

HAND BOOK

2022 – 2023



MAR BASELIOS

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

(Approved by the AICTE and affiliated to the APJ Abdul Kalam Technological University)

Accredited by NAAC with 'A' Grade (CGPA - 3.13)

B.Tech Programmes accredited by NBA since 2016

MAR IVANIOS VIDYANAGAR, NALANCHIRA P.O.
THIRUVANANTHAPURAM – 695 015
KERALA, INDIA.

Tel. No. 0471 - 2545866, 2545868, 2545872, Fax. 2545869

E Mail : mbcet@mbcet.org

Website : www.mbcet.ac.in

Note

This Hand Book is intended for the Students admitted to the College in 2022-2023 under the autonomous system. For detailed Syllabus and updates students may visit the Department website as given below.

Department	Link
Civil Engineering	: https://mbcet.ac.in/departments/civil-engineering/syllabus/
Computer Science and Engineering	: https://mbcet.ac.in/departments/computer-science-engineering/syllabus/
Electronics and Communication Engineering	: https://mbcet.ac.in/departments/electronics-communication-engineering/syllabus/
Electrical and Electronics Engineering	: https://mbcet.ac.in/departments/electrical-electronics-engineering/syllabus/
Mechanical Engineering	: https://mbcet.ac.in/departments/mechanical-engineering/syllabus/

PERSONAL INFORMATION

Name:

Date of Birth:Gender:

Branch:

Class and Roll No:

ID Card No:

Name & Address of Parent:

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Email ID:

Name & Address of Local Guardian:

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Phone No/Mobile No:.....

Email ID:

Blood Group:

Emergency Contact No:.....

Driving License No:..... Vehicle No.....

Bank Account:

PREAMBLE

The Malankara Syrian Catholic Church has been in the field of Education in India for over Eight Decades, having established hundreds of Primary, Secondary and Higher Secondary Schools, Industrial Training Institutes and the Arts and Science Colleges. Mar Baselios College of Engineering and Technology (MBCET) established in 2002, by the Major Archdiocese of Trivandrum is administered by it through the Malankara Catholic Educational Society. The Society has ventured into the specialized areas of Higher Education such as Medical Science, Life Science and Management Studies also. Mar Ivanios College Campus, is enjoying a pride of place in the heart of Thiruvananthapuram city, The MBCET campus provides an ideal milieu for academic pursuits. The College is located in a verdant and serene environment, just 5 km. from the heart of the city among 17 educational Institutions. Aesthetically designed buildings in nine blocks spread over the campus have a total built-up area of over 36000 sq.m. An eco-friendly infrastructure concept has been executed. Rain water harvesting has been implemented right from the inception of the Institution. Each block is connected by Pedestrian Bridge, retaining the separate entity of each branch of Engineering studies with the recreation areas and Library centrally located. College enjoys high reputation and has become autonomy since 2020. College is affiliated to the APJ Abdul Kalam Technological University.

FOUNDER & HIS VISION

The Founder of the College, His Beatitude Moran Mor Cyril Baselios Catholicos and the first Major Archbishop of Trivandrum established this Institution with a sublime objective, of providing quality Technical Education rooted on fundamental human values. In the words of the Founder: "This Engineering College is meant to train and develop men and women of higher caliber, equipped with the most modern scientific knowledge and technological skills destined not only to help our people in their march towards progress but also to bring glory and honour to our people and our country. The Students of our College are to strive for excellence and skills and in the pursuit of success in life, in terms of their commitment to bring happiness to our fellow beings and for the development of our Nation."



PATRON

His Beatitude Moran Mor Baselios Cardinal Cleemis, Catholicos and Major Archbishop of Trivandrum, is the Patron of our College. As the President of the Malankara Catholic Educational Society under which the College functions, His Beatitude executes the administration through the Governing Body of the College. As His Beatitude puts it: "We wish to reach out to all sections of our society without the distinction of gender, caste, religion or creed. In short, Mar Baselios College of Engineering and Technology is envisaged to be a glaring example of the philosophy of education and the apostolate of Human Resource Development, which the Major Archdiocese of Trivandrum has been pursuing for the last eight decades".



VISION :

To be an Institution moulding globally competent Professionals as epitomes of Noble Values.

MISSION :

To transform the Youth as technically competent, ethically sound and socially committed Professionals by providing a vibrant learning ambience, for the welfare of humanity.

CORE VALUES

- Integrity
- Tolerance
- Professional Excellence
- Commitment
- Social Responsibility
- Accountability
- Innovation.

GOALS & OBJECTIVES

The College aims at achieving the integral development of human personality so as to ensure the possibility of living a life with its full glory. It endeavours to contribute in placing spiritually inspired human beings, at the centre of the Universe in the New Millennium, ensuring the creative use of Science and Technology, in the context of a techno-centric life and sustainable development.

In order to accomplish this, special endeavour will be made to enable the students:

- * To strive for excellence in life.

- * To promote scientific enquiry and innovations
- * To acquire and apply knowledge with prudence for the welfare of humanity.
- * To be the agents of qualitative social changes.
- * To use Science & Technology for the preservation of human values and human dignity.
- * To apply Science & Technology for universal brotherhood by being agents of the Gospel of Love and to be architects of future.

QUALITY POLICY STATEMENT

We, at MBCET, are committed to quality, to be globally competent in Technical Education, pursuing its quest for excellence in teaching, learning, innovation and research guided by noble values, ethical vigour and social commitment, enabling the stakeholders to adapt themselves to varying technologies and environment for the preservation and improvement of life, by encouraging sustainable practices.

MOTTO: "DUC IN ALTUM"
(Leading to the Heights of Excellence)

GOVERNING BODY

His Beatitude Moran Mor Baselios Cardinal Cleemis Catholicos	- Chairman
His Excellency Rt. Rev. Dr. Mathews Mor Poly Carpos (Aux. Bishop of Tvm)	- Member
Rev. Fr John Varghese Palanilkunnathil, (Bursar, MBCET)	- Member
Rev. Fr Thomas Kayyalackal (Finance Officer of Major Archdiocese of Trivandrum)	- Member
Shri. Jacob Punnoose, IPS (Retd)	- Member
Dr. S. Viswanatha Rao, Vice Principal, MBCET	- Member
Dr. Neethu Roy, Dean (R & C) Prof CED, MBCET	- Member
Dr. Tony Thomas, Global Chief Digital and Information Officer Signify	- Member
Prof. Arun Kumar Agrawal, IITBHU(Retd)	- UGC Nominee
Mr. Ajayan C., Addl. Secretary to Govt. (HE)	- Govt. Nominee
Dr. Suresh Babu V, Principal CET	- KTU Nominee
Dr. Abraham T Mathew, Principal, MBCET	- Member

Secretary

Advisory Board

Mr. John Mathai, IAS (Retd.), Former Chief Secretary, Govt. of Kerala.

Mr. John P. Zacharia, Director, VSSC, Trivandrum

Dr. S. Unnikrishna Pillai, Former Principal, REC (NIT), Calicut.

Dr. Chem Nayar, Emeritus Professor, Curtin University, Australia

Dr. Vijayan K. Asari, Professor, University of Dayton, Ohio, USA.

Dr. Achuthsankar S. Nair, Head, Dept. of Computational Biology &
Bioinformatics, Uty. of Kerala.

Dr. Saji Gopinath, Professor, Vice Chancellor, Digital University, Kerala.

Mr. Alexander Varghese, Chief Administrative Officer, UST Global,
Trivandrum

Mr. Jayan P. Nair, Senior Vice President, IBS Software Services,
Trivandrum.

Mr. Rajesh Nair, CTO and Founder, Degree Controls Inc., USA.

COLLEGE COUNCIL

1. Dr. Abraham T Mathew (Principal)
2. Fr John Varghese Palanilkunnathil (Bursar)
3. Dr. S Viswanatha Rao, Vice Principal & Dean(Academic-UG)
4. Dr. Paul Thomas (Dean - PGS&R)
5. Dr. Neethu Roy (Dean – R&C)
6. Dr. George Zachariah, Dean(SA)& NAAC Coordinator
7. Dr. Muraleedharan K, Dean (Admin)
8. Dr. Pradeep M., Controller of Examinations
9. Prof. Joseph Cherian, HoD S&H
10. Dr. Jayashree M J, IQAC Coordinator
11. Dr. Jayakumari J (HoD - ECE)
12. Dr. Tessy Mathew (HoD – CS)
13. Dr. Jayasree S (HoD – CE)
14. Dr. Rajesh T.N (HoD – ME)
15. Dr. Nisha G K, HoD EEE & Camp Officer (KTU Valuation)
16. Dr. Christi Francis (HoD Ph.Edn.D)
17. Prof. Raju K Gopal, Head, ITMS
18. Ms. Elizabeth Varghese, Asso. Professor, EED, Admission
Chairperson

19. Ms. Asha S. Asso.Prof – CSED - Exam Cell Co-ordinator & CoE
20. Dr. Archana P Das, Asst Professor, S & H, First Year Coordinator
21. Ms. Lakshmy S., Asst. Professor, ECE, Coordinator Statutory Reports
22. Dr. Jisha John, Assoc. Professor, CSED-Member Secretary

Academic Council

- | | | |
|--|---|----------------------|
| 1. Dr. Abraham T Mathew (Principal) | - | Chairman |
| 2. Dr. S Viswanatha Rao
(Vice Principal, Dean (Academic Affairs-UG)) | - | Member. |
| 3. Rev. Dr. Gigi Thomas Dean, Mar Ivanios College | - | Member. |
| 4. Dr. Ayyappan M.
Former MD, HLL Lifecare Ltd. | - | Member. |
| 5. Dr. Ashok S.
Professor (HAG), EED, NIT Calicut | - | Member. |
| 6. Dr. Kurien Issac
Senior Prof, Dean IPRCE, Aerospace Engg. Dept., IISST | - | Member. |
| 7. Dr. K. Muraleedharan Nair
Professor, Dean (Administration) | - | Member. |
| 8. Dr. Paul Thomas
Professor, Dean (PG Studies & Research) | - | Member. |
| 9. Dr. Neethu Roy
Professor, Dean (Research & Consultancy) | - | Member. |
| 10. Dr. Jayasree S., Professor & HoD, CED | - | Member. |
| 11. Dr. Tessy Mathew, Professor & HoD, CSED | - | Member. |
| 12. Dr. Jayakumari J, Professor & HoD, ECE | - | Member. |
| 13. Dr. Jayshree M.J., Professor & IQAC Coordinator | - | Member. |
| 14. Dr. Nisha G.K., Professor & HoD, EED | - | Member. |
| 15. Dr. Rajesh T.N., Asso. Professor & HoD, MED | - | Member. |
| 16. Prof. Joseph Cheriyan, Professor & HoD, S&H | - | Member. |
| 17. Dr. Pradeep M, Asso. Prof, MED,
Controller of Examinations | - | Member. |
| 18. Dr. Jisha John Asso. Professor, CSED | - | Member.
Secretary |

- | | | |
|--|---|---------|
| 19. Dr. Swapna P.S. Asso. Professor, ECE | - | Member. |
| 20. Mr Akhil Raj S.R. Asst. Professor, CED | - | Member. |
| 21. Dr. Sreelatha G (KTU Nominee) | - | Member. |
| 22. Dr. Savier J. S (KTU Nominee) | - | Member. |
| 23. Dr. Ashfak. A (KTU Nominee) | - | Member. |

Board of Studies (BOS)

The Boards of Studies are constituted as UGC guidelines of the Board of Studies of the particular discipline to which he/she belongs. The Heads of Departments will be the Chairpersons of the BOS of each discipline which will have External subject Experts.

Finance Committee

In accordance with the UGC guidelines for Autonomous Colleges a finance committee has been constituted to deal with the financial aspects of the institution.

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|---|---|----------|
| Dr. Abraham T Mathew, Principal | - | Chairman |
| Fr. John Varghese Palanilkunnathil, Bursar | - | Member |
| Dr. George Zacharia, Dean (Student Affairs) | - | Member |
| Finance Officer KTU | - | Member |

Administration

Principal

Dr. Abraham T Mathew

Bursar

Fr. John Varghese Palanilkunnathil

Asst. Bursar

Fr. Thomas Mukalumpurath

Internal Quality Assurance Cell (IQAC)

Internal Quality Assurance Cell (IQAC) is a body constituted in accordance with the norms of the National Assessment and Accreditation Council (NAAC) an autonomous body of the UGC. The objective of this body is to formulate and propose quality measures to be implemented in the college to enhance and sustain the quality performance of the Institution. The IQAC is constituted with the following office-bearers.

Chairman: Dr. Abraham T Mathew, Principal

Vice Chairperson : Dr. S. Viswanatha Rao, Vice Principal & Dean (Academic

Affairs –UG) (Coordinator – Strategic Planning)

Management Representative : Fr John Varghese Palanilkunnathil (Bursar)

Senior Advisor : Dr. George Zachariah, Professor, S&H & Dean (Student Affairs), (Coordinator – NAAC)

IQAC Coordinator : Dr. Jayashree M.J., Professor, ECED (Coordinator – Audits, UGC Reporting & Member Secretary IQAC)

Members: Administrative Officer(s):

Dr. Paul Thomas, Dean (Post Graduate Studies and Research)

Dr. Neethu Roy, Dean (Research and Consultancy)

(Coordinator – NBA)

Dr. Muraleedharan Nair K. , Dean (Administration)

Dr. Pradeep M., Asso. Professor, MED & Controller of Examinations

Dr. Tessa Mathew, Professor and HoD, CSED

Dr. Jayakumari J., Professor and HoD, ECE

Dr. Jayasree S., Professor and HoD, CED

Dr. Nisha G.K. Professor and HoD, EEE

Dr. Rajesh T. N., Associate Professor and HoD, MED

Prof. Joseph Cherian, HoD, S&H

Dr. Christi Francis, HoD, PED

Prof. Raju K Gopal, ITMS Head, Professor, CSED

Members: Faculty:

Dr. Swapna P.S., Asso. Prof., ECE, Asso. Coordinator, NBA,

Ms. Deepa P.L., Asst. Prof., ECE, Asso.Coordinator, NAAC

Mr. G.L. Praveen, Asst. Prof., CSED, Asso.Coordinator, KTUAudits,

Ms. Shyju Susan Mathew, Asst. Prof., EEE, Asso. Coordinator, UGC Reporting

Dr. Jaya S. Pillai, Asst. Professor, CED

Mr. Arvind P., Asst. Professor, MED

Nominees from Alumni:

Mr. Ajithkumar G S, 2011- CSED

Mr. Jerin Chacko, 2007- EED

Nominee from local society :

Mr. Jojimon Thomas, Vice President, PTA

Nominees from Employers / Industrialists / Stakeholders :

Mr. Biju Philip, Sr. Vice President, Envestnet.

Nominee from Professional body :

Mr. Aditya S., IET

Administrative Staff representative :

Mr. Mohan George, Office Superintendent

Library Representative :

Mr. Binu K John, Librarian

Lab Staff Representative:

Ms. Linumole K. C. (Lab Instructor)

Student Representative:

Senate Chairperson / General Secretary

Invitee:

Ms. Sabitha S.Nair., Asst. Professor, S&H,

Ms. Lakshmy S, Asst. Professor, ECE

COURSES OFFERED

MBCET offers the following courses approved by the All India Council for Technical Education (AICTE) and sanctioned by the Govt. of Kerala, leading to the B.Tech., M.Tech. and Ph.D Degree of the APJ Abdul Kalam Technological University

	Branch of Study	No. of Seats
B.Tech. Programmes		
1)	Civil Engineering	120 + 6 (Fee Waiver)
2)	Computer Science and Engineering	120 “ “
3)	Computer Science and Engineering (Artificial Intelligence)	60 (new)
4)	Electrical and Computer Engineering	60 (new)
5)	Electrical and Electronics Engineering	60 + 3
6)	Electronics and Communication Engineering	120 + 6 (Fee Waiver)
7)	Mechanical Engineering	60 + 3
M.Tech. Programmes		
1)	Computer Science and Engineering	18
2)	Machine Design	18
3)	Power Control and Drives	18
4)	Telecommunication Engineering	18
5)	Structural Engineering	18
6)	Transportation Engineering	18 (new)
7)	IOT and Sensor Systems	18 (new)

COLLEGE STAFF

Principal : **Dr. Abraham T. Mathew**, M.Sc. (Engg), Ph.D.,
Senior Member IEEE, Life Member: ISTE,
Fellow : IETE.

Vice - Principal : **Dr. S. Viswanatha Rao**, M.E., Ph.D, Senior
Member IEEE

Deans

1. Dean (Academic Affairs-UG) : **Dr. S. Viswanatha Rao**, Vice Principal,
Prof. (ECE)

2. Dean (PG Studies & Research): **Dr. Paul Thomas**, M.Tech., LLB, Ph.D.,
PMP, C (Eng.), FIE, LMASI.

3. Dean (Research & Consultancy): **Dr. Neethu Roy**, M.Tech., Ph.D.

4. Dean (Administration) : **Dr. Muraleedharan Nair K**, MTech, PhD

5. Dean (Student Affairs) : **Dr. George Zacharia**, MA, PGDTE, PhD

Department of Civil Engineering

Professor & Head : Dr. Jayasree S, M.Tech, Ph.D

Professors : Dr. M. Satyakumar, M.Tech., Ph.D.
: Dr. Neethu Roy, M.Tech., Ph.D.
: Dr. Elizabeth C. Kuruvila, M.Tech, Ph.D.

Associate Professors : Dr. Jisha S.V., M.Tech, Ph.D.

Asst. Professors : Ms. Bindu Biju, M.Tech.
: Ms. Ann George, M.Tech. (AHoD)
: Ms. Jean Molly Simon, M.Tech.
: Dr. Jaya S. Pillai, M.Tech, Ph.D.
: Ms. Anupama Krishnan, M. Tech.
: Ms. Sherin Mathew, M.Tech.
: Ms. Lekshmi Chandran M., M.Tech.
: Mr. Akhil Raj S.R., M.Tech
: Ms. Anita A., M.Tech. (Leave)
: Ms. Nimisha Anna Jacob, M.Tech.
: Ms. Smrithi Cheriyaath, M.Tech.
: Ms. Rintu Johnson, M.Tech.
: Ms. Akhila A.M., M.Tech.
: Ms. Anupama Krishna D., M.Tech.
: Ms. Panchami Lal, M.Tech.
: Mr. Jomy Joseph Peedikayil, M.Tech.
: Mr. Sijo M. Saji, M.Tech.
: Mr. Jobin Joy, M.Tech.
: Ms. Joju M.R., M. Tech. (Leave)

- : Ms. Sangeetha Sajeew, M.Tech.
- : Ms. Nandana Ramesh, M.Tech.
- : Dr. Archana J. Satheesh, M.Tech, Ph.D.
- : Dr. Alice Thomas, M.Tech, Ph.D.
- : Dr. Praveen P.S., M.Tech, Ph.D.
- : Ms. Ansu Mathew, M.Tech
- : Ms. Diana Alice Sugunan, M.Tech.
- : Dr. Minu Ann Peter, M.Tech, Ph.D.
- : Ms. Lekshmisree. A.S., M. Tech.

Department of Computer Science and Engineering

- Professor & Head** : Dr. Tessy Mathew, M.Tech., Ph.D
- Professor** : Prof. Raju K Gopal , B.Sc. (Engg), M.Tech.
- Associate Professors** : Ms. S. Asha, M.E.
: Dr. Jisha John, M.Tech, Ph.D (AHoD)
- Asst. Professors** : Mr. G. L. Praveen, M.Tech.
: Mr. V. S. Shibu, M.Tech.
: Ms. V S. Devipriya, M.Tech. (Leave)
: Ms. Anne Dickson, M.Tech.
: Ms. B R. Poorna, M.E.
: Mr. Shon J. Das, M.Tech
: Dr. Jesna Mohan, M.Tech, Ph.D
: Ms. Anjali C, M. Tech.
: Mr. Robin Joseph, M.Tech.
: Ms. Aswathy Ravikumar, M.Tech. (Leave)
: Ms. Gayathri K S, M.Tech.
: Mr. Binu Jose A, M.E. (Leave)
: Ms. Jisha Jose, M.E.
: Dr. Shini Renjith, M.Tech, Ph.D (Leave)
: Ms. Kiran Baby, M.Tech
: Mr. Ramjith R.P., M.Tech
: Ms. Jayalekshmi J., M.Tech
: Ms. Dhanya L.K., M.Tech
: Ms. Anjali S., M.Tech
: Ms. Prathibha S. Nair, M.Tech
: Mr. Praveen J.S., M.Tech
: Ms. Vijitha Robinson, M.Tech.
: Ms. Nileena Ouseph, M.Tech
: Ms. Sreeja S.R, M.Tech
: Ms. Deepthi K. Moorthy, M.Tech.
: Mr. Arun K., M.Tech.
: Ms. Vishagini V., M.Tech.
: Ms. Lino Zachariah, M.Tech

Department of Electrical and Electronics Engineering

- Professor & Head** : Dr. G. K. Nisha, M.Tech, Ph.D.
- Professors** : Dr. Abraham T. Mathew (Principal) M.Tech,
Ph.D
: Dr. Ushakumari S., M. Tech, Ph.D.
- Associate Professors** : Ms. Elizabeth Varghese, M.Tech
: Dr. Shalu George K., M.E., Ph.D
- Asst. Professors** : Mr. R. S. Praveen Raj, M.Tech.
: Ms. P. Sheenu, M.E.
: Mr. F. R. Rejish Babu, M.E.
: Ms. P. Sandhya, M.Tech.
: Ms. Jomole Joseph Peedikayil, M.Tech. (Leave)
: Ms. Shyju Susan Mathew, M.Tech. (AHOd)
: Ms. A V. Soumya, M.Tech.
: Ms. Charivil Sojy Rajan, M.Tech.
: Ms. Manju Sreekumar, M.Tech. (Leave)
: Ms. Manju Ann Mathews, M.Tech.
: Ms. Surasmi N L., M. Tech
: Ms. Vandana P., M.Tech.
: Ms. Anu Gopinath, M.Tech. (Leave)
: Mr. Aswin R. B, M.Tech.
: Ms. A. N. Archana, M.Tech.
: Ms. Jeneena Babu, M.Tech
: Ms. Shilpa Susan Peter, M.Tech.
: Ms. Shilpa George, M.Tech.
: Mr. Ajish Ashok, M.Tech.
: Ms. Anila A.V., M.Tech.
: Ms. Revathy K.P., M.Tech.

Department of Electronics & Communication Engineering

- Professor & Head** : Dr. Jayakumari J., M.Tech, Ph.D
- Professors** : Dr. S Viswanatha Rao, M.E., Ph.D,
Senior Member IEEE
: Dr. Paul Thomas, M.Tech., LLB, Ph.D., PMP,
C (Eng.), FIE, LMASI.
: Dr. M J. Jayashree, M.Tech., Ph.D
- Associate Professors** : Ms. Luxy Mathews, B.Sc., B.Tech., M.Tech.
: Ms. Ancy S. Anselam, M.Tech.
: Dr. P S. Swapna, M.Tech, Ph.D.
: Dr. Sreedevi P, M.Tech., Ph.D

- Asst. Professors**
- : Ms. Teena Rajan, M.Tech, (AHoD).
 - : Ms. Deepa P L, M.Tech.
 - : Dr. Lani Rachel Mathew, M.Tech., Ph.D
 - : Mr. Niyas K. Haneefa, M. Tech.
 - : Mr. Jinu Baby, M.E.
 - : Ms. Ann Mary Alex, M.Tech.
 - : Mr. Anoop K. Johnson, M.Tech.
 - : Ms. Athira V, M. Tech. (Leave)
 - : Ms. Remya Annie Eapen, M.E.
 - : Ms. P P. Hema, M.Tech. (Leave)
 - : Ms. Lakshmy S, M.Tech.
 - : Mr. Shiras S.N, M. Tech.
 - : Ms. Anu Susan Philip, M.Tech.
 - : Mr. Sherry Varghese George, M.Tech.
 - : Ms. Amritha B.J., M.Tech.
 - : Ms. Ancy Joy, M.Tech.
 - : Mr. Arun J.S., M.Tech.
 - : Mr. Jithin M. George, M.Tech. (Leave)
 - : Mr. Jijo Jose, M.Tech.
 - : Ms. Salga Ann Jacob, M.Tech
 - : Ms. Saumya Thomas, M.Tech
 - : Ms. Liya Johnson, M.Tech
 - : Dr. Emy Mariam George, M.Tech, Ph.D
 - : Ms. Silpa A.S., M.Tech.

Department of Mechanical Engineering

Associate Professor & Head: Dr. Rajesh T.N, M.Tech, Ph.D

Professors

- : Dr. Muraleedharan Nair K.,M.Tech, Ph.D
- : Dr. Remil George Thomas, M.Tech, Ph.D.

Associate Professors

- : Dr. Pradeep M, M.Tech., Ph.D.
- : Dr. Nidhi M B, M.Tech, Ph.D
- : Dr. Vinod V, M. Tech, Ph.D, (AHoD)

Asst. Professors

- : Mr. Hari Venkit, M. Tech. (Leave)
- : Mr. Ayswer A S, M.Tech.
- : Dr. Premchand V P, M. Tech., Ph.D
- : Mr. Aravind P., M.Tech.
- : Dr. Prasanth P.S., M.Tech., Ph.D
- : Dr. Deepak G. Dilip, M.Tech., Ph.D
- : Mr. Deepak B., M.Tech.
- : Mr. Roshan George Koshy, M.Tech.
- : Mr. Ajeesh M V., M.Tech
- : Ms. Ruby Maria Syriac, M E.
- : Mr. Vinod V., M.Tech. (Leave)
- : Mr. Vishnu Prasad K.R., M. Tech. (Leave)
- : Mr. Raveesh G., M.Tech. (Leave)

- : Mr. Deepak B.S., M.Tech.
- : Mr. Bobin Saji George, M.Tech.
- : Mr. Melvin Jacob, M.Tech.
- : Mr. Vaisakh S. Nair, M.Tech.
- : Mr. Emmanuel Ruben Gilbert, M.Tech.
- : Mr. Abhiram R. Nair, M.Tech.
- : Mr. Akhilchandran B.S., M.Tech.
- : Mr. Alen K. Johnson., M. Tech.
- : Mr. Mobin M. Mathew, M.Tech.
- : Mr. Bipin Shankar, M.Tech.

Department of Sciences and Humanities

Professor & Head : Prof. Joseph Cheriyan, M.Sc., M.Phil

Professors : Dr. George Zacharia, M.A., PGDTE, Ph.D.
: Prof. Y. Mathew, M.Sc., M.Phil.

Associate Professor : Dr. G.P. Krishna Mohan, M.Sc., Ph.D.

Asst. Professors : Ms. Sabitha S. Nair, M.Sc., B.Ed.,M.Phil
: Ms. Lakshmi J.S., M.Sc., B.Ed.
: Dr. Archana P. Das, M.Sc., M.Phil, Ph.D
: Dr. Suvith. V.S., M.Sc., M.Phil., Ph.D
: Ms. Lekshmi I, M.Sc., B. Ed., M. Phil (Leave)
: Ms. Jisha J J., M.Sc., B. Ed., M.Phil (AHOd)
: Ms. Uma M., M.Sc., B. Ed., M.Phil.
: Dr. Veena Nair, MA, M.Phil., Ph.D.
: Dr. Vidya Vilas, M.Sc, Ph.D.
: Mr. Vinu. V, M.A
: Ms. Sruthi Janardhanan M.Sc.
: Mr. Anish M.S.,B.Tech, Msc.
: Ms. Anaswara Johny, M.Sc., B.Ed.
: Ms. Soji Merin Mathew, M.Sc.
: Ms. Roshna Rachel Philip, MA, B.Ed.

Department of Physical Education

Asst. Director of Physical Edn.: Dr. Christi Francis, M.P.Ed,DCA, M.Phil, Ph.D
: Dr. Deepak Raj, M.P.Ed, DCA., Ph.D

Placement Co-ordinator : Mr. Justin Joseph, M.Sc., M.Tech.,MBA

Student Counselor

Dr. Shobha Treasa George, M.Sc., Ph.D., MFT, CPT (USA)
Fr. Bitty Mathew, M.SW, M.Div

Nursing Station in-Charge

Lt. Col. Sifi Kuriakose (Retd.)

Technical Staff

Department of Civil Engineering

Lab Instructor Sr. Grade	: Mr. Johnson George
Lab. Instructor Gr. I	: Mr. Edwin Roy E. J. : Ms. Dhanalekshmi M. C
Lab. Instructor Gr. II	: Mr. Vijin V. J. : Mr. Shijin Kumar R.V.
Lab Assistant Gr. I	: Mr. Arun J. : Ms. Vidyamol S. : Ms. Renchu Mohan R. : Mr. Anand M.C.
Lab Asst. Gr. II	: Ms. Anjitha Rajan : Mr. Sarath Kumar S.

Department of Computer Science and Engineering

Lab. Instructor Sr. Grade	: Ms. K.C. Linumole : Ms. G. Priya
Lab. Instructor Gr. I	: Ms. Rejani L. : Ms. Naicy M. John
Lab. Instructor Gr. II	: Ms. Vichithra V.R.

Department of Electrical and Electronics Engineering

Trade Instructor	: Mr. V. Ramachandran Nair
Lab. Instructor Gr. I	: Ms. S. Prabha : Mr. E. Senthilkumar : Mr. Rajeev Mon S. : Ms. Shabina N. : Ms. Smiji R. S.
Lab. Instructor Gr. II	: Mr. Ratheesh Kumar V. S. : Mr. Vishnuchandran C. L. : Ms. Suchithra M. S. : Mr. Sajan S.S.
Lab. Assistant Gr. I	: Mr. Midhun Gopal V. : Mr. Anand B.H. : Mr. Arun N

Department of Electronics and Communication Engineering

Trade Instructor	: Mr. K. Ramachandran Nair
Lab Instructor Sr. Grade	: Ms. Manju Suresh
	: Mr. S. M. Ajith Kumar
Lab. Instructor Gr. I	: Mr. C. S. Shinin
	: Mr. Anilkumar B. S.
	: Ms. Sarika U. S.
	: Ms. Swapna Lekha U.
	: Mr. Rajendran H.
	: Mr. Nobert A Varghese
Lab. Instructor Gr. II	: Ms. Hanna Varghese
	: Mr. Dhaneesh Raj. D.
Lab. Assistant Gr. I	: Mr. Akhil Sudheesh

Department of Mechanical Engineering

Workshop Superintendent	: Mr. G. Sukumaran Asari, B.Tech.
Workshop Instructor Gr. I	: Mr. Sijo Thomas
	: Mr. Anil Kumar R. S.
	: Mr. Aneesh S. C
	: Mr. Shaji D.
Workshop Instructor Gr. II	: Mr. Biju Androose
	: Mr. Aneesh Rajan A. T.
	: Mr. Balamurali D.
Welder/ Workshop Instructor	: Mr. Biju K.
Workshop Asst. Gr. I	: Mr. Prasanth S. S.
	: Mr. Shaji P.
Lab Assistant Gr. I	: Mr. Shijin Kumar S.
Workshop Instructor	: Mr. Velukutty
	: Mr. G. Krishnankutty

Department of Science and Humanities

Tutor	: Ms. Shimamol . C.
Lab Instructor II	: Mr. Praveen R.
Lab Assistant	: Mr. Abhijith S.L.

ITMS Division

Programmer, Sel. Grade	: Ms. Reena Rajan
Asst. System Administrator	: Ms. V. S. Alosius
Asst. Network Administrator	: Mr. Jiju Wilfred
Lab. Instructor Gr. I	: Ms. L. Sindhumol
Programmer	: Mr. Shinulal P. K.

Asst. System Support Techn. : Mr. Laiju B. Nair,
Junior System Supp. Techn. : Mr. Jith C.
Data Entry Operator : Ms. Priya Rani K.

Library Staff

Librarian : Mr. Binu K. John, B.Sc., M.LISc., M.Phil., PGDCA
Assistant Librarians : Ms. Anjana G., M.Sc., M.LISc.
: Mr. Sambhu B.K., B.Com, M.LISc.
: Mr. Sabeesh T., B.A., M.LISc.
Office Assistant : Ms. Sherin Mary Joseph, B.Com, PGDCA

Office Staff

Senior Superintendent : Mr. Mohan George, B.Com.
Section Officer : Mr. Varghese Thomas, B.Com
Selction Grade Assistants : Mr. Renny Thomas Abraham, B.Com., PGDCA
: Ms. Shiji George, B.A.
Senior Office Assts. : Mr. Jacob Varghese
: Mr. D. Joykutty, B.A., PGDHRM
Accountant : Mr. Aiju Looke, B.Com, COPA
Receptionist : Ms. Accamma Kumary George, MA, PGDMM
Confidential Assistant Sr. Grade : Ms. Soni Gerry, M.Sc., B.Ed., DSM.
Senior Office Assistant : Ms. Sandhya R.S., B.Com, CFA, TTC
Store Assistant : Ms. Rema G.S., B.A.
Confidential Assistant Gr. II : Ms. Silja S., M.Sc.
Office Assistant : Ms. Nisha Mathew, M.Sc.
Clerical Assistants : Ms. Jancy B. S.
: Ms. Nisha N.S
Office Assistant : Mr. Mohanadas M.P., BA
Clerical Assistant : Ms. Ligi S B. Kumar
Office Assistant : Ms. Amala Asokan L., B.Tech.
Attender Gr. I : Mr. Mathew Thomas
Attenders : Mr. Sabu B. S.
: Mr. Retnakaran C.
Peons : Mr. Rejy John
: Mr. Anikumar A.

GENERAL DISCIPLINE

Discipline, both in personal and professional matters, is essential for the success of an Engineer. Well mannered and prudent behaviour on campus will improve one's self-esteem and will help in having good inter-personal relations. The high level of discipline consistent with the superior standards of the Centres of Excellence in Higher Education shall be maintained on the campus. The following guidelines will help in maintaining discipline on campus and they shall be adhered to by all.

1. Courteous behaviour, an essential ingredient of Professional Competence, is expected from all. Dishonesty, blasphemy, sedition ragging obscenity in word or act, harassment or any other acts of misconduct will invite strict disciplinary action.
2. Students shall wear the prescribed uniform whenever on the campus.
3. Students shall wear the ID cards while on the campus.
4. Students should not loiter in the corridors or on the campus during class hours. They should make use of their free time by using the Library, Computer facilities or other facilities for the extra-curricular activities.
5. Habitual negligence of academic work, absence from internal examination, non-submission of assignments, frequent absence from classes, etc., will be reported to the parents and if not corrected, may lead to discontinuance from the programme.
6. Students, if they have any grievance and personal problems shall bring them to the notice of the Faculty Advisor, HoD, Grievance Committee or the College authorities individually; but shall not take recourse to collective complaints or petitions to anybody within or outside the College.
7. Students are forbidden from attending or organizing any meeting in the College or in its premises or collecting money for any purpose without the permission of the Management.
8. Political activity in any form, under any banner is not permitted in the campus.
9. Wilful damages to property and equipment will have to be compensated for. Pasting of posters and notices on walls or disfiguring the building and campus, in any form are forbidden.
10. Students organizing tours on their own accord without permission and teachers accompanying them is banned. Any act contrary to this rule will invite strict disciplinary action.

Prevention of Ragging

Ragging, in any form is prohibited by law. The Govt. of Kerala has banned ragging in Educational Institutions / Hostels vide the Kerala Prohibition of Ragging Act 1998 Section 3 which makes ragging punishable as follows:

- a) Imprisonment up to a term of 2 years
- b) A fine up to Rs.10000/-
- c) Dismissal from the Institution. The students so dismissed shall not be admitted to any other Educational Institution for three years.

Anti-ragging Committee and Anti-ragging Squad

In compliance with the AICTE regulations Anti-ragging Committee and Anti-ragging Squad have been constituted to prevent the menace of ragging. The squad will conduct frequent patrolling in the common areas of the campus and maintains vigil to prevent the occurrence of ragging. The squad will also have the responsibility to investigate incidence of ragging, if any and report to the Principal.

Students shall not indulge in any of the following activities, which are treated as ragging:

- a. Any act that prevents, disrupts or disturbs the regular academic activity of a student.
- b. Exploiting the service of a junior student by a senior student or a group of senior students.
- c. Any act of financial extortion or forceful expenditure burden put on a junior student including fund-raising for any organizations.
- d. Any act of physical abuse including all variants of it: annoying, playing, practical jokes, sexual abuse, homosexual assaults, stripping, forcing obscene and lewd acts or gestures.
- e. Any act of abuse by spoken words, emails, SMS or any other means.
- f. Any word or act that causes hurt to the dignity of the individual.
- g. Entering without permission any class other than the one assigned to a student.
- h. Forcing a student to boycott class without his/her consent to participate in strike, demonstration, dharna, etc.

Reporting Cases of Ragging

The complaints or information with regard to ragging could be oral or written and even from third parties. The burden/responsibility of proving his/

her innocence rests with the accused. Written Complaints can be lodged with the Principal, HoD's, Class Advisor or any of the members of the Anti-Ragging Committee. All complaints/information received shall be kept strictly confidential to protect the complainant and due enquiry shall be conducted as required under the law. In the event of a student being booked in a criminal offence and being suspended from the College, he/she will be re-instated only after his/her obtaining clearance certificate from the Police Officer concerned.

Parking of Students' Vehicles

Parking of two wheelers within the Campus is permitted only in the specified parking area for Boys and Girls. Students are not permitted to take out their vehicles during the working hours. In case of urgency, prior permission should be secured. Students are not permitted to use four-wheelers on the Campus. In urgent situations which demand the use of four-wheelers, prior permission should be obtained from the authorities.

Mobile Phones

Usage of mobile phones with or without Camera/smart phones are not allowed on the Campus during class hours. Students who bring the phone shall be very prudent in its use all the time. Phones shall be kept in switched off mode while attending classes. If any student is found using mobile phones inappropriately, the phone shall be confiscated and disciplinary action shall be initiated against him or her.

ETHICS COMMITTEE

Government has given specific instructions to restrict the use of mobile phones and prohibit fashion shows and vulgar dances in the campuses. Accordingly Institutional Level Ethics Committee has been constituted to oversee the usage of the phones. In compliance with the order of Hon'ble High Court of Kerala and the instructions issued by the Government, a surprise inspection squad is also constituted in the Institution to ensure the compliance. The squad is empowered to conduct surprise inspections in the campus and will furnish reports to the Ethics Committee there upon to the Principal for further necessary action.

INFORMATION TECHNOLOGY MANAGEMENT AND SERVICES (ITMS)

Information Technology Management and Services (ITMS) division effectively manages the IT infrastructure facilities and provides quality IT Services for the Institution's Research, Academic and Administrative needs. ITMS is headed by the Head-ITMS and has four sub units, namely Server

Administration, Network Administration, Security and System Maintenance & Support having a total of 9 staff.

Core Services

- Installation, Operation and Management of the computer backbone network in the College buildings.
- Installation and Maintenance of all computer hardware and systems like UPS, WiFi, Access Points, LCD Projectors, Biometric Machines, etc.
- Connection of the College's Network to Internet through Firewall and its management.
- Management of a central storage space and email service for all staff.
- Installation, Operation and Management of Student Management System, Course Management System (Moodle), Asset Tracking and Management System, Biometric Attendance System and other Campus Management Software.
- Co-ordination of Campus-wide software licenses.
- Co-ordination of on-line publication on the College website.

LIBRARY

The Library has institutional membership with UGC-INFLIBNET, e-ShodhSindhu, DELNET, National Digital Library of India (NDL) and AICTE consortium.

The library has access to **E-Journals of IEEE (ASPP), Springer ASCE (American Society for Civil Engineers), ASME (American Society for Mechanical Engineers), IEI (India) and EBSCO - Engineering E-Books. etc...**

A separate periodical section is there with 96 National Journals. The Library is computerized using KOHA ILMS. The circulation is based on barcode system. The important library services are:

* Digital Library, * Remote Access * Institutional Digital Repository, * Reprographic Facility *Engineering Portal * Library Instruction Classes * E-Resources awareness programmes * SDI – Selective Dissemination Information * CAS – Current Awareness Service * OPAC – Online Public Access Catalogue * On demand literature search * Library Blog * Online access to E-Resources, * Book Bank etc.

MBCET Library Resources on Web : <https://linktr.ee/mbcetlibrary>

Library Timing: The Library will remain open from 8.30 am to 6.00 pm on all working days and on Saturdays from 9 am to 4 pm.

LIBRARY RULES AND REGULATIONS

All members of the staff and students of the College are entitled to use the Library.

1. B.Tech students can borrow 3 books, B.Tech honours students and M. Tech. students can borrow up to 4 books for a period of 30 days. Faculty members can borrow 6 books for a period of 4 months and all other staff can borrow 2 books for 4 months.
2. The period of borrowing will be 30 days including the day of issue for all students and research scholars.

If a book is not returned to the Library within the stipulated time, an overdue charge of Rs 5 per book per day is charged.

3. The library is kept open on all working days, the timings will be specified on the notice board. At present the library is kept open from 8.30 a.m. to 6.00 p.m.
4. Books in the Reference Section are not open for borrowing.
5. Writing or underlining in the books, periodicals, maps etc. is not allowed. If required a tracing may be taken with the permission of the librarian. The person in whose name a book/periodical is issued will be held responsible for the care of the same. He/she will have to bear the compensation for any damage or loss. If books borrowed from the library are lost, the matter must be reported to the Librarian immediately. The member has to replace the same or a later edition of the same books lost/damaged, within a week's time. If the replacement is not possible the following will be the procedure to recover the cost of the book lost/damaged.
 - a) For a foreign edition: The cost of book converted as per current conversion rate of the foreign currency plus 200% of the cost, will be recovered. For an Indian edition: printed price of the book plus 200% of the cost will be recovered.
 - b) Periodicals: same as above.
6. All personal belongings such as text books, note books, files, briefcases, umbrellas etc. should be kept at the Property Counter. However calculators and plain paper for taking down notes can be brought inside the library.
7. Silence should be observed within the library rooms and halls. Students shall have their identity cards with them while in the Library and shall produce it along with the Barcode ID Cards at the issue counter.

8. Members are not permitted to sub-lend books borrowed from the library.
9. Periodicals are regarded as reference books.
10. All the books borrowed should be returned at the end of the Semester Examinations.
11. A student leaving the Institution before or after completing the Course, has to produce a Non- Liability Certificate from the Librarian for getting any certificate or reimbursement of the Caution Deposit from the College.

CLASS HOURS

The College works under a full day system from 9.15 am to 4.30 pm.

DRESS-CODE

Students shall wear the prescribed uniform while on the campus during class hours. They should dress modestly while attending Programmes on the campus or outside on other occasions.

IDENTITY CARD

It is mandatory that all Students should have their identity cards properly displayed while on the campus.

LEAVE

1. All students shall attend classes regularly. They shall apply for leave if they have to be absent for any reason. Leave application in the prescribed form sanctioned by the HOD must be submitted to the Class Coordinator.
2. For absence exceeding three days, a letter from parent or guardian and a medical certificate whenever necessary, should support the application for leave of absence and for such leave of absence, the application should be submitted on the day on which the student is reporting at the College.

Industrial Training

College promotes industrial training for enabling learning beyond the curriculum. Students going for Industrial Training outside Trivandrum should obtain written permission from their parents and the consent letter should be submitted to the Head of the Department concerned, through the Faculty Advisor.

External Technical/Cultural Fests

Guidelines

1. A student intending to take part in an event in the Technical/Cultural Fest outside the campus should make a request to the Staff Advisor through the Faculty Advisor and the HOD

2. The request should include an application for duty leave in the prescribed form (Form #06).
3. The student who has subsequently participated in the event, should submit, within a week after the end of the duty leave period, copies of certificates of participation / laurels won to show that leave has been utilized for the purpose for which it was applied for.
4. Relevant information regarding the above is conveyed to all the members of Faculty concerned for attendance purposes.
5. A Leave record the class should be maintained by the respective Faculty Advisor. Details of leave taken by the students, duty leave issued, other personal details etc. of each student should be recorded, preferably in a separate page.

Procedure for selection:

- a. Teams representing the college in Inter collegiate/University competitions shall get prior permission.
- b. A selection will be made, if the number of teams interested in participating in any event exceeds the number that is permitted by the Event Coordinator.
- c. External Judges will be brought in, as and when needed, in order to do an unbiased selection of teams which will represent the College in the event.
- d. In case the number of teams interested in participating in any event does not exceed the number that is permitted by the Event Coordinator, a screening will still be done internally to ensure that the programme is of good standard.

Note: Financial help may be provided to the needy participant/s and deserving cases at the discretion of the Management

INTERNAL EXAMINATIONS

- 1) There will be at least two Internal Examinations as part of the continues assessment in a Semester.
- 2) A Progress Report will be sent to the Guardian after the Internal Examination giving details of marks scored, attendance gained and position in the Class.
- 3) Guardians of those students who show poor progress should meet the Staff Advisor on receipt of the Report.

ACADEMIC AWARDS

I. Mar Baselios Youth Excellence Award

Mar Baselios Youth Excellence Award has been instituted in honour of the Founder of MBCET, the late **His Beatitude Moran Mor Cyril Baselios, Major Archbishop Catholicos**. True to the spirit of the Founder's vision, the

award is intended to identify and promote the pursuit of excellence among the Engineering students of Kerala. The winner is selected on the basis of all round excellence in Academics, Leadership, Arts & Sports, Personal Conduct, Ethics and Social Service Activities. A panel of experts will short list the entries for the award. The winner will be selected from the short listed candidates after a personal interview. The award comprises a prize money of Rs.1,00,000/- Certificate and Memento.

II. Other Awards

1. ALL ROUND PERFORMANCE AWARD (year of admission–year of admission+4)

- To be awarded to final year UG students
- Selection will be based on performance in Academics (40 points), Extracurricular & Co-curricular activities (60 points)
- One student from each Department who secures maximum points out of 100 points according to given criteria will be selected
- Improvement exams and Re-valuation can be considered
- Entries with condonation or supplementary papers will be disqualified

2. THE BASELIAN AWARD

- For the best final year UG student
- Selection will be based on performance in Academics (40 points), Extracurricular & Co- curricular activities (60 points) and an Interview (25 points)
- Two students from each Programme of the Department who secures first and second positions based on scores out of 100 points according to given criteria of “All Round Performance Award” will be selected for the interview.
- The shortlisted candidates will be interviewed by the Vice Chairman Governing Body/Experts.
- The Final Year student who secures maximum points out of 125 will be selected for the Award.
- Same student can be awarded “The Baselian Award” and “All Round Performance Award” of a particular Department”, if found qualified.
- Improvement exams and Re-valuation can be considered
- Entries with condonation or supplementary papers will be disqualified

3. PROFICIENCY AWARD

- Will be given to PG and UG students
- Students with highest University Examination mark CGPA in the previous two published results.
- One student from each Branch for UG
- One student from each Stream for PG
- Marks obtained in the first attempt only will be considered.

- Improvement marks will not be considered

4. **BEST ACADEMIC PERFORMANCE AWARD FOR OUTGOING STUDENTS**

For PG and UG students

- One UG student from each Branch who secures highest CGPA in University Examinations from S1 S2 to S8
- One PG student from each Stream who secures highest CGPA in University Examinations from M1 to M4

If more than one student secures same highest CGPA, all with same highest CGPA will be awarded

- Entries with supplementary papers will be disqualified.
- To be awarded on the occasion of Induction Ceremony of the First Year Students for UG students and awarded on the College Day for PG students.

5. **ALL ROUND PERFORMANCE IN THE FIRST YEAR** – “Young Wizard of Science”.

- Only first year UG students are entitled for the Award
- One student from the first year will be selected for the Award on the basis of All Round Performance, Performance in Proficiency Test, Index Marks and Character.
- Students passed in 1st and 2nd series examinations are eligible for the Award

6. **BASELIAN KAYIKA PRATHIBHA PURASKHARAM**

- For Outstanding Performance in sports/games in the current Academic Year
- Male and Female category

7. **BASELIAN KALA PRATHIBHA PURASKHARAM**

- For outstanding performance in arts in the current academic year
- Male and female category

8. **MEMORIAL AWARDS**

i. **Prof. R. V. Chitra Memorial Award**

Instituted by the Staff Members of Department of Electrical & Electronics Engineering in Fond Memory of Prof. R. V. Chitra of their department. Final year student who is Topper in Electrical Machines subjects (Electrical Machines I, II & III).

The Interest accrued from the fixed deposit will be given as Cash Award.

ii. **Annu Memorial Award**

Instituted by the 2005-09 Students of Department of Civil Engineering in Fond Memory of their beloved friend Ms. Annu Varghese who passed away in 2008. The award includes Rs.3,000/- and Memento.

Awarded to the One Final Year Civil Engineering Student for his/her overall performance in academics & extracurricular activities.

iii. **Mr. Arun Memorial Award**

This award is instituted in the fond memory of Mr. Arun V. Abraham of **B.Tech CSE 2010-14 batch** by his parents for one final Year Computer Science & Engineering Student who scores the highest marks till final year, in the University Exams.

9. MBCET Alumni Awards

- i. MBCETAA Outstanding Performer Award is given to one student of the previous year pass out batch for outstanding all round performance in academics and extracurricular activities.
- ii. MBCETAA Special Achievement Award is for special achievements of the alumni.

ACADEMIC ADVISING

The Institution takes care of each student admitted through a unique system of Academic Counseling in which all members of the Teaching Staff are involved. A Faculty Advisor is nominated for every batch of 20 to 25 students. As far as possible the same Advisor continues for a batch throughout the Course, who will take care of the student throughout his/her Course. The Advisors ensure timely enrollment of students during registration and ensure that academic regulations are observed by the students. They meet the group regularly, take special care of the weaker students, give them necessary directions to overcome their deficiencies and maintain the contact with the parents, keeping them abreast with the performance of their ward. The Advisors keep all student records up-to-date.

Co-Curricular & Extra Curricular Activities

STUDENT CHAPTERS OF PROFESSIONAL BODIES

MBCET aims at the holistic development of the personality of students. Accordingly, the Chapters of various Professional Societies and Clubs are functioning in the College. The Professional Societies help Students to improve communication skills, leadership quality, team work skills to gain practical and theoretical knowledge. Students get an opportunity to implement what they learn to advance the Profession, for career advancement, networking, self-promotion opportunities, knowledge about hiring trends and issues, publishing opportunities, Awards/ honours and Professional Development Service.

Institution of Engineers (IE) - Web: www.ieindia.org

The aims and objectives of the IE are to promote the general advancement of Engineering and Engineering Science and their applications

and to facilitate the exchange of information and ideas on those subjects, among the members and the persons attached to the Institution. The College is an Institutional Membership holder of the Institution of Engineers.

Indian Society for Technical Education (ISTE) -

Web: www.isteonline.com

The Indian Society for Technical Education is a National, Professional, Non-profit making Society registered under the Societies Registration Act of 1860. The main thrust of the activities of the Society relates to research, progress of teaching, learning, training and extension services. The Society also organizes various Seminars, Summer and Winter Schools etc. throughout the Country to disseminate the latest advances in Technology and upgrade the quality of Teaching. The College is an Institutional Member of the ISTE and a Chapter of the Society functions in the College.

Computer Society of India (CSI) - Web: www.csi-india.org

The CSI Student Chapter of Mar Baselios College of Engineering & Technology is one among the biggest Student Chapters in the Kerala State. The Chapter conducts an annual quiz for the students of the College under the name BYTES. Another major event that is conducted by the CSI is an Intercollegiate Technical Fest titled CYNOSURE for the students from various Engineering Colleges in and around the city of Trivandrum. Currently the Chapter has 153 student members, which is the largest one in Kerala State.

Institution of Electrical and Electronics Engineers (IEEE) -

Web: www.ieee.org

IEEE founded in 1884 is the world's largest Professional Association dedicated to advancing technological innovation and excellence for the benefit of humanity. IEEE will be essential to the global technical community and to technical professionals everywhere, and be universally recognized for the contributions of technology and of technical professionals in improving global conditions. It is designed to serve professionals involved in all aspects of the Engineering and Computing fields and related areas of science and technology that underlie modern civilization. IEEE and its members inspire a global community through IEEE's highly cited publications, conferences, technology standards, and professional and educational activities. IEEE serves over 395,000 members in 160 countries. Through its worldwide network of geographical units, publications, web services, and conferences, IEEE remains the world's largest Technical Professional Association.

IEEE members of Mar Baselios College of Engineering & Technology (MBCET) engage in technical and professional activities designed to advance the theory and practice of various technologies. The Institute strives to be supportive and responsive to the needs of the members by seeking to

anticipate and manage change in ways that will benefit members and the societies in which they live.

IEEE Computer Society - Web: www.computer.org

IEEE Computer Society is a Professional Society of [IEEE](http://www.ieee.org), founded in 1971, dedicated to Computer Science and Technology. It is the trusted source for information, networking, and career-development, for a global community of researchers, educators, software engineers, IT professionals, employers, and students. Its purpose is to advance the theory, practice, and application of Computer and Information processing science and technology and the professional standing of its members. The Computer Society sponsors workshops and conferences, publishes a variety of peer-reviewed literature, operates technical committees, and develops IEEE computing standards. It supports more than 200 Chapters worldwide and participates in educational activities at all levels of the profession, including distance learning, accreditation of higher education programs in Computer Science, and professional certification in Software Engineering.

IEEE Computer Society Student chapter in MBCET is actively organizing a number of technical events and workshop to make the students up to date with current trends and technologies in computing.

Institution of Engineering and Technology (IET) -

Web: www.theiet.in

Evolved from its early beginnings in 1871 as the Society of Telegraph Engineers (STE) and later as Institution of Electrical Engineers (IEE) in 1887, the IET was formed in 2006 through the merger of IEE and IIE (Institution of Incorporated Engineers). Registered as a charity in England & granted the Royal Charter, the mission of IET is to promote the exchange of information and ideas for the advancement of Science, Engineering and Technology worldwide. Their annual activity programmes are designed to expand the professional development of Local Engineers through Lectures and Technical Visits and encourage young people to join the Engineering Profession by participating in Careers and Science Fairs.

The IET on Campus Student Branch of Mar Baselios College of Engineering and Technology is in its infancy. Working with the IET Student chapter in College of Engineering, Trivandrum, the IET-MBCET student branch is however actively involved in organizing a number of technical events, Workshops and Life Skill Orientation Courses for the benefit of its students. The Student chapter is open to students of Electrical, Electronics, Mechanical, Information Technology and Computer Science Engineering.

American Society of Mechanical Engineers (ASME)

ASME- MBCET Chapter (VORTEX) was brought to life in the year 2017. Since then the chapter has spearheaded many programmes, conferences and workshops for students and was instrumental to cater to the needs of their all around development.

ASME member have access to state of the art web services, seminars, e-books and webinars. ASME Student chapter conducts several cultural and technical programmes. Their flagship event E-FEST AND E-FX are held every year in all continents. ASME also provides scholarships to meritorious students.

The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)

The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) was founded in 1981 at New Delhi by a group of eminent HVAC & R professionals. ISHRAE - MBCET student chapter was officially installed on 22nd February 2019. ISHRAE objectives are advancement of the Arts and Sciences of Heating, Ventilation, Air Conditioning and Refrigeration Engineering and Related Services, Continuing education of Members and other interested persons in the said sciences through Lectures, Workshops, Product Presentations, Publications, Expositions and Encouragement of scientific research.

American Society of Civil Engineers (ASCE)

American Society of Civil Engineers (ASCE) aims to provide the platform for all young civil engineers to develop and grow to become globally competent, ethically strong and service minded engineers of the future. American Society of Civil Engineers is a professional body founded in 1852 to represent Civil Engineers worldwide in over 177 countries. It was the greatest privilege to get the ASCE Student Chapter approved in Mar Baselios College of Engineering and Technology on October 3rd 2017. MBCET was the 1st college to receive this approval in Kerala under the ASCE India Southern Section.

EXTRA - CURRICULAR ACTIVITIES

Special emphasis is given to extra-curricular activities and the Physical Education Department gives the necessary support in this regard. An Amenities Centre, a unique facility of MBCET with a plinth area of about 3000 sq.m, provides indoor playing facility for Shuttle, Badminton, Netball, Volley-ball, Table-Tennis, Billiards etc. and facilities for Photographic Club, Nature Club, Social Service Unit, Departmental Associations and Placement activities, all under the direction of a Senior Professor.

CLUBS & COMMITTEES

For the effective realization of the goals and objectives of the Institution about 40 clubs & committees have been formed in addition to the ones mentioned earlier. The Dean (SA) will co-ordinate the activities of Clubs. For each Club there will be a Faculty-in-charge.

The various Cells and Committees functioning in the College include, Admission Committee, Research Promotion Committee, Resource Monitoring Cell, Examination Cell, Purchase Committee, Discipline Committee, Industry Collaboration Cell, Consultancy Cell, Library Committee, Anti Ragging Committee, Ethics Committee, Staff Grievance Redressal Committee, Student's Welfare / Grievance Redressal Committee, Women's Grievance Redressal Cell (UGC), Women's Studies Unit, Counseling Cell, Hostel Committee, Canteen and Cafeteria Committee, Website Committee, Publication Wing, Archives, Campus Maintenance Committee, Yoga and Meditation Centre, Photography Club, Nature / Eco Club, Sports Club, Music Club.

CCCIET

Cardinal Cleemis Centre for Innovation and Entrepreneur (Trivandrum) is a unique network centre in the Mar Ivanios Vidyanagar Campus initiated by MBCET. CCCIET, is a platform to open new vistas to promote an entrepreneurial ecosystem through Knowledge sharing, Training and Networking with the involvement and collaboration of Corporates, Industries, Trade bodies, government agencies and educational institutions. It is a holistic approach, a combination of Business Centre, Activity Centre and Innovation Exchange Centre. It is intended to be a model for the bond between entrepreneurship and campus innovations, to give new dimension to Engineering studies.

Dr. APJ Abdul Kalam Centre for Innovation, Incubation & Entrepreneurship

This Centre, established in 2016, in collaboration with the Kerala State Industrial Development Corporation (KSIDC), aims at providing facility for the MBCTians who intend to begin startup ventures along with and even after the completion of their B.Tech Programme.

Space Avionics Test & Evaluation Lab (SATEL)

MBCET has set up an Avionics Package Testing Lab in association with the VSSC, Trivandrum. An air-conditioned lab with 80 sqm space has been set-up with clean-room facility inside the lab. The lab is equipped with high-end test and measurement facility with ESD flooring. This includes thermal chamber, data recorder, synthesized function generators and precision DC sources. To start with, small packages such as amplifiers,

filters etc. will be tested. In addition, this lab will provide the students with an opportunity to understand the stringent requirements of components required for Space Electronics and the various related test and measurement processes involved.

E- Yantra : Robotics Lab

This Nodal Centre of the E-Yantra, IIT Bombay, organizes skill-development Programmes in Robotics & Embedded Systems for Faculty Members and Students. Hands on Training is provided by the experts from IIT, Mumbai.

INNOVATION & ENTREPRENEURSHIP DEVELOPMENT CENTRE (IEDC)

The main objective of the Innovation and Entrepreneurship Development Cell is to educate and train students for developing entrepreneurial capabilities through training programmes which will boost up innovative ideas and creativity.

CENTRE FOR CONTINUING EDUCATION

With an aim to promote Continuing Education Programmes and Industrial Consultancies, the Centre conducts Training Programmes, Add-On Courses and Workshops for Students and Graduate Engineers.

CONSULTANCY CELL

The Cell functions to organize Extension Service Programme for the benefit of the Society. The Cell acts as a consultant to various Government and Private Organizations carrying out projects in Design, Testing, Survey and other related areas.

ENERGY AUDIT CELL

The Energy Audit Cell aims to take-up projects and consultancy in Energy related areas. It seeks to find out methods to reduce the Energy consumption. The Cell encourages the use of 'Green Energy' and minimizing of the use of Fossil Fuel.

TRAINING AND PLACEMENT UNIT

The Training and Placement Unit of MBCET has been playing a vital role since its inception in 2004. The TPU with representatives from every batch, works towards arranging Training Programs, Workshops, Seminars, making arrangements for various Aptitude Tests, Competitive Examinations, Guidance and Counseling Classes and securing placements for students in reputed firms. MBCET offers the right settings for campus recruitment examinations. The campus has functioned as a host venue for combined campus recruitment for the top companies such as Infosys, Wipro, UST

Global, CTS, IBS, NeST, LTS etc. A separate facility, the students' Amenity Center is earmarked for the CGPU activities.

MBCETAA

MBCETAA - the Alumni Association of the College has been very active over the years. The Association sponsors the cash prize of the Mar Baselios Youth Excellence Award, besides the Proficiency Awards given every years.

Patron	:	Fr. John Varghese Palanilkunnathil
President	:	Dr. Abraham T Mathew (Principal)
Vice- President	:	Mr. Akhil Raj S. R.
Gen. Secretary	:	Mr. Anoop V
Treasurer	:	Mr. Sherry Varghese

Parent Teacher Association (PTA)

The Parent Teacher Association of the College contributes positively to the smooth and effective functioning of the College. The Parent Teacher Association provides a common platform for the Parents and Teachers for interaction and to discuss matters promoting academic excellence in the Institution. The Association enables to maintain a healthy relationship among the Faculty, Students and Parents.

President	:	Dr. Abraham T Mathew (Principal)
Vice President	:	Mr. Jojimon Thomas
Secretary	:	Prof. (Dr.) M.J. Jayasree

MORAL AND RELIGIOUS FORMATION

Special Lectures, Seminars and Symposia will be arranged by the College Authorities to inculcate Moral and Spiritual values in the students. Students are advised to make the best use of such facilities. All Catholic students are expected to attend religious instruction/discussions arranged for them.

FACILITIES ON THE CAMPUS

College Bus

Students can make use of the facility of the College bus for daily travel after registering their names and getting the passes in advance. Request for one-way Pass will not be entertained.

Hostel Facility

Separate hostel facilities for Men and Women are provided in a homely atmosphere. Application for admission to the hostel should be submitted in the prescribed form at the time of admission/registration.

1. Mar Aprem Hostel for Men

A common room with various recreational facilities is provided for the overall development of the students. Adequate medical facilities are always available. The hostel mess is run on the dividing system. MBCET Hostel for men (MAR APREM HOSTEL) can accommodate **400 students** on single room, twin sharing or three beds basis. Spacious rooms with separate area for living and study are provided.

Chief Warden : Fr. John Varghese Palanilkunnathil Phone: 0471-2534415

Warden (1) : Fr. Thomas Mukalumpurath

(2) : Fr. Johnson Puthuparampil Phone : 8281221234

2. St. Alphonsa Hostel for Women

Accommodation facility for 50 students is available. The hostel owned by the Major Archdiocese of Trivandrum is run by Rev. Sisters of the Sacred Heart Congregation.

Warden: Rev. Sr. Jaya SH Phone: 0471-2530160

3. Mary Matha Ladies Hostel

Accommodation is provided for 250 women students at this Hostel, owned by the Major Archdiocese of Trivandrum.

Warden: Rev. Sr. Ancy FDSHJ Phone: 0471-2114375

Staff Quarters

Accommodation is provided for the members of the Staff at the Staff Quarters.

Amenity Centre

The Students Amenity Centre, Olympia, is a three storeyed building complex. It houses a large auditorium for conducting large-scale tests, recruitment drives, etc. Separate rooms are set apart for group discussions and interviews. It houses also a Store, Gymnasium, facilities for playing Badminton, Basket Ball, Table Tennis and so on.

Bank

Branches of the Catholic Syrian Bank and South Indian Bank are functioning on the campus.

Canteen and Cafeteria

A Canteen attached to the Amenity Centre functions on all working days. Noon Meals and other refreshments are provided on all working days. Besides the Canteen, Cafeterias also provide refreshment on all working days.

College Store

Note Books, Record Books and Stationery are supplied to students at fair price through the Store, attached to the Amenity Centre.

Mar Gregorios Renewal Centre & Girideepam Convention Centre

Facility for Seminars / Workshops / Conferences is provided here.

Counseling Centre

The Students can seek the guidance and support of the Student Counselors for their social, emotional and psychological issues. In order to ensure effective counseling, the Counselors work in co-operation with the departments, the parents and the students.

Information Desk / Reception

An information Desk / Reception will be functioning from 8.30 am to 5.00 pm on all working days. Necessary information can be gathered from there. Tel: 0471 – 2545866, 68, 72.

Telephone Facility

Common Telephone Facility is available at the Information Desk.

Campus WiFi

Campus WiFi facility is available for faculty, Staff, Students and guests.

Important Notice

Students shall desist from creating/ spreading trolls, images and messages in Social Media tarnishing any Person/ Persons, Faith or Objects relating to any Faith which come under the purview of Cyber Crimes.

ACADEMIC CALENDAR 2022 - 2023

JUNE	2022			JULY
	1	Wed		
	2	Thu		
	3	Fri	1	
S8 Classes End	4	Sat	2	Tech Fest 22
	5	Sun	3	St. Thomas Day - H
	6	Mon	4	
	7	Tue	5	
	8	Wed	6	
	9	Thu	7	
	10	Fri	8	
2nd Saturday	11	Sat	9	2nd Saturday/Bakrid
	12	Sun	10	
	13	Mon	11	
	14	Tue	12	
	15	Wed	13	
	16	Thu	14	M4 Classes End
	17	Fri	15	Mar Ivanios Day - H
	18	Sat	16	
	19	Sun	17	
	20	Mon	18	
	21	Tue	19	
	22	Wed	20	
	23	Thu	21	
	24	Fri	22	
	25	Sat	23	S6 Classes End
Crossroads 22	26	Sun	24	
Crossroads 22	27	Mon	25	
College Day	28	Tue	26	
	29	Wed	27	
	30	Thu	28	Karkataka Vavu
		Fri	29	M4 Viva Voce begins
		Sat	30	
		Sun	31	

ACADEMIC CALENDAR 2022 - 2023

AUGUST	2022			SEPTEMBER
	1	Mon		
	2	Tue		
	3	Wed		
M2 Classes End S6 ESE begins	4	Thu	1	
M4 Viva Ends	5	Fri	2	
	6	Sat	3	Onam Holidays begin
	7	Sun	4	
Muharam - H	8	Mon	5	
	9	Tue	6	
	10	Wed	7	First Onam
	11	Thu	8	ThiruOnam
	12	Fri	9	Third Onam
2nd Saturday	13	Sat	10	2nd Saturday/Sree Narayana Guru Jayanthi
	14	Sun	11	Onam Holidays end
Independence Day- H	15	Mon	12	M3 Classes begin
	16	Tue	13	Regular ESE S2, S4 starts
	17	Wed	14	
Sreekrishna Jayanthi - H	18	Thu	15	
M2 ESE begins	19	Fri	16	
S6 ESE Ends	20	Sat	17	
	21	Sun	18	
	22	Mon	19	
	23	Tue	20	Reunion Day
	24	Wed	21	Sree Narayana Guru Samadhi - H
	25	Thu	22	
	26	Fri	23	
S2, S4 classes end	27	Sat	24	
Ayyankali Jayanthi - H	28	Sun	25	
M2 ESE ends	29	Mon	26	
	30	Tue	27	
	31	Wed	28	
		Thu	29	
		Fri	30	

ACADEMIC CALENDAR 2022 - 2023

OCTOBER	2022		NOVEMBER	
S2, S4 ESE ends	1	Sat		
Gandhi Jayanthi - H	2	Sun		
S1, S3 Supplementary Exam	3	Mon		
Mahanavami	4	Tue	1	
Vijaya Dasami - H	5	Wed	2	
	6	Thu	3	
	7	Fri	4	
2nd Saturday/Milad Sherif - H	8	Sat	5	
	9	Sun	6	
Mar Gregorios Day	10	Mon	7	
S1 SIP begins	11	Tue	8	
	12	Wed	9	
	13	Thu	10	
	14	Fri	11	
	15	Sat	12	2nd Saturday
	16	Sun	13	
	17	Mon	14	
	18	Tue	15	
	19	Wed	16	
S1, S3 Supplementary Exam ends	20	Thu	17	
S1 SIP Ends	21	Fri	18	
	22	Sat	19	
	23	Sun	20	
Deepavali	24	Mon	21	
S1 Classes begin	25	Tue	22	
	26	Wed	23	
	27	Thu	24	
	28	Fri	25	Annual Sports
	29	Sat	26	
	30	Sun	27	
S3, S5 Classes begin	31	Mon	28	
		Tue	29	
		Wed	30	S1, S3, S5 CAT to be completed

ACADEMIC CALENDAR 2022 - 2023

DECEMBER - 2022	JANUARY - 2023			
	1	Thu		
	2	Fri		
	3	Sat		
	4	Sun	1	Mannam Jayanthi - H Patron's Day
	5	Mon	2	
	6	Tue	3	
	7	Wed	4	
	8	Thu	5	
	9	Fri	6	
2nd Saturday	10	Sat	7	2nd Saturday
	11	Sun	8	
	12	Mon	9	
	13	Tue	10	
	14	Wed	11	
	15	Thu	12	
	16	Fri	13	
	17	Sat	14	
	18	Sun	15	
	19	Mon	16	
	20	Tue	17	
	21	Wed	18	Founder's Day
	22	Thu	19	
M3 Classes end	23	Fri	20	
X'mas Holidays begin	24	Sat	21	
X'Mas - H	25	Sun	22	
	26	Mon	23	
	27	Tue	24	
	28	Wed	25	
	29	Thu	26	Republic Day - H
	30	Fri	27	
X'mas Holidays end	31	Sat	28	
		Sun	29	
		Mon	30	
		Tue	31	

ACADEMIC CALENDAR 2022 - 2023

FEBRUARY	2023		MARCH	
	1	Wed	1	
	2	Thu	2	
	3	Fri	3	
	4	Sat	4	
	5	Sun	5	
	6	Mon	6	
	7	Tue	7	Attukal Pongala - H
	8	Wed	8	
	9	Thu	9	
	10	Fri	10	
2nd Saturday	11	Sat	11	2nd Saturday
	12	Sun	12	
	13	Mon	13	
	14	Tue	14	
	15	Wed	15	
	16	Thu	16	
	17	Fri	17	
MahaSivaratri - H	18	Sat	18	
	19	Sun	19	
	20	Mon	20	
	21	Tue	21	
	22	Wed	22	
	23	Thu	23	
	24	Fri	24	
	25	Sat	25	
	26	Sun	26	
	27	Mon	27	
	28	Tue	28	
		Wed	29	
		Thu	30	
		Fri	31	

ACADEMIC CALENDAR 2022 - 2023

APRIL	2023		MAY	
	1	Sat		
	2	Sun		
	3	Mon	1	May Day - H
	4	Tue	2	
	5	Wed	3.	
Moundy Thursday - H	6	Thu	4	
Good Friday -H	7	Fri	5	
2nd Saturday	8	Sat	6	
Easter	9	Sun	7	
	10	Mon	8	
	11	Tue	9	
	12	Wed	10	
	13	Thu	11	
Dr. Ambedkar Jayanathi	14	Fri	12	
Vishu - H	15	Sat	13	2nd Saturday
	16	Sun	14	
	17	Mon	15	
	18	Tue	16	
	19	Wed	17	
	20	Thu	18	
	21	Fri	19	
Eid-ul-Fitr	22	Sat	20	
	23	Sun	21	
	24	Mon	22	
	25	Tue	23	
	26	Wed	24	
	27	Thu	25	
	28	Fri	26	
	29	Sat	27	
	30	Sun	28	
		Mon	29	
		Tue	30	
		Wed	31	

PROGRAMME OUTCOMES (POs)

Engineering Graduates will be able to :

1. **Engineering knowledge** : Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis** : Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **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.
4. **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 provided valid conclusions.
5. **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.
6. **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.
7. **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.
8. **Ethics** : Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work** : Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
10. **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.
11. **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.

- 12. 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.

DEPARTMENT OF CIVIL ENGINEERING

VISION

To be a Centre of Excellence in Civil Engineering education with a global perspective, creating ethically strong engineers for the service of society.

MISSION

To provide Engineering Education which can create exemplary professional Civil Engineers of high ethics with strong conceptual foundation coupled with practical insight, to serve the industry and community.

Programme Educational Objectives (PEOs)

- I. Graduates of the Programme will have a successful career as Civil Engineering practitioners, entrepreneurs or professionals, addressing the needs of the industry with a global perspective.
- II. They will contribute to society as ethical and responsible citizens with proven expertise.
- III. They will engage in continuous professional development and advance to leadership roles in their chosen career.

Programme Specific Outcomes (PSOs)

Engineering Graduates will be able to :

1. Provide feasible and sustainable solutions to problems in various Civil Engineering disciplines such as Structural, Environmental, Geotechnical, Transportation and Construction Engineering.
2. Apply the principles, methods, software and codes of practices to design various Civil Engineering Systems.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION

To be a Centre of Excellence in Computer Science and Engineering providing quality education and research for the betterment of the society.

MISSION

To impart sound knowledge in theoretical and applied foundations of Computer Science and Engineering, and to train the students to solve real life issues to effectively define and shape life.

Programme Educational Objectives (PEOs)

- I. Graduates will be successful professionals in Industries of core or interdisciplinary nature or entrepreneurs demonstrating effective leadership and excellent team work.
- II. Graduates will expand the horizon of knowledge through higher education or research, leading to self directed professional development.
- III. Graduates will demonstrate professional attitude and ethics while providing solutions in societal and environmental contexts.

Programme Specific Outcomes (PSOs)

Engineering Graduates will be able to :

- (a) Apply Algorithmic Principles, Programming Skills and Software Engineering Principles to design, develop and evaluate Software Systems of varying complexities.
- (b) Apply knowledge of Systems Integration to design and implement computer- based systems.
- (c) Solve real world and socially relevant problems with the knowledge in recent and advanced Computing Technologies.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

VISION

To be a Centre of Excellence in Electronics and Communication Engineering Education and Research for the service of humanity.

MISSION

To provide quality Engineering Education and to carry out Research in the field of Electronics and Communication Engineering addressing the challenges faced by the society.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

- I. The graduates of the Programme will have a successful career as Professionals in Industry or as Entrepreneurs, encompassing a broad spectrum of areas related to Electronics and Communication Engineering.
- II. They will be able to adapt to the changing needs of Industry and Academia through continuous learning and professional upgrading.
- III. They will exhibit social responsibility in their pursuit of technical excellence.

PROGRAMME SPECIFIC OUTCOMES (PSOs):

Engineering Graduates will be able to :

- a) Design Electronic Circuits and Systems for Communication, Monitoring and Control Applications.
- b) Demonstrate the knowledge, in Electronics, Signal processing, Embedded Systems and Communication Engineering, required for providing technical solutions to real world problems

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

VISION

To be a Centre of Excellence in Electrical & Electronics Engineering Education, Research and Application of knowledge to benefit the society at large.

MISSION

To mould quality Electrical Engineers, fostering creativity and innovation to address global issues.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- I. Graduates will succeed as Professionals in Industry or as Entrepreneurs in Electrical and Electronics Engineering and related disciplines.

- II. Graduates will be able to adapt to the advances in Technology by continuously acquiring knowledge and skills, with an urge for innovation.
- III. Graduates will be socially committed individuals, exhibiting professional ethics in addressing technical and engineering challenges.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Engineering Graduates will be able to :

- a) To apply the knowledge in Electrical and Electronics Engineering for the design of Power Generation, Transmission, Distribution and utilization systems.
- b) To demonstrate the knowledge required to design, develop, test, and implement Electrical & Electronics systems.

DEPARTMENT OF MECHANICAL ENGINEERING

VISION

To be a Centre of Excellence in Education and Research, imparting ethical values for the betterment of mankind.

MISSION

To impart Technical Knowledge and Values through continuous Training and Research for the overall development of the Stakeholders.

Programme Educational Objectives (PEOs)

- I. Graduates will be Engineering Professional, Innovators or Entrepreneurs engaged in Technology Development or implementation of Engineering Systems meeting the Industrial needs.
- II. Graduates will be successful in the pursuit of higher education or research, in Engineering or Management Studies.
- III. Graduates will be self- disciplined and capable of applying technical concepts and skills for the benefit of society.

Programme Specific Outcomes (PSOs)

Engineering Graduates will be able to :

- i) Apply the concepts of Solid Mechanics in the design of Mechanical Engineering systems.
- ii) Apply knowledge of Thermal and Fluid Sciences to solve Engineering Problems.
- iii) Use Simulation Tools and Computer Integrated Systems in Mechanical Engineering.
- iv) Apply advanced manufacturing processes and modern Industrial Management Techniques in Engineering.

CURRICULUM FOR THE AUTONOMY SCHEME

B.Tech. Programmes

For the students admitted from 2020-21

Scheduling of Courses Common for all branches

(i) Knowledge Segments and Credits

Every course of BTech Programme is placed in one of the nine categories as listed in table below. No semester shall have more than six lecture-based courses and two laboratory courses, and/or drawing/seminar/project courses in the curriculum.

Table 1: Credit distribution and the Knowledge Domains

Sl. No.	Category	Category Code	Total credits
1	Humanities and Social Sciences including Management Courses	HSC	8
2	Basic Science Courses	BSC	26
3	Engineering Science Courses	ESC	22
4	Programme Core Courses, Comprehensive Course Work and Viva Voce	PCC	76
5	Programme Elective Courses	PEC	15
6	Open Elective Courses	OEC	3
7	Project Work and Seminar	PWS	10
8	Mandatory Non-credit Courses (P/F) with Grade	MNC	—
9	Mandatory Student Activities (P/F)	MSA	2
	Total Mandatory Credits		162
	Value Added Courses (Optional) – Honours/Minor	VAC	20

(ii) Semester-wise Credit Distribution

Semester	I	II	III	IV	V	VI	VII	VIII	Total Credits
Credits for Courses	17	21	22	22	23	23	15	17	160
Activity Points (Min.)	40			60			100		
Credits for Activities	2								2
Total Credits									162
Value Added Courses (Optional) – Honours / Minor									20
Total Credits									182

SEMESTER I						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U10A	Linear Algebra and Calculus	3-1-0	4	4
B 1/2	BSC	PH0U10A	Engineering Physics B	3-1-0	4	4
		CY0U10A	Engineering Chemistry	3-1-0	4	4
C 1/2	ESC	ES0U10A	Engineering Mechanics	2-1-0	3	3
		ES0U10B	Engineering Graphics	2-0-2	4	3
D 1/2	ESC	ES0U10C	Basics of Civil and Mechanical Engineering	4-0-0	4	4
		ES0U10D	Basics of Electrical and Electronics Engineering	4-0-0	4	4
E	HSC	HS0U10A	Life Skills	2-0-2	4	—
S 1/2	BSC	PH0U18A	Engineering Physics Lab	0-0-2	2	1
		CY0U18A	Engineering Chemistry Lab	0-0-2	2	1
T 1/2	ESC	ES0U18A	Civil and Mechanical Workshop	0-0-2	2	1
		ES0U18B	Electrical and Electronics Workshop	0-0-2	2	1
TOTAL					23/24	17

SEMESTER II						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U10B	Vector Calculus, Differential Equations and Transforms	3-1-0	4	4
B 1/2	BSC	PH0U10B	Engineering Physics B	3-1-0	4	4
		CY0U10A	Engineering Chemistry	3-1-0	4	4
C 1/2	ESC	ES0U10A	Engineering Mechanics	2-1-0	3	3
		ES0U10B	Engineering Graphics	2-0-2	4	3
D1/2	ESC	ES0U10C	Basics of Civil and Mechanical Engineering	4-0-0	4	4
		ES0U10D	Basics of Electrical and Electronics Engineering	4-0-0	4	4
E	HSC	HS0U10B	Professional Communication	2-0-2	4	—
F	ESC	ES0U10E	Programming in C	2-1-2	5	4
S 1/2	BSC	PH0U18A	Engineering Physics Lab	0-0-2	2	1
		CY0U18A	Engineering Chemistry Lab	0-0-2	2	1
T1/2	ESC	ES0U18A	Civil and Mechanical Workshop	0-0-2	2	1
		ES0U18B	Electrical and Electronics Workshop	0-0-2	2	1
TOTAL					28/29	21

DEPARTMENT OF CIVIL ENGINEERING

B.Tech. Programme in Civil Engineering

For students admitted from 2020-21

Scheduling of Courses

SEMESTER III						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20A	Partial Differential Equations and Complex Analysis	3-1-0	4	4
B	PCC	CE1U20A	Mechanics of Solids	3-1-0	4	4
C	PCC	CE1U20B	Fluid Mechanics and Hydraulics	3-1-0	4	4
D	PCC	CE1U20C	Surveying and Geomatics	4-0-0	4	4
E 1/2	ESC	ES0U20A	Design & Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20A	Sustainable Engineering	2-0-0	2	—
S	PCC	CE1U28A	Civil Engineering Planning and Drafting Lab	0-0-3	3	2
T	PCC	CE1U28B	Survey Lab	0-0-3	3	2
R/M			Remedial/Minor Course	3-1-0/ 4-0-0	4	4
TOTAL					26/30	22/26

SEMESTER IV						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20D	Probability, Statistics and Numerical Methods	3-1-0	4	4
B	PCC	CE1U20D	Engineering Geology	3-0-1	4	4
C	PCC	CE1U20E	Geotechnical I Engineering	4-0-0	4	4
D	PCC	CE1U20F	Transportation Engineering	3-1-0	4	4
E 1/2	ESC	ES0U20A	Design & Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20B	Constitution of India	2-0-0	2	—
S	PCC	CE1U28C	Material Testing I Lab	0-0-3	3	2
T	PCC	ME0U28A	Fluid Mechanics Lab	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0/ 4-0-0	4	4
TOTAL					26/30	22/26

SEMESTER V						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	CE1U30A	Structural Analysis I	3-1-0	4	4
B	PCC	CE1U30B	Design of Concrete Structures	3-1-0	4	4
C	PCC	CE1U30C	Geotechnical Engineering II	4-0-0	4	4
D	PCC	CE1U30D	Hydrology and Water Resource Engineering	4-0-0	4	4
E	PCC	CE1U30E	Construction Technology and Management	3-0-0	3	3
F	HSC	NC0U30A	Disaster Management	2-0-0	2	—
S	PCC	CE1U38A	Material Testing Lab II	0-0-3	3	2
T	PCC	CE1U38B	Geotechnical Engineering Lab	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0/ 4-0-0	4	4
TOTAL					27/31	23/27

SEMESTER VI						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	CE1U30F	Structural Analysis II	3-1-0	4	4
B	PCC	CE1U30G	Environmental Engineering	4-0-0	4	4
C	PCC	CE1U30H	Design of Hydraulic Structures	4-0-0	4	4
D	PEC	CE1UXXX	Program Elective I	3-0-0	3	3
E	HSC	HS0U30A	Industrial Economics and Foreign Trade	3-0-0	3	3
F	PCC	CE1U30I	Comprehensive 1 Course work	0-0-1	1	
S	PCC	CE1U38C	Transportation Engineering Lab	0-0-3	3	2
T	PCC	CE1U38D	Civil Engineering Software Lab	0-0-3	3	2
RMH	VAC		Remedial/Minor/ Honours Course	3-1-0/ 4-0-0	4	4
TOTAL					25/29	23/27

PROGRAMME ELECTIVE I

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	CE1U31A	Advanced Computational Methods	3-0-0	3	3
		CE1U31B	Geotechnical Investigation	3-0-0	3	3
		CE1U31C	Traffic Engineering and Management	2-1-0	3	3
		CE1U31D	Mechanics of Fluid Flow	3-0-0	3	3
		CE1U31E	Advanced Concrete Technology	3-0-0	3	3
		CE1U31F	Environmental Impact Assessment	3-0-0	3	3
		CE1U31G	Functional Design of Buildings	3-0-0	3	3

SEMESTER VII

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit	
A	PCC	CE1U40A	Design of Steel Structures	3-0-0	3	3	
B	PEC	CE1UXXX	Program Elective II	3-0-0	3	3	
C	OEC	CE0UXXX	Open Elective	3-0-0	3	3	
D	MNC	NC0U40A	Industrial Safety Engineering	2-1-0	3	—	
S	PCC	CE1U48A	Environmental Engineering Lab	0-0-3	3	2	
T	PWS	CE1U49A	Seminar	0-0-3	3	2	
U	PWS	CE1U49B	Project Phase I	0-0-6	6	2	
R/M/H	VAC		Remedial/Minor/Honours Course	0-1-6/ 3-1-0/ 4-0-0	7/4	4	
TOTAL						24/ (31/28)	15/19

PROGRAMME ELECTIVE II

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	CE1U41A	Prestressed Concrete	3-0-0	3	3
		CE1U41B	Ground Improvement Techniques	3-0-0	3	3
		CE1U41C	Highway Materials and Design	2-1-0	3	3
		CE1U41D	Applied Hydrology	3-0-0	3	3
		CE1U41E	Construction Planning and Management	3-0-0	3	3
		CE1U41F	Advanced Environmental Engineering	3-0-0	3	3
		CE1U41G	Optimisation Techniques in Civil Engineering	3-0-0	3	3
		CE1U41H	Municipal Solid waste management	3-0-0	3	3
		CE1U41J	Applied Soil Mechanics	3-0-0	3	3
		CE1U41K	Advanced Structural Analysis	3-0-0	3	3

OPEN ELECTIVE

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	OEC	CE0U41A	Environmental Impact Assessment	2-1-0	3	3
		CE0U41B	Applied Earth Systems	2-1-0	3	3
		CE0U41C	Informatics for Infrastructure Management	2-1-0	3	3
		CE0U41D	Disaster Management	2-1-0	3	3
		CE0U41E	Environmental Health and Safety	2-1-0	3	3
		CE0U41F	Geoinformatics	2-1-0	3	3

SEMESTER VIII						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	CE1U40B	Quantity Surveying and Valuation	3-0-0	3	3
B	PEC	CE1UXXX	Program Elective III	3-0-0	3	3
C	PEC	CE1UXXX	Program Elective IV	3-0-0	3	3
D	PEC	CE1UXXX	Program Elective V	3-0-0	3	3
T	PCC	CE1U40C	Comprehensive Viva Voce	1-0-0	1	1
U	PWS	CE1U49C	Project Phase II	0-0-12	12	4
R/M/H	VAC		Remedial/Minor/Honours Course	0-1-6	7	4
			TOTAL		25/32	17/21

PROGRAMME ELECTIVE III

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	CE1U31A	Advanced Computational Methods	3-0-0	3	3
B	PEC	CE1U42A	Advanced Structural Design	3-0-0	3	3
		CE1U42B	Geo-environmental Engineering	3-0-0	3	3
		CE1U42C	Railway and Tunnel Engineering	2-1-0	3	3
		CE1U42D	Irrigation and Drainage Engineering	3-0-0	3	3
		CE1U42E	Construction Methods and Equipment	3-0-0	3	3
		CE1U42F	Air Quality Management	3-0-0	3	3
		CE1U42G	Urban Planning and Architecture	3-0-0	3	3
		CE1U42H	Wind Analysis on Structural and Cladding Components	3-0-0	3	3

PROGRAMME ELECTIVE IV

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	PEC	CE1U43A	Bridge Engineering	3-0-0	3	3
		CE1U43B	Advanced Foundation Engineering	3-0-0	3	3
		CE1U43C	Transportation Planning	2-1-0	3	3
		CE1U43D	Informatics for Infrastructure Management	3-0-0	3	3
		CE1U43E	Repair and Rehabilitation of Buildings	3-0-0	3	3
		CE1U43F	Environmental Remote Sensing	3-0-0	3	3
		CE1U43G	Building Services	3-0-0	3	3

PROGRAMME ELECTIVE V

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	CE1U44A	Earthquake Resistant Design	3-0-0	3	3
		CE1U44B	Soil Structure Interaction	3-0-0	3	3
		CE1U44C	Airport, Seaport and Harbour Engineering	3-0-0	3	3
		CE1U44D	Hydroclimatology	3-0-0	3	3
		CE1U44E	Sustainable Construction	3-0-0	3	3
		CE1U44F	Climate Change and Sustainability	3-0-0	3	3
		CE1U44G	Building Information Modelling	3-0-0	3	3
		CE1U44H	Geotechnical earthquake engineering	3-0-0	3	3

MINORS IN CIVIL ENGINEERING

Semester	BASKET I			BASKET II			BASKET III			BASKET IV						
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit				
S3	CE0 M 20A	Building Construction and Structural Systems	4-0-0	4	CE0 M 20B	Introduction to Geotechnical Engineering	4-0-0	4	CE0 M 20C	Informatics for Infrastructure Management	3-1-0	4	CE0 M 20D	Building Technology and Interior	3-1-0	4
S4	CE0 M 20E	Building Drawing	4-0-0	4	CE0 M 20F	Introduction to Transportation Engineering	3-1-0	4	CE0 M 20G	Climate Change and Hazard Mitigation	4-0-0	4	CE0 M 20H	Building Drawing and Building Estimation	4-0-0	4
S5	CS0 M 30A	Structural Mechanics	4-0-0	4	CS0 M 30B	Eco-Friendly Transportation Systems	3-1-0	4	CS0 M 30C	Sustainability Analysis and Design	4-0-0	4	CE0 M 30D	Sensing and Data Mining for Smart Structures and Systems	4-0-0	4
S6	CE0 M 30E	Estimation and Costing	4-0-0	4	CE0 M 30F	Geotechnical Investigation and Ground Improve- ment Techniques	4-0-0	4	CE0 M 30G	Environmental Health and Safety	4-0-0	4	CE0 M 30H	Construction Quality Management	4-0-0	4
S7	CE0 M 49A	Mini Project	0-0-4	4	CE0 M 49A	Mini Project	0-0-4	4	CE0 M 49A	Mini Project	0-0-4	4	CE0 M 49A	Mini Project	0-0-4	4
S8	CS0 M 49B	Mini Project	0-0-4	4	CS0 M 49B	Mini Project	0-0-4	4	CS0 M 49B	Mini Project	0-0-4	4	CE0 M 49B	Mini Project	0-0-4	4

HONOURS IN CIVIL ENGINEERING

Semester	BASKET I				BASKET II				BASKET III			
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit
S4	CE0 M 20A	Advanced Mechanics of Solids	3-1-0	4	CE0 M 20B	Pavement Constru- ction and Manage- ment	3-1-0	4	CE0 M 20C	Geogra- phical Information Systems	4-0-0	4
S5	CE0 M 30A	Structural Dynamics	4-0-0	4	CE0 M 30B	Transpor- tation Systems Manage- ment	3-1-0	4	CE0 M 30C	Ground Water Hydrology	4-0-0	4
S6	CE0 M 30D	Finite Element Methods	4-0-0	4	CE0 M 30E	Earth Dams and Earth Retaining Structures	4-0-0	4	CE0 M 30F	Environ- mental Pollution Modelling	4-0-0	4
S7	CE0 M 40A	Modern Constru- ction Modern Materials	4-0-0	4	CS0 M 40B	Soil Dynamics and Machine Founda- tions	4-0-0	4	CE0 M 40C	Environ- mental Pollution Control Techni- ques	4-0-0	4
S8	CE0 M 49A	Mini Project	0-0-4	4	CE0 M 49A	Mini Project	0-0-4	4	CE0 M 49A	Mini Project	0-0-4	4

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**B.Tech. Programme in Computer Science and Engineering***For the students admitted from 2020-21***Scheduling of Courses**

SEMESTER III							
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit	
A	BSC	MA0U20B	Discrete Mathematical Structures	3-1-0	4	4	
B	PCC	CS1U20A	Data Structures	3-1-0	4	4	
C	PCC	CS1U20B	Logic System Design	3-1-0	4	4	
D	PCC	CS1U20C	Object Oriented Programming using Java	3-1-0	4	4	
E 1/2	ESC	ES0U20A	Design and Engineering	2-0-0	2	2	
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2	
F	MNC	NC0U20A	Sustainable Engineering	2-0-0	2	—	
S	PCC	CS1U28A	Data Structures Lab	0-0-3	3	2	
T	PCC	CS1U28B	Object Oriented Programming Lab (in Java)	0-0-3	3	2	
R/M	VAC		Remedial/Minor Course	3-1-0	4	4	
TOTAL						26/30	22/26

SEMESTER IV						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20E	Graph Theory	3-1-0	4	4
B	PCC	CS1U20D	Computer Organization and Architecture	3-1-0	4	4
C	PCC	CS1U20E	Database Management Systems	3-1-0	4	4
D	PCC	CS1U20F	Operating Systems	3-1-0	4	4
E 1/2	ESC	ES0U20A	Design and Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20B	Constitution of India	2-0-0	2	—
S	PCC	CS1U28C	Digital Lab	0-0-3	3	2
T	PCC	CS1U28D	Operating Systems Lab	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0	4	4
TOTAL					26/30	22/26

SEMESTER V						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	CS1U30A	Formal Languages and Automata Theory	3-1-0	4	4
B	PCC	CS1U30B	Computer Networks	3-1-0	4	4
C	PCC	CS1U30C	System Software	3-1-0	4	4
D	PCC	CS1U30D	Microprocessors and Microcontrollers	3-1-0	4	4
E	PCC	CS1U30E	Management of Software Systems	3-0-0	3	3
F	MNC	NC0U30A	Disaster Management	2-0-0	2	—
S	PCC	CS1U38A	System Software and Micro-processors Lab	0-0-4	4	2
T	PCC	CS1U38B	Database Management Systems Lab	0-0-4	4	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0	4	4
TOTAL					27/31	23/27

SEMESTER VI						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	CS1U30F	Compiler Design	3-1-0	4	4
B	PCC	CS1U30G	Computer Graphics and Image Processing	3-1-0	4	4
C	PCC	CS1U30H	Algorithm Analysis and Design	3-1-0	4	4
D	PEC	CS1UXXX	Programme I Elective	2-1-0	3	3
E	HSC	HS0U30A	Industrial Economics and Foreign Trade	3-0-0	3	3
F	PCC	CS1U30I	Comprehensive Course Work	1-0-0	1	1
S	PCC	CS1U38C	Networking Lab	0-0-3	3	2
T	PWS	CS1U39A	Mini Project	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0	4	4
TOTAL					25/29	23/27

PROGRAMME ELECTIVE I

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	CS1U31A	Foundations of Machine Learning	2-1-0	3	3
		CS1U31B	Data Analytics	2-1-0	3	3
		CS1U31C	Foundations of Security in Computing	2-1-0	3	3
		CS1U31D	Automated Verification	2-1-0	3	3
		CS1U31E	Programming in Python	2-1-0	3	3
		CS1U31F	Advance Data Communication	2-1-0	3	3

SEMESTER VII							
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit	
A	PCC	CS1U40A	Artificial Intelligence	2-1-0	3	3	
B	PEC	CS1UXXX	Programme Elective II	2-1-0	3	3	
C	OEC	CS0UXXX	Open Elective	2-1-0	3	3	
D	MNC	NC0U40A	Industrial Safety Engineering	2-1-0	3	—	
E	PCC	CS1U48A	Compiler Design Lab	0-0-3	3	2	
T	PWS	CS1U49A	Seminar	0-0-3	3	2	
U	PWS	CS1U49B	Project Phase I	0-0-6	6	2	
R/M/H	VAC		Remedial/Minor/Honours Course	0-1-6/ 3-1-0	7/4	4	
TOTAL						24 (31/28)	15/19

PROGRAMME ELECTIVE II

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	CS1U41A	Machine Learning	2-1-0	3	3
		CS1U41B	Cloud Computing	2-1-0	3	3
		CS1U41C	Security in Computing	2-1-0	3	3
		CS1U41D	Model Based Software Development	2-1-0	3	3
		CS1U41F	Web Programming	2-1-0	3	3
		CS1U41G	Natural Language Processing	2-1-0	3	3

OPEN ELECTIVE I

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	OEC	CS0U41A	Introduction to Mobile Computing	2-1-0	3	3
		CS0U41B	Introduction to Deep Learning	2-1-0	3	3
		CS0U41C	Computer Graphics	2-1-0	3	3
		CS0U41D	Python for Engineers	2-1-0	3	3
		CS0U41E	Object Oriented Concepts	2-1-0	3	3

SEMESTER VIII						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	CS1U40B	Distributed Computing	2-1-0	3	3
B	PEC	CS1UXXX	Programme Elective III	2-1-0	3	3
C	PEC	CS1UXXX	Programme Elective IV	2-1-0	3	3
D	PEC	CS1UXXX	Programme Elective V	2-1-0	3	3
T	PCC	CS1U40C	Comprehensive Viva Voce	1-0-0	1	1
U	PWS	CS1U49C	Project Phase II	0-0-12	12	4
R/M/H	VAC		Remedial/Minor/Honours Course	0-1-6	7	4
TOTAL					25/32	17/21

PROGRAMME ELECTIVE III

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	CS1U42A	Deep Learning	2-1-0	3	3
		CS1U42B	Programming Paradigms	2-1-0	3	3
		CS1U42C	Cryptography	2-1-0	3	3
		CS1U42D	Soft Computing	2-1-0	3	3
		CS1U42E	Fuzzy Set Theory and Application	2-1-0	3	3
		CS1U42F	Embedded Systems	2-1-0	3	3
		CS1U42G	Computer Vision	2-1-0	3	3

PROGRAMME ELECTIVE IV

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	PEC	CS1U43A	Formal Methods and Tools in Software Engineering	2-1-0	3	3
		CS1U43B	Client Server Architecture	2-1-0	3	3
		CS1U43C	Parallel Computing	2-1-0	3	3
		CS1U43D	Data Compression Techniques	2-1-0	3	3
		CS1U43F	Data Mining	2-1-0	3	3
		CS1U43G	Mobile Computing	2-1-0	3	3

PROGRAMME ELECTIVE V

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	CS1U44A	High Performance Computing	2-1-0	3	3
		CS1U44B	Blockchain Technologies	2-1-0	3	3
		CS1U44C	Image Processing Technique	2-1-0	3	3
		CS1U44D	Internet of Things	2-1-0	3	3
		CS1U44E	Software Testing	2-1-0	3	3
		CS1U44F	Bioinformatics	2-1-0	3	3
		CS1U44G	Computational Linguistics	2-1-0	3	3

B.Tech (MINOR)												
Semester	BUCKET I Specialization: SOFTWARE ENGINEERING				BUCKET II Specialization: MACHINE LEARNING				BUCKET III Specialization: NETWORKING			
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit
S3	CS0 M 20A	Object Oriented Program- ming	3-1-0	4	CS0 M 20B	Python for Machine Learning	3-1-0	4	CS0 M 20C	Data Communi- cation	3-1-0	4
S4	CS0 M 20D	Program- ming Methodo- logies	3-1-0	4	CS0 M 20E	Mathe- matics for Machine Learning	3-1-0	4	CS0 M 20F	Introduction to Compu- ter Networks	3-1-0	4
S5	CS0 M 30A	Concepts in Software Engineer- ing	3-1-0	4	CS0 M 30B	Concepts in Machine Learning	3-1-0	4	CS0 M 30C	Client Server Systems	3-1-0	4
S6	CS0 M 30D	Introduction to Software Testing	3-1-0	4	CS0 M 30E	Concepts in Deep Learning	3-1-0	4	CS0 M 30F	Networks and IoT Appli- cations	3-1-0	4
S7	CS0 M 49A	Mini Project	0-1-6	4	CS0 M 49A	Mini Project	0-1-6	4	CS0 M 49A	Mini Project	0-1-6	4
S8	CS0 M 49B	Mini Project	0-1-6	4	CS0 M 49B	Mini Project	0-1-6	4	CS0 M 49B	Mini Project	0-1-6	4
S9	CS0 M 49B	Mini Project	0-1-6	4	CS0 M 49B	Mini Project	0-1-6	4	CS0 M 49B	Mini Project	0-1-6	4

B.Tech (HONOURS)												
Semester	BUCKET I Specialization: SECURITY IN COMPUTING				BUCKET II Specialization: MACHINE LEARNING				BUCKET III Specialization: FORMAL METHODS			
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit
S4	CS1 H 20A	Number Theory	3-1-0	4	CS1 H 20B	Computa- tional Funda- mentals of Machine Learning	3-1-0	4	CS1 H 20C	Principles of Program Analysis and Verification	3-1-0	4
S5	CS1 H 30A	Cryptogra- phic Algorithms	3-1-0	4	CS1 H 30B	Neural Networks and Deep Learning	3-1-0	4	CS1 H 30C	Principles of Model of Checking	3-1-0	4
S6	CS1 H 30D	Network Security Algorithms	3-1-0	4	CS1 H 30E	Advanced Topics in Machine Learning	3-1-0	4	CS1 H 30F	Theory of Computa- bility and Complexity	3-1-0	4
S7	CS1 H 40A	Cyber Forensics Algorithms	3-1-0	4	CS1 H 40B	Advanced Topics in Artificial Intelligence	3-1-0	4	CS1 H 40C	Logic for Computer Science	3-1-0	4
S8	CS1 H 49A	Mini Project	0-1-6	4	CS1 H 49A	Mini Project	0-1-6	4	CS1 H 49A	Mini Project	0-1-6	4

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**B.Tech Programme in Electronics and Communication Engineering***For the students admitted from 2020-21***Scheduling of Courses**

SEMESTER III						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20A	Partial Differential Equation and Complex Analysis	3-1-0	4	4
B	PCC	EC1U20A	Solid State Devices	3-1-0	4	4
C	PCC	EC1U20B	Logic Circuit Design	3-1-0	4	4
D	PCC	EC1U20C	Network Theory	3-1-0	4	4
E 1/2	ESC	ES0U20A	Design & Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20A	Sustainable Engineering	2-0-0	2	—
S	PCC	EC1U28A	Scientific Computing Lab	0-0-3	3	2
T	PCC	EC1U28B	Logic Design Lab	0-0-3	3	2
R/M	VAC		Remedial/Minor Course	3-1-0/ 4-0-0	4	4
			TOTAL		26/30	22/26

SEMESTER IV						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20C	Probability, Random Processes and Numerical Methods	3-1-0	4	4
B	PCC	EC1U20D	Analog Circuits	3-1-0	4	4
C	PCC	EC1U20E	Signals and Systems	3-1-0	4	4
D	PCC	EC1U20F	Computer Architecture and Microcontrollers	3-1-0	4	4
E 1/2	ESC	ES0U20A	Design & Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20B	Constitution of India	2-0-0	2	—
S	PCC	EC1U28C	Analog Circuits and Simulation Lab	0-0-3	3	2
T	PCC	EC1U28D	Microcontroller Lab	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0/ 4-0-0	4	4
			TOTAL		26/30	22/26

SEMESTER V						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	EC1U30A	Linear Integrated Circuits	3-1-0	4	4
B	PCC	EC1U30B	Digital Signal Processing	3-1-0	4	4
C	PCC	EC1U30C	Analog and Digital Communication	3-1-0	4	4
D	PCC	EC1U30D	Control Systems	3-1-0	4	4
E 1/2	HSC	HS0U30A	Industrial Economics & Foreign Trade	3-0-0	3	3
		HS0U30B	Management for Engineers	3-0-0	3	3
F	MNC	NC0U30A	Disaster Management	2-0-0	2	—
S	PCC	EC1U38A	Analog Integrated Circuits and Simulation Lab	0-0-3	3	2
T	PCC	EC1U38B	Digital Signal Processing Lab	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0/ 4-0-0	4	4
			TOTAL		27/31	23/27

SEMESTER VI						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	EC1U30E	Electromagnetics	3-1-0	4	4
B	PCC	EC1U30F	VLSI Circuit Design	3-1-0	4	4
C	PCC	EC1U30G	Information Theory and Coding	3-1-0	4	4
D	PEC	EC1UXXX	Programme Elective	12-1-0 / 3-0-0	3	3
E 1/2	HSC	HS0U30A	Industrial Economics & Foreign Trade	3-0-0	3	3
		HS0U30B	Management for Engineers	3-0-0	3	3
F	PCC	EC1U30H	Comprehensive Course work	1-0-0	1	1
S	PCC	EC1U38C	Communication Lab	0-0-3	3	2
T	PWS	EC1U39A	Mini Project	0-0-3	3	2
R/MH	VAC		Remedial/Minor/Honours Course	3-1-0/4-0-0	4	4
			TOTAL		25/29	23/27

PROGRAMME ELECTIVE I

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	EC1U31A	Digital System Design	2-1-0	3	3
		EC1U31B	Power Electronics	3-0-0	3	3
		EC1U31C	Data Analysis	2-1-0	3	3
		EC1U31D	Embedded System	3-0-0	3	3
		EC1U31E	Digital Image Processing	2-1-0	3	3
		EC1U31F	Introduction to MEMS	2-1-0	3	3
		EC1U31G	Quantum Computing	2-1-0	3	3

SEMESTER VII

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	EC1U40A	Wireless Communication	2-1-0	3	3
B	PEC	EC1UXXX	Programme Elective II	2-1-0/ 3-0-0	3	3
C	OEC	EC0UXXX	Open Elective	2-1-0/ 3-0-0	3	3
D	MNC	NC0U40A	Industrial Safety Engineering	2-1-0	3	—
E	PCC	EC1U48A	Electromagnetics Lab	0-0-3	3	2
T	PWS	EC1U49A	Seminar	0-0-3	3	2
U	PWS	EC1U49B	Project Phase I	0-0-6	6	2
R/M/H	VAC		Remedial/Minor/ Honours Course	0-1-6/ 4-0-0	7/4	4
TOTAL					24/ (31/28)	15/19

PROGRAMME ELECTIVE II

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	EC1U41A	Optical Fiber Communication	3-0-0	3	3
		EC1U41B	Computer Networks	3-0-0	3	3
		EC1U41C	Opto Electronic Devices	2-1-0	3	3
		EC1U41D	Antenna and Wave Propagation	2-1-0	3	3
		EC1U41E	Error Control Codes	2-1-0	3	3
		EC1U41F	Machine Learning	2-1-0	3	3
		EC1U41G	DSP Architectures	2-1-0	3	3

OPEN ELECTIVE I

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	OEC	EC0U41A	Mechatronics	2-1-0	3	3
		EC0U41B	Biomedical Instrumentation	3-0-0	3	3
		EC0U41C	Electronic Hardware for Engineers	3-0-0	3	3
		EC0U41D	IoT and Applications	2-1-0	3	3
		EC0U41E	Entertainment Electronics	2-1-0	3	3

SEMESTER VIII						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	EC1U40B	Instrumentation	3-0-0	3	3
B	PEC	EC1UXXX	Programme Elective III	3-0-0/ 2-1-0	3	3
C	PEC	EC1UXXX	Programme Elective IV	3-0-0/ 2-1-0	3	3
D	PEC	EC1UXXX	Programme Elective V	3-0-0/ 2-1-0	3	3
T	PCC	EC1U40C	Comprehensive Viva Voce	1-0-0	1	1
U	PWS	EC1U49C	Project Phase II	0-0-12	12	4
R/M/H	VAC		Remedial/Minor/ Honours Course	0-1-6	7	4
TOTAL					25/32	17/21

PROGRAMME ELECTIVE III

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	EC1U42A	Biomedical Engineering	3-0-0	3	3
		EC1U42B	Satellite Communication	3-0-0	3	3
		EC1U42C	Secure Communication	3-0-0	3	3
		EC1U42D	Pattern Recognition	3-0-0	3	3
		EC1U42E	RF Circuit Design	3-0-0	3	3
		EC1U42F	Mixed Signal Circuit Design	2-1-0	3	3
		EC1U42G	Entrepreneurship	3-0-0	3	3

PROGRAMME ELECTIVE IV

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	PEC	EC1U43A	Modern Communication Systems	3-0-0	3	3
		EC1U43B	Real Time Operating Systems	2-1-0	3	3
		EC1U43C	Adaptive Signal Processing	2-1-0	3	3
		EC1U43D	Microwave Devices and Circuits	3-0-0	3	3
		EC1U43E	Speech & Audio Processing	3-0-0	3	3
		EC1U43F	Analog CMOS Design	2-1-0	3	3
		EC1U43G	Robotics	3-0-0	3	3

PROGRAMME ELECTIVE V

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	EC1U44A	Mechatronics	3-0-0	3	3
		EC1U44B	Optimization Techniques	2-1-0	3	3
		EC1U44C	Computer Vision	2-1-0	3	3
		EC1U44D	Low Power VLSI	2-1-0	3	3
		EC1U44E	Internet of Things	2-1-0	3	3
		EC1U44F	Renewable Energy Systems	3-0-0	3	3
		EC1U44G	Organic Electronics	3-0-0	3	3

B.Tech (MINOR)												
Semester	BASKET I				BASKET II				BASKET III			
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit
S3	ECOM 20A	Electronic Circuits	3-1-0	4	ECOM 20B	Analog Communication	4-0-0	4	ECOM 20C	Introduction to Signals and Systems	3-1-0	4
S4	ECOM 20D	Micro-controllers	3-1-0	4	ECOM 20E	Digital Communication	3-1-0	4	ECOM 20F	Introduction to Digital Signals Processing	3-1-0	4
S5	ECOM 30A	Embedded System Design	3-1-0	4	ECOM 30B	Communication Systems	4-0-0	4	ECOM 30C	Topics in Digital Image Processing	3-1-0	4
S6	ECOM 30C	Image Processing	3-1-0	4	ECOM 30D	VLSI Circuits	3-1-0	4	ECOM 30E	Data Networks	4-0-0	4
S7	ECOM 49A	Mini Project	0-1-6	4	ECOM 49A	Mini Project	0-1-6	4	ECOM 49A	Mini Project	0-1-6	4
S8	ECOM 49B	Mini Project	0-1-6	4	ECOM 49B	Mini Project	0-1-6	4	ECOM 49B	Mini Project	0-1-6	4

B.Tech (HONOURS)												
Semester	GROUP I				GROUP II				GROUP III			
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit
S4	EC1 H 20A	Nanoelectronics	4-0-0	4	EC1 H 20B	Stochastic Process for Communication	4-0-0	4	EC1 H 20C	Stochastic Signal Processing	4-0-0	4
S5	EC1 H 30A	FPGA based System Design	4-0-0	4	EC1 H 30B	Detection and Estimation Theory	4-0-0	4	EC1 H 30C	Stochastic Signal Processing	4-0-0	4
S6	EC1 H 30D	Electronic Design and Automation Tools	4-0-0	4	EC1 H 30E	MIMO and Communication Systems	4-0-0	4	EC1 H 30F	Detection and Estimation Theory	4-0-0	4
S7	EC1 H 49A	Mini Project	0-1-6	4	EC1 H 49A	Mini Project	0-1-6	4	EC1 H 49A	Mini Project	0-1-6	4

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

B.Tech Programme in Electrical and Electronics Engineering

For the students admitted from 2020-21

Scheduling of Courses

SEMESTER III						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20A	Partial Differential Equation and Complex Analysis	3-1-0	4	4
B	PCC	EE1U20A	Circuits and Networks	2-2-0	4	4
C	PCC	EE1U20B	Measurements and Instrumentation	3-1-0	4	4
D	PCC	EE1U20C	Analog Electronics	3-1-0	4	4
E 1/2	ESC	ES0U20A	Design and Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20A	Sustainable Engineering	2-0-0	2	-
S	PCC	EE1U28A	Circuits and Measurements Lab	0-0-3	3	2
T	PCC	EE1U28B	Analog Electronics Lab	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0/ 4-0-0	4	4
			TOTAL		26/30	22/26

SEMESTER IV						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20C	Probability, Random Processes and Numerical Methods	3-1-0	4	4
B	PCC	EE1U20D	DC Machines and Transformers	2-2-0	4	4
C	PCC	EE1U20E	Electromagnetic Theory	3-1-0	4	4
D	PCC	EE1U20F	Digital Electronics	3-1-0	4	4
E 1/2	ESC	ES0U20A	Design and Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20B	Constitution of India	2-0-0	2	-
S	PCC	EE1U28C	Electrical Machines Lab I	0-0-3	3	2
T	PCC	EE1U28D	Digital Electronics Lab	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0/ 4-0-0	4	4
			TOTAL		26/30	22/26

SEMESTER V						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	EE1U30A	Power Systems I	3-1-0	4	4
B	PCC	EE1U30B	Microprocessors and Microcontrollers	3-1-0	4	4
C	PCC	EE1U30C	Signals and Systems	3-1-0	4	4
D	PCC	EE1U30D	Synchronous and Induction Machines	3-1-0	4	4
E 1/2	HSC	HS0U30A	Industrial Economics & Foreign Trade	3-0-0	3	3
		HS0U30B	Management for Engineers	3-0-0	3	3
F	MNC	NC0U30A	Disaster Management	2-0-0	2	-
S	PCC	EE1U38A	Microprocessors and Micro-controllers Lab	0-0-3	3	2
T	PCC	EE1U38B	Electrical Machines Lab II	0-0-3	3	2
RMH	VAC		Remedial/Minor/Honours Course	3-1-0/ 4-0-0	4	4
TOTAL					27/31	23/27

SEMESTER VI						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
	PCC	EE1U30E	Linear Control Systems	2-2-0	4	4
B	PCC	EE1U30F	Power Systems II	3-1-0	4	4
C	PCC	EE1U30G	Power Electronics	3-1-0	4	4
D	PEC	EE1UXXX	Program Elective I	3-0-0	3	3
E 1/2	HSC	HS0U30A	Industrial Economics & Foreign Trade	3-0-0	3	3
		HS0U30B	Management for Engineers	3-0-0	3	3
F	PCC	EE1U30H	Comprehensive Course work	1-0-0	1	1
S	PCC	EE1U38C	Power Systems Lab	0-0-3	3	2
T	PCC	EE1U38D	Power Electronics Lab	0-0-3	3	2
R/MH	VAC		Remedial/Minor/Honours Course	3-1-0/ 4-0-0	4	4
TOTAL					25/29	23/27

PROGRAMME ELECTIVE I

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	EE1U31A	Biomedical Instrumentation	3-0-0	3	3
		EE1U31B	Renewable Energy Systems	3-0-0	3	3
		EE1U31C	Computer Organization	3-0-0	3	3
		EE1U31D	High Voltage Engineering	3-0-0	3	3
		EE1U31E	Object Oriented Programming	3-0-0	3	3
		EE1U31F	Material Science	3-0-0	3	3
		EE1U31G	Soft Computing	3-0-0	3	3

SEMESTER VII						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	EE1U40A	Advanced Control Systems	2-1-0	3	3
B	PEC	EE1UXXX	Program Elective I	2-1-0/ 3-0-0	3	3
C	OEC	EE0UXXX	Open Elective I	2-1-0/ 3-0-0	3	3
D	MNC	NC0U40A	Industrial Safety Engineering	2-1-0	3	-
S	PCC	EE1U48A	Control Systems Lab	0-0-3	3	2
T	PWS	EE1U49A	Seminar	0-0-3	3	2
U	PWS	EE1U49B	Project Phase I	0-0-6	6	2
R/M/H	VAC		Remedial/Minor/ Honours Course	0-1-6/ 3-1-0/ 4-0-0	7/4	4
TOTAL					24/ (31/28)	15/19

PROGRAMME ELECTIVE II

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	EE1U41A	Electric Drives	2-1-0	3	3
		EE1U41B	Digital Control Systems	3-0-0	3	3
		EE1U41C	Modern Operating Systems	3-0-0	3	3
		EE1U41D	Data Structures	2-1-0	3	3
		EE1U41E	Digital Signal Processing	2-1-0	3	3
		EE1U41F	Illumination Technology	2-1-0	3	3
		EE1U41G	Digital Protection of Power Systems	3-0-0	3	3

OPEN ELECTIVE

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	OEC	EE0U41A	Control Systems Engineering	2-1-0	3	3
		EE0U41B	Introduction to Power Processing	2-1-0	3	3
		EE0U41C	Renewable Energy Systems	3-0-0	3	3
		EE0U41D	Electric Vehicles	2-1-0	3	3
		EE0U41E	Energy Management	3-0-0	3	3

SEMESTER VIII

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	EE1U40B	Electrical System Design and Estimation	2-1-0	3	3
B	PEC	EE1UXXX	Program Elective III	2-1-0/ 3-0-0	3	3
C	PEC	EE1UXXX	Program Elective IV	2-1-0/ 3-0-0	3	3
D	PEC	EE1UXXX	Program Elective V	2-1-0/ 3-0-0	3	3
T	PCC	EE1U40C	Comprehensive Course Viva	1-0-0	1	1
U	PWS	EE1U49C	Project Phase II	0-0-12	12	4
R/M/H	VAC		Remedial/Minor/Honours Course	0-1-6	7	4
			TOTAL		25/32	17/21

PROGRAMME ELECTIVE III

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	EE1U42A	Robotics	2-1-0	3	3
		EE1U42B	Energy Management	3-0-0	3	3
		EE1U42C	Smart Grid Technologies	2-1-0	3	3
		EE1U42D	Electrical Machine Design	2-1-0	3	3
		EE1U42E	Switch Mode Power Converters	3-0-0	3	3
		EE1U42F	Computer Aided Power System Analysis	2-1-0	3	3
		EE1U42G	Machine Learning	3-0-0	3	3

PROGRAMME ELECTIVE IV

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	PEC	EE1U43A	Nonlinear Systems	2-1-0	3	3
		EE1U43B	Special Electric Machines	3-0-0	3	3
		EE1U43C	Power Quality	3-0-0	3	3
		EE1U43D	Computer Networks	3-0-0	3	3
		EE1U43E	Design of Power Electronic Systems	2-1-0	3	3
		EE1U43F	HVDC & FACTS	3-0-0	3	3
		EE1U43G	Advanced Electronic Design	2-1-0	3	3

PROGRAMME ELECTIVE V

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	EE1U44A	Electric and Hybrid Vehicles	3-0-0	3	3
		EE1U44B	Internet of Things	3-0-0	3	3
		EE1U44C	Energy Storage Systems	3-0-0	3	3
		EE1U44D	Robust and Adaptive Control	2-1-0	3	3
		EE1U44E	Solar PV Systems	2-1-0	3	3
		EE1U44F	Industrial Instrumentation and Automation	3-0-0	3	3
		EE1U44G	Big Data Analytics	3-0-0	3	3

B.Tech (MINOR)																
Semester	BASKET I			BASKET II			BASKET III			BASKET IV						
	Electrical Machines and Drives			Power Systems			Control Systems			Architectural Lighting and Electrical System Design						
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit				
S3	EE0 M 20A	Electric Circuits	3-1-0	4	EE0 M 20B	Introduction to Power Engineering	3-1-0	4	EE0 M 20C	Dynamic Circuits and Systems	4-0-0	4	EE0 M 20D	Basics of Illumination Science and Lighting Design	4-0-0	4
S4	EE0 M 20E	Electrical Machines	3-1-0	4	EE0 M 20F	Energy Systems	4-0-0	4	EE0 M 20G	Principles of Instrumentation	4-0-0	4	EE0 M 20H	Electric Power Supply and Distribution Systems	4-0-0	4
S5	EE0 M 30A	Solid State Power Conversion	3-1-0	4	EE0 M 30B	Solar and Wind Energy Conversion Systems	3-1-0	4	EE0 M 30C	Control Systems	3-1-0	4	EE0 M 30D	Energy efficiency in Buildings	4-0-0	4
S6	EE0 M 30E	Power Semiconductor Drives	3-1-0	4	EE0 M 30F	Instrumentation and Automation of Power Plants	4-0-0	4	EE0 M 30G	Digital Control	4-0-0	4	EE0 M 30H	Electrical System Design and Building services	3-1-0	4
S7	EE0 M 49A	Mini Project	0-1-6	4	EE0 M 49A	Mini Project	0-1-6	4	EE0 M 49A	Mini Project	0-1-6	4	EE0 M 49A	Mini Project	0-1-6	4
S8	EE0 M 49B	Mini Project	0-1-6	4	EE0 M 49B	Mini Project	0-1-6	4	EE0 M 49B	Mini Project	0-1-6	4	EE0 M 49B	Mini Project	0-1-6	4

B. Tech (HONOURS)												
GROUP I				GROUP II				GROUP III				GROUP IV
Semester	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit
S4	EE1 H 20A	Network Analysis and Synthesis	3-1-0	4	EE1 H 20A	Network Analysis and Synthesis	3-1-0	4	EE1 H 20A	Network Analysis and Synthesis	3-1-0	4
S5	EE1 H 30A	Digital Simulation	4-0-0	4	EE1 H 30A	Digital Simulation	4-0-0	4	EE1 H 20A	Digital Simulation	4-0-0	4
S6	EE1 H 30B	Generalized Machine Theory	3-1-0	4	EE1 H 30C	Analysis of Power Electronic Circuits	3-1-0	4	EE1 H 30E	Electric Vehicle Technology	4-0-0	4
S7	EE1 H 40A	Operation and Control of Generators	4-0-0	4	EE1 H 40B	Dynamics of Power Converters	3-1-0	4	EE1 H 40D	Smart Grid and Interfacing	4-0-0	4
S8	EE1 H 49A	Mini Project	0-1-6	4	EE1 H 49A	Mini Project	0-1-6	4	EE1 H 49A	Mini Project	0-1-6	4

DEPARTMENT OF MECHANICAL ENGINEERING

B.Tech Programme in Mechanical Engineering

For the students admitted from 2020-21

Scheduling of Courses

SEMESTER III						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20A	Partial Differential Equation and Complex Analysis	3-1-0	4	4
B	PCC	ME1U20A	Mechanics of Solids	3-1-0	4	4
C	PCC	ME1U20B	Mechanics of Flu ury and Material Science	3-1-0	4	4
E 1/2	ESC	ES0U20A	Design and Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20A	Sustainable	2-0-0	2	—
S	PCC	ME1U28A	Computer Aided Machine Drawing	0-0-3	3	2
T	PCC	CE0U28A	Materials Testing Lab	0-0-3	3	2
R/M	VAC		Remedial/ Minor Course	3-1-0	4	4
			TOTAL		26/30	22/26

SEMESTER IV						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	BSC	MA0U20D	Probability, Statistics and Numerical Methods	3-1-0	4	4
B	PCC	ME1U20D	Engineering Thermodynamics	3-1-0	4	4
C	PCC	ME1U20E	Manufacturing Process	3-1-0	4	4
D	PCC	ME1U20F	Fluid Machinery	3-1-0	4	4
E 1/2	ESC	ES0U20A	Design and Engineering	2-0-0	2	2
	HSC	HS0U20A	Professional Ethics	2-0-0	2	2
F	MNC	NC0U20B	Constitution of India	2-0-0	2	—
S	PCC	ME1U28B	FM and HM Lab	0-0-3	3	2
T	PCC	ME1U28C	Machine Tools Lab-I	0-0-3	3	2
R/MH	VAC		Remedial/Minor/Honours Course	3-1-0	4	4
			TOTAL		26/30	22/26

SEMESTER V						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	ME1U30A	Mechanics of Machinery	3-1-0	4	4
B	PCC	ME1U30B	Thermal Engineering	3-1-0	4	4
C	PCC	ME1U30C	Industrial and Systems Engineering	3-1-0	4	4
D	PCC	ME1U30D	Machine Tools and Metrology	3-1-0	4	4
E 1/2	HSC	HS0U30A	Industrial Economics and Foreign Trade	3-0-0	3	3
	HSC	HS0U30B	Management For Engineers	3-0-0	3	3
F	MNC	NC0U30A	Disaster Management	2-0-0	2	—
S	PCC	ME1U38A	Machine Tools Lab-II	0-0-3	3	2
T	PCC	ME1U38B	Thermal Engineering Lab-I	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0	4	4
			TOTAL		27/31	23/27

SEMESTER VI						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	ME1U30E	Heat and Mass Transfer	3-1-0	4	4
B	PCC	ME1U30F	Dynamics and Design of Machinery	3-1-0	4	4
C	PCC	ME1U30G	Advanced Manufacturing Engineering	3-1-0	4	4
D	PEC	ME1UXXX	Programme Elective I	2-1-0	3	3
E 1/2	HSC	HS0U30A	Industrial Economics and Foreign Trade	3-0-0	3	3
	HSC	HS0U30B	Management For Engineers	3-0-0	3	3
F	PCC	ME1U30H	Comprehensive Course Work	1-0-0	1	1
S	PCC	ME1U38C	Computer Aided Design and Analysis Lab	0-0-3	3	2
T	PCC	ME1U38D	Thermal Engineering Lab-II	0-0-3	3	2
R/M/H	VAC		Remedial/Minor/Honours Course	3-1-0	4	4
			TOTAL		25/29	23/27

PROGRAMME ELECTIVE I						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	ME1U31A	Nondestructive Testing	2-1-0	3	3
		ME1U31B	Computational Fluid Dynamics	2-1-0	3	3
		ME1U31C	Advanced Mechanics of Solids	2-1-0	3	3
		ME1U31D	IC Engines, Combustion and Pollution	2-1-0	3	3
		ME1U31E	Automobile Engineering	2-1-0	3	3
		ME1U31F	Product Design & Development	2-1-0	3	3
		ME1U31G	Advanced Metal Joining Techniques	2-1-0	3	3

SEMESTER VII						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	ME1U40A	Design of Machine Elements	2-1-0	3	3
B	PEC	ME1UXXX	Programme Elective II	2-1-0	3	3
C	OEC	ME0UXXX	Open Elective	2-1-0	3	3
D	MNC	NC0U40A	Industrial Safety Engineering	2-1-0	3	—
E	PCC	ME1U48A	Mechanical Engineering Lab	0-0-3	3	2
T	PWS	ME1U49A	Seminar	0-0-3	3	2
U	PWS	ME1U49B	Project Phase I	0-0-6	6	2
R/MH	VAC		Remedial/Minor/Honours Course	0-1-6/ 3-1-0	7/4	4
			TOTAL		24/ (31/28)	15/19

PROGRAMME ELECTIVE II

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	ME1U41A	Advanced Methods in Nondestructive Testing	2-1-0	3	3
		ME1U41B	Optimization Techniques and Applications	2-1-0	3	3
		ME1U41C	Finite Element Method	2-1-0	3	3
		ME1U41D	Aerospace Engineering	2-1-0	3	3
		ME1U41E	Hybrid and Electric Vehicles	2-1-0	3	3
		ME1U41F	Operations Management	2-1-0	3	3
		ME1U41G	Air Conditioning and Refrigeration	2-1-0	3	3

OPEN ELECTIVE I

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	OEC	ME0U41A	Introduction to Business Analytics	2-1-0	3	3
		ME0U41B	Quantitative Techniques for Engineers	2-1-0	3	3
		ME0U41C	Automotive Technology	2-1-0	3	3
		ME0U41D	Renewable Energy Engineering	2-1-0	3	3
		ME0U41E	Quality Engineering and Management	2-1-0	3	3

SEMESTER VIII						
Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
A	PCC	ME1U40B	Mechatronics	2-1-0	3	3
B	PEC	ME1UXXX	Programme Elective III	2-1-0	3	3
C	PEC	ME1UXXX	Programme Elective IV	2-1-0	3	3
D	PEC	ME1UXXX	Programme Elective V	2-1-0	3	3
T	PCC	ME1U40C	Comprehensive Viva Voce	1-0-0	1	1
U	PWS	ME1U49C	Project Phase II	0-0-12	12	4
R/M/H	VAC		Remedial/Minor/Honours Course	0-1-6	7	4
			TOTAL		25/32	17/21

PROGRAMME ELECTIVE III

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
B	PEC	ME1U42A	Quality Management	2-1-0	3	3
		ME1U42B	Decisions with Metaheuristics	2-1-0	3	3
		ME1U42C	Pressure Vessel and Piping Design	2-1-0	3	3
		ME1U42D	Data Analytics for Engineers	2-1-0	3	3
		ME1U42E	Industrial Tribology	2-1-0	3	3
		ME1U42F	Micro and Nano Manufacturing	2-1-0	3	3
		ME1U42G	Heating and Ventilation Systems	2-1-0	3	3

PROGRAMME ELECTIVE IV

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
C	PEC	ME1U43A	Composite Materials	2-1-0	3	3
		ME1U43B	Artificial Intelligence and Machine Learning	2-1-0	3	3
		ME1U43C	Acoustics and Noise Control	2-1-0	3	3
		ME1U43D	Heat Transfer Equipment Design	2-1-0	3	3
		ME1U43E	Robotics and Automation	2-1-0	3	3
		ME1U43F	Technology Management	2-1-0	3	3
		ME1U43G	Cryogenic Engineering	2-1-0	3	3

PROGRAMME ELECTIVE V

Slot	Category Code	Course Number	Courses	L-T-P	Hours	Credit
D	PEC	ME1U44A	Reliability Engineering	2-1-0	3	3
		ME1U44B	Industrial Internet of Things	2-1-0	3	3
		ME1U44C	Fracture Mechanics	2-1-0	3	3
		ME1U44D	Gas Turbines and Jet Propulsion	2-1-0	3	3
		ME1U44E	Advanced Energy Engineering	2-1-0	3	3
		ME1U44F	Additive Manufacturing	2-1-0	3	3
		ME1U44G	Power Plant Engineering	2-1-0	3	3

MINOR												
Semester	BASKET I				BASKET II				BASKET III			
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit
S3	ME0 M 20A	Mechanics of Materials	3-1-0	4	ME0 M 20B	Fluid Mechanics and Machinery	3-1-0	4	ME0 M 20C	Material Science and Techno- logy	3-1-0	4
S4	ME0 M 20D	Theory of Machines	3-1-0	4	ME0 M 20E	Thermo- dynamics	3-1-0	4	ME0 M 20F	Manufac- turing Techno- logy	3-1-0	4
S5	ME0 M 30A	Dynamics of Machines	3-1-0	4	ME0 M 30B	Thermal Science and Engineering	3-1-0	4	ME0 M 30C	Machine Tools Enginee- ring	3-1-0	4
S6	ME0 M 30D	Machine Design	3-1-0	4	ME0 M 30E	Heat Transfer	3-1-0	4	ME0 M 30F	Industrial Enginee- ring	3-1-0	4
S7	ME0 M 49A	Mini Project	0-1-6	4	ME0 M 49A	Mini Project	0-1-6	4	ME0 M 49A	Mini Project	0-1-6	4
S8	ME0 M 49B	Mini Project	0-1-6	4	ME0 M 49B	Mini Project	0-1-6	4	ME0 M 49B	Mini Project	0-1-6	4

B.Tech (HONOURS)												
Semester	GROUP I				GROUP II				GROUP III			
	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit	Course Number	Course	L-T-P	Credit
S4	ME1 H 20A	Continuum Mechanics	3-1-0	4	ME1 H 20B	Advanced Mechanics of Fluids	3-1-0	4	ME1 H 20C	Materials in Manu- facturing	3-1-0	4
S5	ME1 H 30A	Experi- mental Stress Analysis	3-1-0	4	ME1 H 30B	Advanced Thermo- dynamics	3-1-0	4	ME1 H 30C	Fluid Power Automation	3-1-0	4
S6	ME1 H 30D	Advanced Design Synthesis	3-1-0	4	ME1 H 30E	Compres- sible Fluid Flow	3-1-0	4	ME1 H 30F	Advanced Numerical Controlled Machining	3-1-0	4
S7	ME1 H 40A	Advanced Theory of Vibrations Analysis	3-1-0	4	ME1 H 40B	Computa- tional Methods in Fluid Flow and Heat Transfer	3-1-0	4	ME1 H 40C	Precision Machining	3-1-0	4
S8	ME1 H 49A	Mini Project	3-1-0	4	ME1 H 49A	Mini Project Methods	3-1-0	4	ME1 H 49A	Mini Project	3-1-0	4

MAR BASELIOS COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous)
REGULATIONS FOR THE BACHELOR OF TECHNOLOGY (B.Tech)
PROGRAMMES

APPLICABLE FROM B.Tech 2020 ADMISSION ONWARDS

Mar Baselios College of Engineering and Technology (MBCET) (hereinafter referred to as College) has been conferred the autonomous status by the University Grants Commission(UGC) of Ministry of Education, Government of India, in July 2020. APJ Abdul Kalam Technological University (affiliating University) (hereinafter referred to as University) has notified the conferment of autonomy in September 2020, based on the directives from the Government of Kerala. The College has adopted Outcome Based Education (OBE) as the broad frame work for instruction and evaluation. Examinations shall be governed by the principles of Outcome Based Education that truly reflects the international viewpoint about the teaching-learning process. These regulations are for the Four Year Bachelor of Technology (B.Tech) Programmes being offered by the various Departments. The Regulations shall be applicable prospectively for the batches admitted from 2020 onwards. Degree will be awarded by the affiliating University.

REGULATIONS

R1. Short Title, Application and Commencement

- R1.1 These Regulations shall be called the Mar Baselios College of Engineering and Technology B.Tech Regulations, 2020.
- R1.2 These are subject to the provisions of the (UGC) (Conferment of Autonomous Status Upon Colleges and Measures for Maintenance of Standards in Autonomous Colleges) Regulations, 2018. It is the express understanding that these regulations are subject to the approval of the concerned statutory bodies of the College.
- R1.3 These Regulations shall apply to all B.Tech Programmes offered in the College.
- R1.4 These regulations shall be applicable for students admitted from 2020 onwards.

R2. Admission

- R2.1 The eligibility for admission shall be as decided by the University or the competent statutory authority for admissions from time to time (See Rule RU-1.).

- R2.2 The norms for admission and mode of admission shall be as per the regulations of UGC and the agreement with the Government of Kerala from time to time.
- R2.3 The Branches of study and number of students admitted shall be based on the approval by the All India Council for Technical Education(AICTE) and the University.
- R2.4 A student admitted to a branch of study shall normally continue to study in the same branch. However, branch change shall be permitted to few vacant seats, if any, after successfully completing the First and Second semesters (See Rule RU-2).
- R2.5 If at any time after admission, it is found that a candidate has not fulfilled any of the requirements stipulated by the University or the statutory body concerned, the Principal may revoke the admission of the candidate and report the matter to the University.
- R2.6 Migration of students from other Colleges/Universities shall be permitted in very special cases as per the norms approved by the Academic Council (See Rule RU-3).

R1. Structure of the B.Tech Programme

- R3.1 The duration of the B.Tech Programme shall be 4 years (8 semesters).
- R3.2 The maximum duration one student can take to complete the Programme shall be 12 semesters spanning six academic years.
- R3.3 Every academic year shall have two semesters, normally '1st July to 31st December (Odd semester)' and '1st January to 30th June (Even semester)'. Each semester shall have 75 instructional days and the regular assessments followed by the End Semester Examination.
- R3.4 Academic Calendar: The College shall publish the academic calendar for every academic semester indicating the commencement of the semester, beginning of classes, the course registration date, dates of course and class committee meetings, IQAC audits, schedule for mandatory Continuous Assessment Tests (CATs) for theory courses, dates by which the evaluations in respect of laboratory/practical/project/comprehensive shall be completed, dates for finalization of the attendance/Continuous Assessment (CA) marks, last working day in the semester, dates of End Semester

Examination, date of declaration of results and so on. It shall also indicate approved holidays falling within the semester, dates for the supplementary examinations, etc. Pursuant to the academic calendar, the time table for all classes shall be published.

- R3.5 Every branch of the B.Tech Programme shall have a curriculum and syllabi for the courses as per the framework. The curriculum shall be normally modified/updated once in three years. However, innovative elective courses can be included as and when required, on the recommendations of the respective Board of Studies and subject to the approval of the Academic Council. The syllabus may be revised/updated as frequently as needed to absorb the new topics. Such revisions shall be based on the student feedback/faculty feedback/suggestions from experts and shall be included subject to the recommendations of the Board of Studies concerned.
- R3.6 The academic Programmes of the College follow the credit system. The general pattern is as below, where one Hour means one *credit hour* of 50 minutes:

1 Hour Lecture (L) per week	1 credit
1 Hour Tutorial (T) per week	1 credit
2 Hours Practical (P) per week	1 credit
3 to 4 Hours Practical (P) per week	2 credits

- R3.7 The curriculum of any branch of the B.Tech Programme shall have a requirement of total of minimum 160 earned academic credits and 2(two) additional pass/fail credits.
- R3.8 Number of Credits per semester as per the curriculum shall not be less than 15 or greater than 25.
- R3.9 The College may allow students to transfer credits they have earned at other Universities and Academic Institutions, as per the guidelines given by the Board of Studies and approved by the Academic Council and based on the norms of the affiliating University.
- R3.10 Every course of B.Tech Programme/ B.Tech with Minor/ B.Tech (Honours) shall be placed in one of the ten categories as listed in the Table 1 below, which has been drawn broadly in alignment with the framework of the affiliating University.

Table 1

Sl. No.	Category	Code	Credit
1	Humanities and Social Sciences including Management Courses	HSC	58
2	Basic Science Courses	BSC	26
3	Engineering Science Courses including workshop, drawing, basics of electrical/mechanical/computer etc.	ESC	22
4	Professional Core Courses	PCC	76-78
5	Professional Elective Courses relevant to chosen specialization/branch	PEC	15
6	Open Elective Courses – Electives from other technical and/or emerging areas as specified in the curriculum concerned	OEC	03
7	Project Work & Seminar	PWS	8-10
8	Mandatory Courses	MNC	Non credit
9	Mandatory Student Activities (Pass/Fail)	MSA	2
Total Mandatory Credits			162
10	Value Added Courses (Optional) – Honours/Minor	VAC	20

R3.11 No semester shall have more than six lecture-based courses and two laboratory and/or drawing/ seminar/ project/ mini project comprehensive courses in the curriculum (excluding MNC).

R3.12 The medium of instruction shall be English. All examinations, project/ seminar reports and presentations shall be in English.

R1. Academic Monitoring and Student Support

R4.1 Advisory System

College shall maintain a strong Faculty Advisory system in order to help the students in planning their courses of study and for providing general advice on the academic programme/co scholastic activities/ career guidance. The Department concerned shall assign a certain number of students to a faculty member who will be designated as their 'Faculty Advisor' (FA). There may be two or three FAs for a class and each FA can be in charge of roughly 20 to 25 students. HoD shall nominate one faculty member(preferably a regular faculty with minimum 5 years of experience) among the FAs as the Senior Faculty Advisor (SFA) of that class.

FAs shall be the first point of contact for students and parents. Students shall first approach their FA for all purposes of registration and all kinds of academic advices, leave and all academic/study related matters in the College. FA shall make appropriate recommendations or remarks on the applications submitted by the students before forwarding the same to HoD/other officials as the case may be. The documents regarding all academic and non-academic matters of students under an advisory group shall be kept with the Senior Faculty Advisor during the studies of the students and for a duration after that as decided by the College.

- R4.2 The SFA shall arrange separate or combined meetings with Faculty Advisors, faculty, parents and students as and when required and discuss the academic progress of students under their advisory group. The Senior Faculty Advisor/ Faculty Advisor shall also offer guidance and help to solve the issues on academic matters/non academic matters and guide the students for counselling when needed. Advisory meetings shall preferably be convened:
- i) Immediately after the commencement of the semester.
 - ii) Immediately after announcing the marks of first Continuous Assessment test.
- R4.3 Faculty advisor shall keep the complete record of academics, attendance/leave, disciplinary actions, if any, contact details of parents/local guardians and any other relevant data of the students assigned to him/her. The FA/SFA shall maintain the meeting minutes and action taken reports of the advisory meetings and shall get it noted by the respective Head of the Department.
- R4.4 The FA/SFA will assign the activity points based on the proof produced by the students. They shall consolidate the statements of attendance, activity points and continuous assessment marks of the students in their advisory group. These statements shall be certified by the Head

of Department and forwarded to the Dean(Academic) for approval. An attested copy of these records shall be kept in safe custody of the HoD for all sorts of inspections/verifications, for a duration decided by the College.

- R4.5 Parents/Local guardians can maintain contact with the FA of his/her ward or access the online portal for seeking information on the performance of their ward.

R1. Course Committee(CoC)

- R5.1 Every common course (electives are excluded) offered to students admitted for the B.Tech Programme irrespective of their Branch of study shall have a Course Committee(CoC) constituted by the Dean(Academic), considering the fact that such courses shall have more than one Instructor/faculty assigned to deliver/conduct the course. The Chairperson of the course committee shall be a senior faculty member not teaching that course in that semester.

Members:-

- i) The members of the faculty who have been assigned to deliver/ conduct the course.
- ii) One student representative each from the respective classes, nominated by HoD upon recommendation from SFA.

R2. Class Committee(CC)

- R6.1 There shall be one class committee(CC) for every semester for each class(both batches together if applicable) in each Department for each Branch. Class committee will be constituted by the respective Heads of the Departments. The Chairperson of the committee shall be a senior member of the faculty of the Department, who does not offer any course for that class during the semester concerned.

Members:-

- i) All members of the faculty from all Departments who are teaching courses in that semester for that class for which the CC is constituted.
- ii) Two student representatives (minimum) from the same class, nominated by the Head of the Department, upon recommendation from SFA (preferably @one male and one female).

- iii) Senior Faculty Advisor/one Faculty Advisor of each batch of the class of that semester.
- R6.2 Term of office of the Course Committee and Class Committee shall be one semester and are required to be constituted every semester. The course committees and class committees can be convened as and when required. There shall be three meetings in a semester, mandatorily, to discuss and finalize the teaching and evaluation plans, the assessment marks, etc. The first meeting shall be convened within two weeks after the commencement of classes and the second after the first Continuous Assessment test. The third one (without student representatives) shall be towards the end of the semester for the finalization of Continuous Assessment Marks. In every meeting there shall be review on the matters related to the performance of the students, feedback of the students on the teaching, etc.
- R6.3 The Principal or Dean (Academic) or his/her nominee or HoD shall have the right to be present in any class committee meetings or convene the special meetings. The Chairperson of the committee shall record the proceedings of each meeting and communicate a copy of the record the proceedings of each meeting to the HoD concerned for any further actions required.
- R6.4 The responsibilities of the Course/Class Committee include the following:
- i) Discuss the lecture plan, method of evaluation/assessment and the policy formulated by the course faculty/course coordinator. The same shall be announced in the class also in the beginning of the semester. If any modifications arise from the discussions the faculty concerned shall accordingly revise the plans. Copies of the final Course plans and the Minutes of the meetings shall be maintained by the Chairperson of the course/class committee for such durations as decided by the College.
 - i) Review the progress of the classes in terms of adherence of the respective members of the faculty to the course plan and time schedule, standards of continuous assessment tests/assignments etc. and give feedbacks to Dean(Academic)/HoD.
 - ii) Monitor the attendance and progress of the students to identify students with low attendance and poor performance in the tests. Class Committee shall take measures to give necessary advice/warning through FA/HoD. Faculty and CC shall take remedial measures for improving the performance of slow learners in the

class, with a view of handholding the academically weak students. In case of financial difficulties of any student to pay the fees, attend internships, etc. CC shall make proactive moves to help such students.

- iii) Discuss the difficulties/shortcomings/inadequacies in the portions that are part of the curriculum and syllabi and make suitable suggestions and recommendations for the future revisions. These points shall be communicated to Dean (Academic) through the Department.
- iv) Finalize the Continuous Assessment(CA) Marks (meeting to be conducted without the student members). Final CA marks shall be submitted to the HoD in the prescribed format for publishing in the web/notice board to seek corrections/grievance from the students. A copy shall be given to the SFA/FA for follow up.

R1. Registration and Enrolment

R7.1 Registration for the First semester(S1) of the study is automatic upon admission to the B.Tech Programme for all the students. However, from Semesters S2 to S8, it is required by every student to register for the semester and get enrolled for the courses to be credited in that semester. Registration and enrolment shall be done at the beginning of each semester as per the schedule given in the academic calendar and as per the notice issued by the Dean(Academic).

R7.2 A student shall be eligible for the semester registration and course enrolment if and only if he/she completely satisfies the minimum requirements to continue the programme as per the extant regulations and rules and shall be permitted to enroll only if,

- (i) he/she has cleared all the dues in the College, Hostel & Library up to the end of the previous semester,
- (ii) he/she is not debarred from enrolment by a disciplinary action of the College,
- (iii) he/she has paid all the tuition fees and all other relevant fees, if any, prescribed by the College,
- (iv) Progress is satisfactory as per the regulations, and
- (v) Students shall ensure that the teaching evaluation of the courses registered in the previous semester are duly completed.

The procedure and the schedule for the registration will be notified by the Dean(Academic) before the commencement of the next semester.

R2. Minimum Cumulative Credit Requirements for Registering to Higher Semesters

R8.1 All students admitted in first semester(S1) can continue to the second semester(S2).

R8.2 The students shall register and enroll to the third semester(S3) after clearing the dues to the College. All students registered for third semester courses and enrolled in third semester(S3) can do the registration and enrollment to the fourth semester(S4).

R8.3 A student shall earn not less than 21 credits from the first and second semesters(S1 and S2) for registration to the fifth semester(S5). If any student fails to score the above minimum credit requirement to continue the programme, he/she shall be on academic probation, during which he/she is to earn/makeup the deficit credits. If any student still does not qualify to register for the fifth semester, he/she has to discontinue the programme. However, College shall make arrangements of remedial teaching and guidance/counselling well on time to avoid the occurrence of cases of heavy backlogs of credits for the students.

R8.4 All students registered for fifth semester courses and admitted in fifth semester(S5) can register and enroll to sixth semester(S6).

R8.5 A student shall earn not less than a total of 47 credits from first to fourth semesters(S1 to S4) for becoming eligible for registration to the seventh semester(S7). If any student fails to score the above minimum credit requirement and if he/she was not on academic probation earlier for more than once, he/she shall be put on academic probation to earn/makeup the deficit credits. If he/she is on academic probation and at the end of the probation period, still does not qualify to register for the seventh semester, he/she has to discontinue the programme. However, College shall make arrangements of remedial teaching and guidance/counselling well on time to avoid the occurrence of cases of heavy backlogs of credits for the students.

R8.6 The maximum cumulative period of academic probation is two years, in accordance with the extant regulations (See R3.2).

R8.7 All students registered for seventh semester courses and enrolled in seventh semester can register and enroll to the eighth semester(S8).

R8.8 Minimum credit requirements to continue the programme

Semester	Allotted Credits	Cumulative Credits	Required Minimum Cumulative Credits
First	17	17	Not Applicable
Second	21	38	Not Insisted
Third	22	60	Not insisted
Fourth	22	82	Not Insisted
Fifth	23	105	21 Credits from S1& S2
Sixth	23	128	Not Insisted
Seventh	15	143	47 Credits from S1 to S4
Eight	17	160	Not Insisted
Eight	17	160	Not Insisted

- R8.9 A student who has not registered for all the core courses listed in the curriculum for a semester shall not be eligible to register for the next higher semester. Any exemptions in this regard shall be subject to the approval of the Academic Council.
- R8.10 For the B.Tech programme, the maximum number of additional credits(credit overload/early credit of electives) a student can register in a semester, in excess of the total mandatory credits that normally appears in the curriculum for that semester, is limited to 08(eight) credits.
- R8.11 In the situations of changes in the curriculum/syllabus, a student has to register for the approved equivalent courses (meeting the same/higher credits) as per the revised curriculum/syllabus, based on the advice of FA, recommendation of the HoD and approval of Dean (Academic), whenever he/she is allowed to resume the studies after the period of discontinuation/break of study/academic probation. Only such students who agree and furnish an undertaking in this regard shall be given permission to continue the programme when they return after the discontinuation/break/probation and in

the case of changes of curriculum and syllabus getting implemented during the same time period of break of study referred herein.

R1. Assessment Procedure

- R9.1 The Academic Council shall decide the pattern of the assessment procedure from time to time, considering the national and global trends. As per the provisions given in the present regulations the evaluation of the academic performance of the student for the purposes of awarding grades and grade points shall be based on a system of Continuous Assessment (CA) and End Semester Examination (ESE). Continuous Assessment (CA) shall be made through the multiple components such as tests, assignments, tutorials, quizzes, presentations, course projects, reports etc. which have been adopted by the faculty during the course delivery, depending on the nature of the course and the content. This shall make only one portion of the total marks to be earned. Remaining portion of the marks shall be earned from the End Semester Examination (ESE) for each of the enrolled course of study in each semester. Distribution of marks for CA and ESE shall be governed by the regulations. (See R10)

R1. Weightage for Assessment Components

- R10.1 For all lecture-based courses and for all courses where lectures are clubbed with laboratory practical or drawing or projects etc., the End Semester Examination shall carry a weightage between 50% to 67% of the maximum marks of the course. The remaining weightage is for Continuous Assessment through tests, assignments, tutorials, course projects, presentations etc.
- R10.2 For courses where lectures clubbed with practical or drawing or projects etc. assessment procedure shall be a properly weighted combination of those for lectures and those for practical or drawing or project components etc., and shall be decided by the course faculty under intimation to the class committee.
- R10.3 End Semester Examination is not mandatory for laboratory/practical/drawing course. If it is planned, it shall be conducted before the last instructional day and the weightage for it will not exceed 50%, and shall be decided by the course faculty under intimation to the class committee.
- R10.4 For Project, Mini Project, Seminar, Comprehensive course work and viva voce, the assessment will be continuous assessment (CA) only and the distribution pattern for the weights shall be decided by the panel of evaluators, under intimation to the class committee.

R10.5 For all courses, the course plan and assessment pattern shall be announced in the class at the beginning of the semester and shall be presented in the first meeting of the class committee. Modifications, if any based on the discussions, shall be made by the course faculty under intimation to the class committee. All such records shall be filed and kept by the Chairperson of the class committee.

R1. Continuous Assessment

R11.1 Continuous Assessment (CA) shall be made through the multiple components such as tests, assignments, tutorials, quizzes, presentations, course projects, reports etc. which have been adopted by the faculty during the course delivery, depending on the nature of the course and the content.

R11.2 There shall be minimum two Continuous Assessment Tests (CATs) of 90 minutes duration each, for lecture-based courses and for courses where lectures are clubbed with practical or drawing or projects etc. Each test shall cover roughly 50% of the syllabus so that full syllabus is covered in the continuous assessment.

R11.2 Re-test, covering the entire syllabus, shall be permitted towards the end of the semester for the students who could not appear for the test due to genuine reasons and have duly obtained such permissions in time.

R11.3 For laboratory practical/drawing courses, the method of assessment shall be based on the performance of students in the regular laboratory/practical/drawing classes and the tests and the distribution of weights for the assessment components shall be decided by the course faculty under intimation to the class committee.

A general guideline regarding weightage of various components of the continuous assessment is shown below:

Course	Attendance	CA Tests	Assignment/ Class work/ Course project
Theory	20%	50%	30%
Drawing/ Practical	20%	40%	40%

R11.4 The tests shall be conducted as scheduled in the academic calendar and shall be administered/ coordinated by the Examination Cell.

- R11.5 The marks of tests shall be consolidated and published on the notice board duly signed by the SFA and the HoD.
- R11.6 Number of assignments/tutorials/presentations/course projects/reports etc. shall be decided by the course faculty, depending on the nature of the course and the content.
- R11.7 **Submission of marks:** At the end of the semester, the SFA shall forward the consolidated statements of Continuous Assessment Marks prepared by the course faculty and attendance statement for each course to the HoD. These statements shall be vetted by the Class Committee and endorsed by the Head of Department. This step will be in addition to the data entry to be done in the online system maintained by the College for the academic system management.
- R11.8 The certified copy of consolidated attendance and Continuous Assessment marks shall be displayed on the Department Notice Board for at least two working days for the information of students and helping the students to get the corrections done by the Department on time.
- R11.9 Any concerns raised by the students regarding attendance and Continuous Assessment marks shall be submitted to the Chairperson, Grievance Redressal Committee. The committee shall take appropriate steps to ensure proper redressal of the concerns raised by the students. Changes if any shall be made in the records by the respective faculty.
- R11.10 The Continuous Assessment marks and the attendance shall be uploaded to the College portal and forwarded to the Controller of Examinations, after due corrections, if any.
- R11.11 The original statement of Continuous Assessment Marks and Attendance shall be kept in safe custody of the HoD for future verifications.
- R11.12 Students have to earn two mandatory credits, as per the curriculum, through their involvement in various activities. The two credits shall be awarded based on the Activity points earned by the individual student. The Activity points earned by the students shall be published

at the Department at the end of every semester and shall be duly accounted in the assessments as required in the regulations.

R1. End Semester Examination

- R12.1 There shall be an End-Semester examination (ESE) of three hours duration for each lecture based course and for each course where lectures are clubbed with practical or drawing or projects etc. The End Semester Examinations for all such cases shall be proctored and conducted by the Controller of Examinations.
- R12.2 The regular class works shall be completed well before the commencement of the End Semester Examinations, duly covering the portions envisaged in the syllabus with an emphasis on higher learning achievements for the students.
- R12.3 The eligibility criteria for registering to the End Semester Examination are the mandatory percentage of attendance in the course (as per R17) and no disciplinary actions pending. Students who do not meet the eligibility criteria are awarded an FE grade.
- R12.4 The regular End Semester Examinations (ESE) shall be held twice in a year. That is, one respectively at the end of each semester odd/even, namely – April/May session (for even semesters) and October/November session (for odd semesters).
- R12.5 The students can apply for re-evaluation of the answer scripts of the End Semester Examination within 3 working days from the date of declaration of results. The final mark awarded will be the better of the two marks. If the difference in marks obtained in re-evaluation and the original evaluation is more than 15% of the maximum marks, Answer scripts shall be sent for third evaluation. The final mark shall then be the average of the two closer marks obtained in the three evaluations, to the advantage of the applicant or the mark obtained in the original evaluation whichever is higher. Results shall be kept on hold in the cases of re-evaluation till the final result is announced after the completion of the re-evaluation process. This process will be handled by the Examination Cell.
- R12.6 After publication of results, students can apply for scrutiny of answer scripts in the cases where the students have doubt about the grades received and suspect an error in the totaling of marks. The corrected results after scrutiny shall be published, in case of discrepancy of marks. Results shall be kept on hold in the cases of

scrutiny till the final result is announced after the completion of the scrutiny process.

- R12.7 Supplementary/Re-examination shall be conducted for making up the chance lost for absent/failed students of a regular examination as the case may be, after the publication of results of the same. Appearing for the Re-examination by absent/failed students may be deemed as a supplementary chance. In order to save the year and to enable smooth progress of the slow learners, annual supplementary examination for all semesters (courses) will be conducted, preferably before the starting of the next academic year. In all cases, the declaration of results of the regular examinations shall be completed within the timeframe possible before the commencement of the odd/even semester.
- R12.8 Students, who have completed a course (lecture-based courses and courses where lectures are clubbed with practical/drawing/projects etc.), but could not write the End Semester Examination, shall be considered as absent and shall be awarded “F” Grade, provided they meet other eligibility criteria (R12.3). They can appear for the End Semester Examination at the next opportunity and earn the credits without having to register (course registration) for the course again.
- R12.9 The students with FE grade shall register for the courses during the normal semesters in which the courses are offered again. However, for the seventh and eighth semester FE grade students can register for the courses in the next immediate chance, when offered.
- R12.10 In case of Laboratory/Practical/Workshop/Drawing courses, if the student has not completed the course assessments, or did not meet the minimum attendance requirement of 75%, or scored less than 50% in the assessment, he/she shall be awarded an “I” grade against the course. The final grade will be given only after fulfilling the requirements of the course.

R1. Evaluation of Project/Thesis, Seminar and Comprehensive Viva Voce

- R13.1 Project/Thesis work in the curriculum shall be normally done by a group of 3 to 5 students. Objective of the project is to facilitate higher order learning through the engagement with the project work and will be done in two phases in Semesters VII and VIII. The project

work will be evaluated by a panel of evaluators appointed by the HoD. Panel of evaluators for Phase I of the project (in Semester VII) shall comprise the HoD/Senior Faculty member, Project Coordinator and the Project Supervisor.

The final evaluation of Phase II of the project in S8(in Semester VIII) shall be done by a panel with one expert from Industry/research institute and a senior faculty from sister Department, in addition to the project coordinator and project supervisor. Interim evaluations shall be done by the panel, without the external expert. The modalities and the distribution of marks of assessment/evaluation shall be decided by the panel of evaluators and shall be announced in the class committee. The selection of the external experts for project evaluation, shall be with the prior approval of the Dean (Academic).

- R13.2 On completion of the project work, each of the student shall submit a report in the prescribed format to the Department. Number of copies and the format shall be as per the Department guidelines. Soft copy of the report shall be submitted to the College Digital Library after due check for plagiarism.
- R13.3 Seminar as per the curriculum shall be presented by individual student. This shall be assessed by a panel of evaluators decided by the HoD, comprising of one senior faculty, seminar coordinator and seminar guide. Method of assessment/evaluation shall be decided by the panel of evaluators and shall be announced in the class committee.
- R13.4 After the successful presentation of the seminar, the student shall submit a report in the prescribed format to the Department. Number of copies and the format shall be as per the Department guidelines.
- R13.5 The Comprehensive viva voce shall be conducted in the eighth semester largely based on the core courses studied from third to eighth semester and the comprehension of the topics of the discipline. The viva voce shall be conducted by the panel of evaluators (excluding project supervisor) assigned for final project phase II evaluation towards the end of the semester (Project coordinator, expert from Industry/research Institute and senior faculty from a sister Department).
- R13.6 Highest ethical standards shall be followed in the preparation of all the reports and research papers.

R1. Pattern of Grading

- R14.1 A student will be eligible for the award of B.Tech Degree of the University on satisfying the following requirements:
- i) Fulfilled all the curriculum requirements within the stipulated duration of the Programme.
 - ii) Earned the required minimum credits as specified in the curriculum for the branch of study.
 - iii) No pending disciplinary action.
- R14.2 Students registered for a course have to attend the course regularly and undergo the Continuous Assessment and appear for the End Semester Examinations. Credits for the course are deemed to be earned only on getting at least a pass grade 'P' or better in the composite evaluation.
- R14.3 For lecture-based courses and courses where lectures are clubbed with practical/drawing/projects etc. the pass minimum shall be 40% for the End Semester Examination and 50% of CA and ESE put together. Grade 'F' will be awarded to the student for the course if either his/her mark for the End Semester Examination (ESE) is below 40 % or the overall mark [Continuous Assessment + End Semester Examination] is below 50 %.
- R14.4 Students who received F grade in an End Semester Examination shall have to appear for the End Semester Examination at the next opportunity and earn the credits. They shall not be permitted to register for the course again. The CA marks will be carried forward.
- R14.5 Grading is based on the overall marks obtained by the student in a course, as given in RU14.8. The grade card shall only give the grades against the courses the student has registered. Semester grade card shall give the grade for each registered course, Semester Grade Point Average (SGPA) for the semester as well as Cumulative Grade Point Average (CGPA).
- R14.6 There is no provision for improving the grades awarded to the student.
- R14.7 Grade cards shall be issued by the College to the student after acquiring minimum 'P' grade for all the courses in the semester. On earning the required credits for the degree, the College shall issue the final consolidated grade sheet for the B.Tech programme including CGPA.

R14.8 Grade and Grade Points

Grades	Grade Point (GP)	% of Total Marks obtained in the Course
S	10	90% and above
A+	9.0	85% and above but less than 90%
A	8.5	80% and above but less than 85%
B+	8.0	75% and above but less than 80%
B	7.5	70% and above but less than 75%
C +	7.0	65% and above but less than 70%
C	6.5	60% and above but less than 65%
D	6.0	55% and above but less than 60%
P (Pass)	5.5	50% and above but less than 55%
F (Fail) for ESE	0	Below 50% (CA+ ESE) or Below 40 %
FE	0 (R12.3)	Failed due to lack of eligibility criteria
F	0	Could not appear for the End Semester Examination but fulfills the eligibility criteria, for lecture-based courses and courses where lectures are clubbed with practical/drawing/projects etc.
I	0	Failed to satisfy the requirements (R12.10) for Laboratory/Practical/ Workshop/Drawing courses
CGPA 8.0 and above First class with Distinction		
CGPA 6.5 and above First class		
Equivalent percentage mark shall be = $10 \times \text{CGPA} - 2.5$		

R15. Calculation of SGPA/CGPA

R15.1 Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are calculated as follows.

$$SGPA = \frac{\sum C_i \times GP_i}{\sum C_i}$$

where ' C_i ' is the credit assigned for a course and ' GP_i ' is the grade point for that course. Summation is done for all courses specified in the curriculum of that semester.

$$CGPA = \frac{\sum C_i \times GP_i}{\sum C_i}$$

where ' C_i ' is the credit assigned for a course and ' GP_i ' is the grade point for that course. Summation is done for all courses specified in the curriculum up to that semester for which the 'CGPA' is needed.

CGPA for the B.Tech programme is arrived at by considering all course credits that are needed for the degree and their respective grade points.

R15.2 A student shall earn 2(two) credits by actively involving in co-curricular and extra-curricular activities as per the guidelines issued from time to time. On getting minimum 100 activity points the student satisfies the requirement and earns the two credits which shall not be counted for the calculation of CGPA but shall be mandatory for the award of the degree.

R3. Break of Study

R16.1 A student is permitted to avail break of study:

- i) In case of accident or serious illness needing prolonged hospitalization and rest.
- ii) In case the student has a bright idea and would like to initiate a start-up venture or develop a product.
- iii) In case of any personal reasons that need a break in study.
- iv) For internship leading to employment.

R16.2 For break of study due to illness, student shall submit all necessary medical reports together with the recommendation of the doctor treating him giving definite reasons for break of study and its duration. Before joining back, the student should submit the fitness certificate from the doctor who had treated him.

- R16.3 Students who want to initiate a start-up venture or a product development, have to submit a project report, clearly indicating the purpose, action plan, technical details, funding details and future plans to the Principal. The Principal shall evaluate the proposal by constituting an expert team consisting of a technocrat and a bank executive and take an appropriate decision based on the team's recommendation. The break of study for the startup shall be permitted only after the 4th semester for a maximum duration of two semesters. This is however permitted only on successfully completing the courses listed out in all the four semesters.
- R16.4 Students who require a break of study due to personal reasons shall convince the Principal on the genuine need of it by giving authentic evidence for the same.
- R16.5 Students who require break of study for 'internship leading to employment' shall produce the offer letter obtained from the employer concerned. The Principal shall verify the authenticity of the offer and take appropriate decision, based on the recommendation of the standing committee.
- R16.6 Break of study for an academic year is the preferred option to break of study for a semester.
- R16.7 Students shall have to rejoin on the first working day of the next immediate semester after the break of study.
- R16.8 Students readmitted after break of study shall continue their studies in the existing scheme to which he/she was readmitted. The exemption and addition of courses to be registered, the transitory courses (approved by the Academic Council), if any due to curriculum change, shall be decided by the respective Board of Studies.

R17. Attendance

- R17.1 Students are expected to attain 100% attendance for all courses. However, under unavoidable circumstances they are permitted to avail leave. Total leave of absence shall not exceed 25% of the academic contact hours for a course and 75% attendance is mandatory for registering to the End Semester Examination.
- R17.2 Condonation of shortage of attendance up to 15% will be considered on medical grounds, to write the End Semester Examination. This shall be permitted for one or more courses registered in the semester. The relaxation/condonation of attendance on medical grounds is applicable only twice during the entire programme period. In case of prolonged illness, break of study is permitted as per R16.2.

- R17.3 There can be relaxation up to a maximum of 10% to students participating in officially sponsored National level competitions/ championships/ tournaments which will be granted in the form of duty leave. The student shall get prior permission from the Principal before participating in such events. Such students should produce the participation certificate countersigned by the University Sports Coordinator/Director of Physical Education in the case of sports activities and the Senior Faculty Advisor in the case of other extracurricular activities within ten days of the event. The participation certificate thus produced shall be forwarded to the Principal with the due recommendation of the respective Head of the Department. Under no circumstances, the Principal shall consider the certificate if the overall physical attendance of the candidate is less than 60%. Late applications received shall not be considered on any account.
- R17.4 There can be relaxation up to a maximum of 5% to students for organizing extra/ co-curricular activities which will be granted in the form of duty leave. Such students should produce the required documents countersigned by the University Sports Coordinator/ Director of Physical Education in the case of sports activities and the Senior Faculty Advisor in the case of other extra/ co-curricular activities within ten days of the events. The documents thus produced shall be forwarded to the Principal with the due recommendation of the respective Head of the Department. Under no circumstances, the Principal shall consider the documents, if the overall physical attendance of the candidate is less than 60%. Late applications received shall not be considered on any account.
- R17.5 A summary of all cases of attendance relaxation shall be reported to the Academic Council.

R18. Discipline

- R18.1 Discipline is of paramount importance in the College. Every student is required to observe discipline and decorous behaviour both inside and outside the campus and not to indulge in any activities, which shall spoil the decorum and tend to bring down the prestige of the Institution.
- R18.2 Ragging of any nature is a criminal and non-bailable offence. Involvement in ragging shall lead to stringent punishment, including imprisonment as per the law of the land. A student, whose involvement in ragging is established, shall be summarily dismissed from the College. In all cases of harassment, if any, of the junior students by the seniors, the College level Anti-Ragging Committee will take appropriate decisions for immediate implementation by the College. Each student of the College, along with his/her parent,

is required to give an undertaking in this regard and the same is to be submitted at the time of admission to the College.

R19. Malpractices in Examinations

- R19.1 Every student is required to be scrupulous and is expected to observe discipline and decorous behavior in the campus, classrooms and examination halls. Any act of indiscipline, misbehavior, use of unfair practice in examinations, threatening, damage to the College property, etc. shall be deemed as acts of indiscipline and shall be referred to the Disciplinary Action Committee (DAC) appointed by the College for detailed inquiry and measures thereon.
- R19.2 Malpractices in examinations shall be viewed seriously and any such incident observed or reported by a faculty member or an invigilator associated with the examinations shall be reported to the Controller of Examinations, who in turn shall refer it to the DAC. On the basis of the report and evidence available or gathered, DAC shall immediately initiate an enquiry by charging the student and also by giving the student a chance to explain his/her case. The committee shall recommend the course of action in line with the guidelines in the examination manual and forward it to the Head of the Institution/Professor nominated by the Head of the Institution, for action.
- R19.3 The actions are to be based on the severity of the offence and are to be dealt with, on a case-to-case basis. The student, if desires, may appeal to the Grievances Redressal Committee for a relook on the decision. Based on the committee's report, the Principal shall take a final decision on the matter.

R20. Academic Auditing

- R20.1 There shall be system of academic auditing and the audit shall be conducted in each Department of the College at stipulated intervals. The academic auditing shall be conducted by the Internal Quality Assurance Cell (IQAC) constituted as per the guidelines of UGC. The Internal Quality Assurance Cell (IQAC) shall audit all the academic activities including all internal/ESE evaluations and examinations. This cell shall prepare academic audit statements. These reports shall be presented to the Principal for further action.

Academic auditing shall cover: -

- (i) Course delivery and adherence to the course plan, syllabus coverage, quality of question papers used for Continuous Assessment Tests, Continuous Assessment, maintenance of

laboratory experimental set ups and equipment, practical assignments, mini projects/projects/comprehensive viva voce and conduct of practical classes and their evaluation.

- (ii) Co-curricular and Extra-curricular activities available for students, the monitoring mechanism of activity points to be earned by the students.
- (iii) The audit shall cover the key performance indicators prescribed by NBA/NAAC/NIRF/University and the lack/inadequacy shall be promptly brought to the notice of the Principal.

R21. Minor in Engineering leading to B.Tech with Minor

- R21.1 All students of B.Tech Programme shall be eligible to register for Minor in Engineering, if they desire.
- R21.2 The registration to Minor in Engineering shall be along with the registration to the 3rd semester. The batch size of a minor program can be between 20(-)10% to 60(+)-10%. That is number of students in a batch be in between 18 to 66. Each batch shall be mapped to a faculty member.
- R21.3 If a student fails in any course of the minor, he/she shall not be eligible to continue with B.Tech Minor option. There won't be any supplementary examination for the courses chosen for Minor. However, the additional credits and grades thus far earned by the student shall be included in the grade card but shall not be considered in calculating the CGPA.
- R21.4 The student shall earn 20 additional credits to be eligible for the award of B.Tech Degree with Minor in specified field. Total credits required is **182** (162 + 20 credits from value added courses).
- R21.5 Out of the 20 additional credits, 12 credits shall be earned by undergoing a minimum of 3 courses, during the specified period. The number of contact hours for these courses shall be 15 hours/credit. The duration of a course shall be minimum 15 weeks. Of these three courses, one shall be a mini project to be done in Seventh Semester, based on the chosen area of study. The remaining 8 credits could be earned from two or more MOOCs offered by reputed online platforms (NPTEL, SWAYAM, Coursera etc.) recommended by the Board of Studies and approved by the Academic Council.
- R21.6 The curriculum and the syllabus of the contact courses shall be recommended by the Board of Studies and approved by the Academic Council.

- R21.7 The assessment of the contact courses and award of credits shall be exactly as that of regular courses. R9 to R15 shall be followed in assessment and evaluation of the contact classes. The assessment and certification of the MOOCs shall be as per the prescribed norms of the MOOCs. The candidate shall produce the certification issued by the MOOCs conducting agency in proof of credit attainment.
- R21.8 The certificate of B.Tech degree with Minor shall be issued by the University to the students who fulfill all the academic eligibility requirements for the B.Tech programme and Minor in Engineering.
- R21.9 The College shall not charge any additional fee from the students for registering to additional courses for B.Tech with Minor.

R22. B.Tech (Honours)

- R22.1 All B.Tech students are eligible to register for B.Tech (Honours). However, their mandatory CGPA at the end of eighth semester shall be **8.5** or higher to be eligible for the award of B.Tech (Honours).
- R22.2 A student can take Honours and Minor together, if they wish.
- R22.3 The registration to B.Tech (Honours) shall be along with the registration to the 4th semester.
- R22.4 If a student fails in any course including the course chosen for B.Tech (Honours), he/she shall not be eligible to continue with B.Tech (Honours). However, the additional credits thus far earned by the student shall be included in the grade card but shall not be considered in calculating the CGPA.
- R22.5 A student shall earn 20 additional credits to be eligible for the award of B.Tech (Honours) Degree. Total credits required is **182** (162 + 20 credits from value added courses).
- R22.6 Out of the 20 Credits, 12 credits shall be earned by undergoing minimum three specified B. Tech (Honours) Elective courses of the respective stream. Students have to get at least 'C' grade or better in all the additional courses for award of B.Tech (Honours). The remaining 8 credits could be acquired through two or more MOOCs offered by reputed online platforms (NPTEL, SWAYAM, Coursera etc.) of the respective streams recommended by the Board of studies and approved by the Academic Council. There won't be any supplementary examination for the courses chosen for Honours. The student shall not be permitted to select the normal elective courses of the respective B.Tech programmes for attaining the additional credit requirements of B.Tech (Honours).

- R22.7 The assessment and certification of the MOOCs shall be as per the prescribed norms of the MOOCs. The candidate shall produce the certification issued by the MOOCs conducting agency in proof of credit attainment so as to enable the credit transfer.
- R22.8 The College shall not charge any additional fee from the students for offering B.Tech (Honours) courses.
- R22.9 B.Tech (Honours) Degree shall be issued by the University to the students who fulfill all the academic eligibility requirements for the B.Tech and B.Tech (Honours) programmes.

R23. Grace Marks for Sports /Arts Competitions

- R23.1 Only regular bona-fide candidates are eligible for the award of grace marks.
- R23.2 The criterion for the award of Grace Marks is representing the University in officially sponsored national level competitions/ championships/ tournaments when called upon to do so. The student shall get official prior permission from the University for representing the University.
- R23.3 The maximum grace marks that can be awarded to a candidate in a particular semester for all activities put together shall be 5% of the aggregate maximum End Semester Examination marks of all theory courses for which the College conducts End Semester Examinations.
- R23.4 The maximum grace marks that can be awarded to a student for a theory course in a particular semester for all activities put together shall not exceed 10% of the maximum marks of End Semester Examination of the course.
- R23.5 The grace marks shall not be awarded to a student for Practical/ Lab/ Viva Voce/ continuous assessment/Seminar/Comprehensive course work and viva voce etc. even though she/he fails for the same.
- R23.6 Eligible grace marks shall be distributed equally on all theory courses of an examination. However, re-distribution of grace marks shall be allowed only in the case of those courses of an examination for which the candidate has passed. Re-distribution is possible from passed courses to failed courses only. Re-distribution of grace marks is not permissible from failed courses to other courses for a pass.
- R23.7 The grace marks shall be awarded for all theory courses in a semester.

- R23.10 If the candidate does not secure the minimum marks required for a pass even after effecting re-distribution, eligible moderation fixed by the respective board if any, shall be awarded to that candidate in addition to the grace marks for a pass.
- R23.11 Eligible grace marks shall be awarded for the regular examination of the performing semester only. Grace marks shall not be awarded for supplementary examinations.
- R23.12 The performing semester shall be considered from 1st July to 31st December (Odd semester) and 1st January to 30th June (Even Semester).
- R23.13 Grace marks shall be awarded on the basis of performance in the respective semester.
- R23.14 The request for grace marks shall be submitted to the Dean (Academic) through the Head of Dept. along with all relevant documents, within the time limit prescribed by the College. The request for grace marks received after the time limit shall not be entertained on any account.
- R23.15 Only a single highest achievement during the period of a semester shall be considered for awarding the grace marks.
- R23.16 Due approval from Academic Council will be taken for granting the Grace Marks.

R24. Grace Marks for Persons with Disability (PWD)

- R24.1 A person with disability means a person suffering from not less than 40% of any disability as certified by the District Medical Board. To be eligible for the grace marks, the certificate of disability specifying the percentage of disability shall be produced before the Principal at the time of admission.
- R24.2 The grace marks that can be awarded for PWD candidates shall be 25% of the marks scored by the candidate in each course at the time of finalization of the results.
- R24.3 Transfer of marks from one course to another shall not be permitted. Fractions of marks if any, while computing the grace marks shall be rounded off to the next higher integer.
- R24.4 PWD candidates who are eligible for grace marks shall be awarded grace marks for regular and supplementary chances until they pass the whole examination.

- R24.5 Grace marks shall be awarded only for the marks of the End Semester Examinations.
- R24.6 The request for grace marks shall be submitted to the Controller of Examinations through the Head of Dept. along with all relevant documents, within the time limit prescribed by the College. The request for grace marks received after the time limit shall not be entertained on any account.
- R24.7 Due approval from Academic Council will be taken for granting the Grace Marks.

R25. Student Welfare Committee

The College shall have a Student Welfare Committee, constituted by the Principal.

R26. Grievance Redressal Committee

The College shall have a Grievance Redressal Committee constituted by the Principal.

R27. Disciplinary Action Committee

The College shall have a Disciplinary Action Committee (DAC) constituted by the Principal. The constitution of the DAC and its functioning are detailed in the Examination Manual.

R28. Academic Integrity

College shall establish the mechanism as prescribed in the UGC regulations, to enhance awareness about responsible conduct of research and academic activities, to promote academic integrity and to prevent plagiarism.

R29. Removal of Difficulty

College reserves the right to remove difficulty/difficulties in the course of implementations of these Regulations in consultation with the appropriate statutory bodies.

R30. Revision of Regulations and Curriculum

- R30.1 The Academic Council of the College reserves the right to revise or change or amend the rules and regulations, the scheme of examinations, the curriculum and the syllabi from time to time, if found necessary, and will be intimated to the University.

- R30.2 In the event of any clarification in the interpretation of the rules and regulations, they shall be referred to the Standing Committee. The Standing Committee will offer suitable interpretations/ clarifications /amendments required for special case on such references and get them ratified in the next meeting of the Academic Council. The decision of the Academic Council is final.
- R30.3 The Principal shall inform/forward or delegate to inform/forward all regulations, guidelines, communications, announcements etc. issued by the regulatory bodies and the affiliating University regarding student academic and other matters to the HoDs for information and timely action.
- R30.4 Principal shall implement/delegate to implement the reforms in the academic processes by way of the orientation programs to the HoDs, SFAs and FAs regarding student counseling, the prevailing norms, regulations, guidelines and procedures on all academic and other student related matters.

RULES

RU-1 Admission Procedure

- (a) Government Quota (50% of the approved intake):

Allotted by the office of Commissioner for Entrance Examination (CEE) from the list prepared based on the rank obtained in Kerala Engineering Architecture Medical (KEAM) entrance examination by Govt. of Kerala. Reservation of seats is as per the Government regulations.

- (b) Management Quota (50% of the approved intake):

The admissions to the management quota are done based on the agreement signed by the State Government with the Colleges coming under the Kerala Catholic Engineering College Managements' Association (KCECMA) and the prospectus approved by the Admission Supervisory Committee, Government of Kerala.

The applications are to be submitted online to the College admission portal on or before the date mentioned in the prospectus. A rank list prepared by apportioning the marks obtained in the entrance examination conducted by the CEE and the marks obtained for mathematics, physics and chemistry/ equivalent subjects in the qualifying examination. The marks will be apportioned in the ratio of 50:50. The seats are filled from this rank list.

- (c) An additional 3% of sanctioned intake under Fee Waiver Scheme will be allotted by the Commissioner of Entrance Examinations.
- (d) Admission under OCI/PIO/FN category will be as per the norms.

RU-2 Branch Change

RU-2.1 A student admitted to a particular branch of the B.Tech program will normally continue studying in that branch till completion.

RU-2.2 However, in special cases the college may permit a student, who has requested for a change from one branch of study to another, after the first two semesters, strictly in accordance with the provisions laid down hereinafter.

RU-2.3 Only those students who have (a) earned all the credits prescribed in the first two semesters of their studies, and (b) obtained a CGPA not lower than 8.5 at the end of the second semester will be eligible for consideration for a change of branch after the second semester.

RU-2.4 Change of branch shall be made strictly on the basis of CGPA of S1 & S2 at the end of second semester of the applicant. Ties shall be broken by the marks obtained in S1 & S2 for Mathematics, Physics, and Chemistry taken in that order.

RU-2.5 Change of branch to/from will be considered only against the vacant seats within the sanctioned strength limited to overall 2.5% (rounded to the nearest integer) of sanctioned intake of the branch in the college.

RU-2.6 The notification regarding the transfer of branch shall be published in the website of the College after the second semester examination. The College shall collect the applications from the students and list of students whose branch changes are approved shall be put in the notice board/College website.

RU-2.7 Students can give only one choice of branch, to which they wish to change over.

RU-2.8 All changes of branch made in accordance with the above rules will be effective from the third semester of the applicants concerned. No change of branch shall be permitted thereafter.

RU-2.9 The change of branch will be final and binding on the applicant. No student will be permitted, under any circumstances, to refuse the change of branch once offered.

RU-2.10 The appropriate credits applicable to the new branch of study earned by the student in the first two semesters will be transferred to him in the new branch.

RU-3 Norms for Migration from other Colleges/Universities

RU-3.1 Migration of meritorious students from other Colleges shall be permitted to third semester only.

RU-3.2 Migration shall be allowed only within the sanctioned strength of the College.

RU-3.3 The following Category of students shall not be eligible for migration:

- (i) Govt. of India Nominee
- (ii) Management Quota in Aided Colleges
- (iii) Management Quota in Private Self-Financing Colleges
- (iv) Students admitted under NRI/PIO Quota
- (v) Lateral Entry Students
- (vi) Students admitted under TFW Scheme.
- (vii) Students admitted in any Supernumerary Seats.
- (viii) Any other category which are ineligible as per the conditions for admission prescribed by Govt. of Kerala/Govt. of India.

RU-3.4 The student shall fulfill the affiliating University's eligibility criteria for admission to the Programme applied for migration.

RU-3.5 The student should have passed all the courses in the lower semesters and secured a minimum CGPA of 8.5 (First and second semester together) and shall fulfill the academic eligibility requirement for promotion to the third semester.

RU-3.6 The student seeking migration shall submit copies of all certificates and mark lists upto the last semester including secondary and higher secondary examinations.

RU-3.7 The student seeking migration shall submit copies of rules and regulations, curriculum and syllabus certified by the Principal (in the case of Autonomous College)/ the Registrar (in the case of affiliated Colleges/Universities) along with the application for migration.

- RU-3.8 The student seeking migration shall submit no objection certificate, migration certificate and conduct certificate from the parent College/ University.
- RU-3.9 The students shall not be permitted to change the branch of study and the selection of students in each branch shall be on the basis of CGPA earned till the previous semester.
- RU-3.10 The respective Board of Studies shall examine each migration case and shall decide on any addition, exemption or substitution of courses the student has to undergo based on the courses so far completed and the academic requirement of existing curriculum and syllabus of the College.
- RU-3.11 The credits so far earned by the student in the parent University will be transferred as per the clauses in the regulations for the respective Programme and as per the pattern of credits followed in the existing regulations, through a mapping process. The respective Board of Studies will decide the equivalency of the courses and the credits to be transferred in each case subject to approval by the Academic Council.
- RU-3.12 The extant curriculum, syllabus, rules and regulations of the College shall be applicable to the migrated students.

