5	2													
CL	3	3												

## **Assessment Method:**

#### CIE:

- 1. Manual + Record + Viva 30 Marks
- 2. Internal Examination -15Marks.
- 3. Surprise test +mini project 05Marks

## SEE:

1. Students are required to conduct two experiments, each will be evaluated for 25marks

## **ENVIRONMENTAL STUDIES**

Course Code : 17CIV18/28

Hours/Week : 2+0+0 (L+T+P) CIE Marks : 100

Total hours : 26

Course type : Hu

## **Expected Course outcomes:**

- 1. Students will study about the inter-relationship between the living organisms and their environment. They will have the knowledge about the damage, unsustainable development and improved standard of living that have on the environment and this will help them to develop a concern toward the same.
- 2. Students will interpret the importance of natural resources and its relationship with human activities, and also the importance of biogeochemical cycle.
- Students will be able to identify the various types of pollution and their effects on the environment & on human population, its prevention method and also the various social issues connected with environment.
- 4. To correlate the exploitation and utilization of conventional and non-conventional resources.
- 5. Young engineers will gain legal literacy about the various acts and organization regarding the environment and pollution.

Unit 1 05 hours

Environment: Definition, Ecosystem, Balanced ecosystem, Human activities — Food Shelter, Economic and Social security.

Effects of Human Activities on Environment — Agriculture, Industry, Mining. Environmental impact assessment, Sustainable development.

Unit 2 05 hours

Natural resources: Water resources - Availability and quality aspects. Water borne disease and Water induced disease. Flouride problems in drinking water, Mineral resources, and Forest resources. Material cycles— Carbon, Nitrogen, and sulphur

Unit 3 07 hours

Environmental Pollution and their effects- Water pollution, Noise pollution, Air pollution, Radioactive Pollution and Automobile pollution.

Current Environmental issues of importance: Population growth, Climate change, Global warming, Natural disasters, Acid rain, Ozone layer depletion, Animal husbandry-- effects and Water Management and Conservation.

Unit 4 05 hours

Energy: Different types of energy, Electromagnetic radiation, Conventional and non-conventional resources-Hydroelectric, Fossil fuel, Nuclear energy, solar energy, Bio-mass and Bio gas.

Unit 5 04 hours

Environmental Protection- Role of Government, legal aspects, initiative by NGO's, Central Pollution Control Board (CPCB), State Pollution Control Board (SPCB), Environmental education.

#### **Text Books:**

- 1. Environmental Studies- Dr. S M Prakash, Elite Publications.
- 2. Environmental Studies- R GeethaBalakrishna, K G LakshminarayanaBhatta, S M Publications.
- 3. Introduction to Environmental Science and Engineering- Raman Sivakumar- Tata McGraw Hill.

#### **Assessment Method:**

#### CIE:

- 1. Three internals tests (each 30 marks) are conducted, best of two tests marks will be considered.
- 2. Minimum two Assignments evaluated through rubrics for 20 marks. Average of two will be considered.
- 3. Two written surprise tests conducted and evaluated for 20 marks. Average of these two will be considered.

РО	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2
CO1						2	3					3		1
CO2						2	3					3		
соз						3	3		2			3		
CO4							3		2			3		
CO5						3	3					3		
17EVS 17/27						3	3		2			3		

## Bridge Mathematics – I (Lateral Entry) Common for all branches

Course Code: 14DMAT31 Sem : 3 L-T-P: 2 -0-0 CIE: 100

Total lecture hrs: 28

**Objectives:** To learn the basic concepts of calculus, set theory, complex numbers and vector algebra **Expected outcomes:** 

- Students can apply basic knowledge of complex numbers
- Students can apply basic knowledge of vector algebra
- Students can apply basic differential calculus to different engg. field
- Students will be able to apply concepts of set theory
- Students can apply basic integral calculus to different engg. field

Unit – I 5 hrs

Complex numbers, Argand diagram, Polar form, complex conjugate, amplitude and modulus, exponential form, De Movier's theorem

Unit – II 5

Vector addition, subtraction, scalar and vector products, scalar and vector triple products.

Unit – III

Successive differentiation, Taylor and Maclaurin series, Partial differentiation, total derivatives, Jacobian

Unit – IV

Set theory- definition, notations, subset, power set, universal set, Venn diagram, union, intersection, difference of sets and properties. Cartesian products

Unit – V 6

Reduction formula for sin<sup>n</sup>x and cos<sup>n</sup>x, Double and triple integrals (direct problems), gamma and beta functions

Text book: Higher Engg. Mathematics by B S Grewal, Khanna Publication

## Bridge Mathematics – II (Lateral Entry) Common for all branches

Course Code: 14DMAT41 Sem : 4 L-T-P: 2 -0-0 CIE: 100

**Total lecture hrs: 28** 

**Objectives:** To solve the ordinary and partial differential equations by analytical methods and understand the concept and usage curve fitting, correlation and regression and to solve system of equations.

## **Expected outcomes:**

- Students will be able to apply concept of solving 1<sup>st</sup> order ordinary differential equations to engineering problems
- Students will be able to apply concept of finding complimentary function and particular solution to engineering problems
- Students will be able to apply concept of vector calculus to find flux, divergence and other engineering application
- Students will be able to fit appropriate curves to given set of data
- Students will be able to apply concept of eigen values to engineering problems

## Unit-I Differential equations of 1st order

6hrs

Solution of differential equations of 1<sup>st</sup> order, 1<sup>st</sup> degree, separation of variable, Linear differential equations, exact equations (direct problems only, reducible to these forms is not included)

## Unit - II Differential equations of second order

6hrs

Complementary function, Particular Integral of the form  $ke^{ax}$ , sinax, cosax,  $x^n$ ,  $e^{ax}V$ 

## Unit – III Vector Calculus

5hrs

Differentiation of vector functions, velocity and acceleration, gradient, divergence and curl

## **Unit – IV** curve fitting

5 hrs

Least square fit of straight line, parabola, regression lines, correlation coefficient

## Unit - V system of linear equations and eigen values

5 hrs

Rank of a matrix, consistency of a linear system of equations, Gauss elimination, Eigen values and eigen vectors of square matrices.

**Text Books**: Higher engineering Mathematics by Grewal, 36<sup>th</sup> edition, Khanna Publications

## TIME TABLE

## I SEMESTER

Day	08.45	9.40	09.50	10.45	11.40	12.35	01.15	02.10	03.05
/ TIME	9.40	9.50	10.45	11.40	12.35	01.15	02.10	03.05	04.00
Mon									
Tue									
Wed		BR				LUI			
Thu		BREAK				LUNCH			
Fri									
Sat									

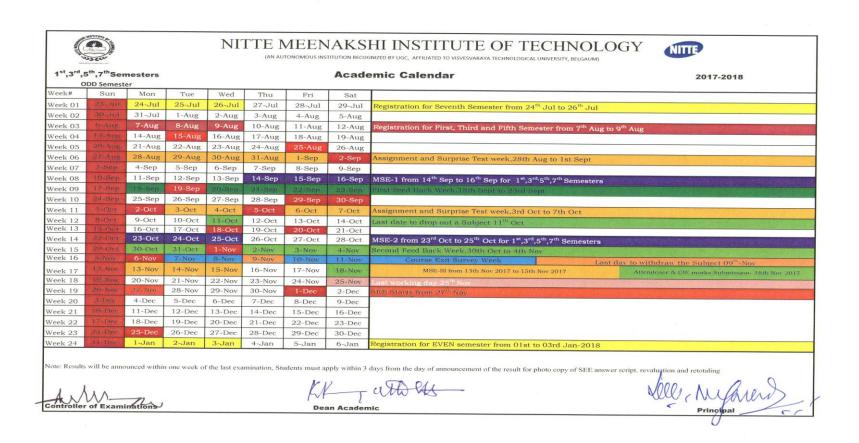
## II SEMESTER

Day	08.45	9.40	09.50	10.45	11.40	12.35	01.15	02.10	03.05
/ TIME	9.40	9.50	10.45	11.40	12.35	01.15	02.10	03.05	04.00
Mon									
Tue		-							
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Thu		BREAK				LUNCH			
Fri									
Sat		1							

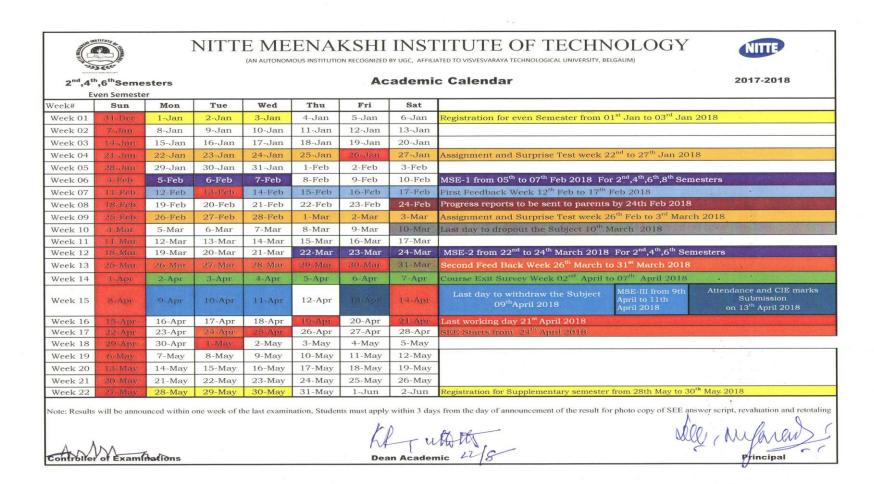
## LIST OF ABBREVIATIONS

ADE	The state of the s		
ADE	All India Council for Taskrical Education		
AICTE	All India Council for Technical Education		
BE	Bachelor of Engineering		
CAIR	Centre for Artificial Intelligence and Robotics		
CGPA	Cumulative Grade Point Average		
CIE	Continuous Internal Evaluation		
CO	Course Outcome		
CVRDE	Combat Vehicles Research & Development Establishment		
DRDO	Defence Research and Development Organisation		
DUGC	Department Undergraduate committee		
GAC	Grievances Appeal Committee		
HoD	Head of the Department		
IEDC	Innovation and Entrepreneurship Development Centre		
IISc	Indian Institute of Science		
ISTE	Indian Society For Technical Education		
KKC	Karnataka Knowledge Commission		
KSOU	Karnataka State Open University		
MBA	Master of Business Administration		
MCA	Master of Computer Applications		
MEMS	Micro Electro Mechanical Systems		
MHRD	Ministry of Human Resource Development		
MOU	Memorandum of Understanding		
MSME	Micro, Small and Medium Enterprises		
MTech	Master of Technology		
NAAC	National Assessment and Accreditation Council		
NBA	National Board of Accreditation		
NCC	National Cadet Corps		
NET	Nitte Education Trust		
NMIT	Nitte Meenakshi Institute of Technology		
NPTEL	National Programme for Technology Enhanced Learning		
NRB	Naval Research Board		
NSS	National Service Scheme		
NUEPA	National University of Educational Planning and Administration		
OBE	Outcome Based Education		
OPAC	Open Public Access Catalogue		
PEO	Program Educational Objective		
PG	Post Graduate		
PhD	Doctor of Philosophy		
PIO	Person of Indian Origin		
PO	Program Outcome		
PSO	Program Specific Outcome		
R&D	Research and Development		
SEE	Semester End Examination		
SGPA	Semester Grade Point Average		
TEQIP	Technical Education Quality Improvement Program		
UG	Under Graduate  Under Graduate		
USN	University Seat Number		
VTU	Visvesvaraya Technological University		
V 1 U	visvesvaraya recimological emiversity		

## ACADEMIC CALENDAR FOR 2017 - 18 ODD SEMESTER



## ACADEMIC CALENDAR FOR 2017 - 18 EVEN SEMESTER



# LIST OF GENERAL HOLIDAYS FOR THE YEAR 2017, AS PER VTU, BELGAUM

Sl. No.	Date	Day	Holiday
1	14-01-2017	Saturday	Sankranthi
2	26-01-2017	Thursday	Republic Day
3	24-02-2017	Friday	Mahashivarathri
4	29-03-2017	Wednesday	Chandramana Ugadi
5	14-04-2017	Friday	Good Friday/Ambedkar Jayanthi
6	29-04-2017	Saturday	Basava Jayanthi
7	01-05-2017	Monday	May Day
9	26-06-2017	Monday	Ramzan
10	15-08-2017	Tuesday	Independence Day
11	25-08-2017	Friday	Ganesha Chaturthi
12	02-09-2017	Saturday	Bakrdi
13	19-09-2017	Tuesday	Mahalaya Amavase
14	29-09-2017	Friday	Ayooda Pooja
15	30-09-2017	Saturday	Vijayadashami
16	02-10-2017	Monday	Gandhi Jayanthi
17	05-10-2017	Thursday	Valmiki Jayanthi
18	18-10-2017	Wednesday	Naraka Chaturdashi
19	20-10-2017	Friday	Deepavali
20	01-11-2017	Wednesday	Rajyotsava Day
21	06-11-2017	Monday	Kanaka Jayanthi
22	01-12-2017	Friday	Id-Milad
23	25-12-2017	Monday	Christmas Day

## **HOW TO REACH NMIT?**

