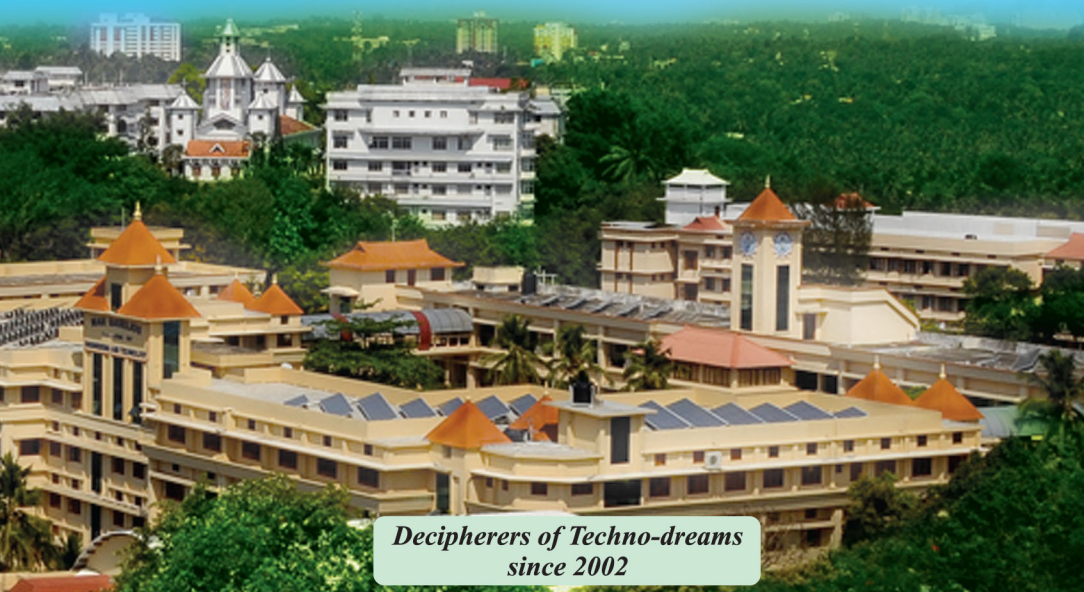
MAR BASELIOS

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

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

The First Self-Financing Engineeirng College in Kerala to receive NBA accreditation for all Programmes & NAAC accreditaion with 'A' Grade (CGPA - 3.13)



Decipherers of Techno-dreams since 2002

HAND BOOK
2020 – 2021

HAND BOOK

2020 – 2021

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) All 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 in admission 2019 and batches prior to that. A seperate Hand Book shall be made availabe for the students admitted in 2020.

Principal

PERSONAL INFORMATION

Name: ……

Date of Birth: …… Sex: ……..

Branch: ……

Class and Roll No: ……

ID card No: ……

Name & Address of Parent: .....

.....

.....

.....

Email ID: ……

Name & Address of Local Guardian: .....

.....

.....

.....

Phone No: ……

Email ID: ……

Blood Group: ……

Vehicle No: ……

Driving License No: ……

Bank Account: ……

PREAMBLE

The Malankara Syrian Catholic Church has been in the field of Education in the State for over Eight Decades, having established hundreds of Primary, Secondary and Higher Secondary Schools, Industrial Training Institutes and a few 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, realizing the need in the changing social scenario for an agency to encounter the challenges in Education. The Society has ventured into the specialized areas of Higher Education such as Medical Science, Life Science and Management Studies also. Set against the backdrop of the serene and panoramic Mar Ivanios Vidyanagar at Nalanchira, away from the hustle and bustle of the city life, yet 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 33130 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 controlled by the Administrative Head.

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, namely, to provide quality Technical Education based 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 Council of the College. As His Beatitude puts it: "We wish to reach out to all sections of our society without the distinction of caste, creed, etc. 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.

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 fully human existence. 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.

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

* To strive for excellence in life.
* To promote scientific enquiry.

* To acquire and apply knowledge 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
Rt. Rev. Msgr. Dr. Mathew Manakarakavil	- Member
Rev. Fr John Vilayil, (Bursar, MBCET)	- Member
Rev. Fr Thomas Kayyalackal (Finance Officer, of Major Archdiocese of Trivandrum)	- Member
Shri. Jacob Punnoose(IPS Retd)	- Member
Prof. S. Viswanatha Rao, Vice Principal, MBCET	- Member
Dr Neethu Roy, Asst. Dean & Prof CED, MBCET	- Member
Mr Tony Thomas, CIO, Boston Consulting Group	- Member
Prof. Arun Kumar Agrawal, IITBHU(Retd)	- Member
Government Nominee (Nomination awaited)	- Member
University Nominee (Nomination awaited)	- Member
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, IIM, Kozhikode.
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. Fr. John Vilayil (Bursar)
2. Dr. Abraham T Mathew (Principal)
3. Prof. S. Viswanatha Rao (Vice Principal)
4. Dr. Paul Thomas (Dean - P G)
5. Dr. Neethu Roy (Asst. Dean – R&D)
6. Dr. Tessy Mathew (HoD – CS)
7. Dr. M. J. Jayasree (HoD – EC)
8. Dr. Jayasree S (HoD – CE)
9. Dr. Nisha G.K (HoD – EE)
10. Dr. Rajesh T.N (HoD – ME)
11. Prof. Joseph Cheriyan (HoD – S&H)
12. Ms. Christi Francis (ADPE)
13. Ms. Asha S.(Asso.Prof – CS) - Nominated
14. Dr. George Zacharia (Prof – S & H) – Nominated
15. Mrs. Jomol Joseph P (Asst. Prof. - EE) - Nominated

Management Administration

Bursar	:	Fr. John Vilayil
Asst. Bursar	:	Fr. Raju Parukoor

Corporate Relations

Corporate Relations portfolio is constituteds to provide impetus to skill development, entrepreneurship, innovations and the relations with industry and other institutions.

Director	:	Dr. T M George Ph.D
Chief Operating Officer	:	Mr. Vipinkumar K C

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.

Dr. Abraham T Mathew, Principal - Chairman

Management Representative:

Fr. John Vilayil (Bursar)

Senior Administrative Officers:

Prof. S. Viswanatha Rao, Vice-Principal

Dr. Paul Thomas (Dean P G)

Dr. Neethu Roy (Asst. Dean- R&D)

Stakeholders' Representatives:

Industry : Ms. Geetha Kumari (Chief Engineer, KSEB)
Mr. Biju Philip (Sr. Vice President, Envestnet)

Alumni : Mr. Ajith Kumar G. S.
Mr. Jerrin Chacko

Co-ordinator:

Prof. (Dr.) George Zacharia

Members :

Dr. M.J. Jayashree (HoD, EC)
Dr. Tessy Mathew (HoD, CS)
Dr. Jayasree S (HoD, CE)
Dr. Rajesh T.N. (HoD, ME)
Dr. Nisha G K (HoD, EE)
Prof. Joseph Cheriyan (HoD, S& H)

Mr. Shibu (Asst. Prof., Dept. of CS)
Ms. Jaya S Pillai (Asst. Prof., Dept. of CE)
Mr. Aravind P. (Asst. Prof., Dept. of ME)
Ms. Deepa P.L. (Asst. Prof., Dept. of EC)
Ms. P. Sandhya (Asst. Prof., Dept of EE)
Ms. Sabitha S. Nair (Asst. Prof., Dept. of S&H)

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 & Engineering	120 " "
3)	Electrical & Electronics Engineering	120 " "
4)	Electronics & Communication Engineering	120 " "
5)	Mechanical Engineering	120 " "
	M.Tech. Programmes	
1)	Computer Science & Engineering	18
2)	Machine Design	18
3)	Power Control and Drives	18
4)	Telecommunication Engineering	18
5)	Structural Engineering	18

COLLEGE STAFF

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

Vice - Principal : **Prof. S. Viswanatha Rao** M.E., Senior Member IEEE
: **Dr. Paul Thomas** Dean **(PG)** M.Tech., LLB, Ph.D., PMP, C (Eng.),FIE, LMASI.
: **Dr. Neethu Roy (Asst. Dean-R &D),** M.Tech., Ph.D.

Department of Civil Engineering
Associate Professor & Head: Dr. Jayasree S, M.Tech, Ph.D

Professors	: Dr. M. Satyakumar, M.Tech., Ph.D.
	: Prof. P. S. Abraham, B.Arch., MCP
	: Dr. Neethu Roy, M.Tech., Ph.D.
	: Dr. Elizabeth C. Kuruvila, M.Tech, Ph.D.
Asst. Professors	: Ms. Bindu Biju, M.Tech.
	: Ms. Ann George, M.Tech. (study leave)
	: Ms. Tisny D. B., M.Tech.
	: Ms. P. Muthulakshmi, M.Tech. (on leave)
	: Ms. Jean Molly Simon, M.Tech.
	: Mr. Jaya S. Pillai, M.Tech.
	: Ms. Anupama Krishnan, M. Tech.
	: Ms. Parvathy U., M.Tech.
	: Ms. Sherin Mathew, M.Tech.
	: Ms. Lekshmi Chandran M., M.Tech.
	: Mr. Akhil Raj S.R., M.Tech
	: Ms. Linda Jose, M.Tech.
	: Ms. Anita A., M.Tech.
	: Ms. Aneena Babu, M.Tech.
	: Dr. Jisha S.V., M.Tech, Ph.D.
	: Ms. Nimisha Anna Jacob, M.Tech.
	: Ms. Smrithi Cheriyath, M.Tech.
	: Ms. Rintu Johnson, M.Tech.
	: Ms. Athira I.C., 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.
	: Mr. Sangeetha Sajeev, M.Tech.
	: Mr. Joju M.R., M. Tech.
	: Mr. Nandana Ramesh, M.Tech.

Department of Computer Science & Engineering

Associate Professor & Head	: Dr. Tessy Mathew, M.Tech., Ph.D
Professors	: Dr.R.Vikraman Nair, B.Sc.(Engg.), DEA, Ph.D
	: Prof. Raju K Gopal , B.Sc. (Engg), M.Tech.
Associate Professor	: Ms. S. Asha, M.E.
	: Dr. Jisha John, M.Tech, Ph.D
Asst. Professors	: Ms. Elizabeth B. Varghese, M.Tech. (study leave)
	: Mr. G. L. Praveen, M.Tech.

: Mr. V. S. Shibu, M.Tech.
: Ms. V S. Devipriya, M.Tech.
: Ms. Anne Dickson, M.Tech.
: Ms. B R. Poorna, M.E.
: Ms. R S. Divya, M.Tech.
: Mr. Shon J. Das, M.Tech,
: Ms. Merin Kuriakose, M.Tech. (on leave)
: Ms. Anjali C, M. Tech.
: Mr. Robin Joseph, M.Tech.
: Ms. Aswathy Ravikumar, M.Tech. (study leave)
: Ms. Gayathri K S, M.Tech.
: Mr. Binu Jose A, M.E.
: Ms. Jesna Mohan, M.Tech
: Ms. Jisha Jose, M.E.
: Ms. Shini Renjith, M.Tech
: Ms. Kiran Baby, M.Tech
: Mr. Ramjith R.P., M.Tech
: Ms. Jayalekshmi J., M.Tech
: Ms. Vinny Pious, M.Tech
: Ms. Dhanya L.K., M.Tech
: Ms. Anjali S., M.Tech

Department of Electrical & Electronics Engineering

Professor & Head : Dr. G. K. Nisha, M.Tech, Ph.D.

Professor : Prof. A. S. Shajilal, M.Tech.

Associate Professor : Ms. Elizabeth Varghese, M.Tech

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.
: Dr. Shalu George K., M.E., Ph.D
: Ms. Shyju Susan Mathew, M.Tech.
: Ms. A V. Soumya, M.Tech.
: Ms. Charivil Sojy Rajan, M.Tech.
: Ms. Manju Sreekumar, M.Tech.
: Ms. Manju Ann Mathews, M.Tech.
: Ms. Surasmi N L., M. Tech
: Ms. Vandana P., M.Tech.
: Ms. Anu Gopinath, M.Tech.
: Mr. Aswin R. B, M.Tech.
: Ms. A. N. Archana, M.Tech.
: Ms. Keerthi S Nair, M.Tech. (on leave)

: Ms. Jeneena Babu, M.Tech
: Ms. Ashni Elsa George, M.Tech.
: Ms. Shilpa Susan Peter, M.Tech.
: Ms. Shilpa George, M.Tech. (on leave)
: Mr. Ajish Ashok, M.Tech.
: Ms. Hridya C.K., M.Tech.

Department of Electronics & Communication Engineering

Professor & Head : Dr. M J. Jayashree, M.Tech., Ph.D

Professors : Prof. S Viswanatha Rao, M.E., Senior Member IEEE
: Dr.. Paul Thomas, M.Tech., LLB, Ph.D., PMP, C (Eng.),FIE, LMASI.
: Dr. Jayakumari J., M.Tech, Ph.D

Associate Professors : Ms. Luxy Mathews, B.Sc., B.Tech., M.Tech.
: Ms. Ancy S.Anselam, M.Tech.

Asst. Professors : Ms. P S. Swapna, M.Tech.
: Ms. Teena Rajan, M.Tech.
: Dr. Sreedevi P, M.Tech., Ph.D
: Ms. Deepa P L, M.Tech.
: Ms. Lani Rachel Mathew, M.Tech.
: Mr. Niyas K. Haneefa, M. Tech. (study leave)
: Mr. Jinu Baby, M.E.
: Ms. Ann Mary Alex, M.Tech.
: Mr. Anoop K. Johnson, M.Tech.
: Ms. Poorna R. Prabhu, M.Tech. (on leave)
: Ms. Athira V, M.Tech.
: Ms. Remya Annie Eapen, M.E.
: Ms. P P. Hema, M.Tech.
: Ms. Riya John, M.Tech.
: Ms. Lakshmy S, M.Tech.
: Mr. Shiras S.N, M.Tech.
: Ms. Anu Susan Philip, M.Tech.
: Mr. Sherry Varghese George, M.Tech.
: Ms. Roselin Raju, 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.
: Mr. Jijo Jose, M.Tech.

Department of Mechanical Engineering

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

Professor : Dr. Muraleedharan Nair K.,M.Tech, Ph.D

Associate Professors : Mr. Remil George Thomas, M.Tech.
: Mr. Pradeep M, M.Tech.
: Dr. Nidhi M B, M.Tech, Ph.D
: Dr. Vinod V, M.Tech, Ph.D

Asst. Professors : Mr. Hari Venkit, M.Tech. (study leave)
: Mr. Ayswer A S, M.Tech.
: Dr. Premchand V P, M.Tech., Ph.D
: Mr. Aravind P., M.Tech.
: 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. (study leave)
: Mr. Vinod V., M.Tech.
: Mr. Kedar Mohan, M.Tech.
: Mr. Ranjith H., M.Tech.
: Mr. Vishnu Prasad K.R., M.Tech.
: Mr. Raveesh G., M.Tech. (study leave)
: Mr. Deepak B.S., M.Tech.
: Mr. Bobin Saji George, M.Tech.
: Mr. Vishnu Asok J S, M.Tech.
: Mr. Aashish John, M.Tech.
: Mr. Melvin Jacob, M.Tech.
: Mr. Vaisakh S. Nair, M.Tech.
: Mr. Ananthan S.P., M.Tech.
: Mr. Emmanuel Ruben Gilbert, M.Tech.
: Mr. Abhiram R. Nair, M.Tech.
: Ms. Sreelekshmi Soman G., M.Tech.
: Mr. Akhilchandran B.S., M.Tech.
: Mr. Alen K. Johnson., M.Tech.

Department of Sciences & 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.

Asst. Professors : Ms. Sabitha S. Nair, M.Sc., B.Ed.,M.Phil, (study leave)
: Dr. M. T. Savitha, M.Sc., B.Ed., Ph.D
: Ms. Lakshmi J.S., M.Sc., B.Ed.
: Dr. Archana P. Das, M.Sc., M.Phil, Ph.D
: Ms. Lekshmi I, M.Sc., B. Ed., M. Phil,

: Ms. Jisha J J., M.Sc., B. Ed., M.Phil.
: Ms. Uma M., M.Sc., B. Ed., M.Phil.
: Dr. G.P. Krishna Mohan, M.Sc., Ph.D.
: Dr. Veena Nair, MA, M.Phil., Ph.D.
: Dr. Vidya Vilas, M.Sc, Ph.D.
: Mr. Vinu. V, M.A
: Ms. Deleesa Babu, M.Sc.
: Mr. Suvith. V.S., M.Sc., M.Phil.
: Ms. Sruthi Janardhanan M.Sc.

Department of Physical Education

Asst. Director of Physical Edn.: Ms. Christi Francis, M.P.Ed,DCA, M.Phil.
: Mr. Deepak Raj, M.P.Ed, DCA.

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 : Ms. Deeparani V.
: Mr. Arun J.
: Ms. Vidyamol S.
: Ms. Renchu Mohan R.

Department of Computer Science Engineering

Lab. Instructor Sr. Grade : Ms. K.C. Linumole
: Ms. G. Priya

Lab. Instructor Gr. I : Ms. Rejani L.
: Ms. Naicy M. John

Lab. Assistant Gr. I : 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.
Lab. Assistant Gr. I	: Mr. Sajan S.S.
	: 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
Lab. Instructor Gr. I	: Mr. S. M. Ajith Kumar
	: Mr. C. S. Shinin
	: Mr. Anilkumar B. S.
	: Ms. Sarika U. S.
	: Ms. Swapna Lekha U.
	: Mr. Rajendran H.
Lab. Instructor Gr. II	: Ms. Hanna Varghese
Lab. Assistant Gr. I	: Mr. Dhaneesh Raj. D.

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.
Welder	: Mr. Biju K.
Workshop Asst. Gr. I	: Mr. Prasanth S. S.
	: Mr. Shaji P.
	: Mr. Shijin Kumar S.
Lab Assistant Gr. I	: Mr. Shiju Kumar S

Department of Science & Humanities

Tutor	:	Ms. Shimamol . C.
Lab Assistant	:	Mr. Praveen R.
	:	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 Assistant	:	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	:	Ms. Soni Gerry, M.Sc., B.Ed., DSM.
Office Assistant	:	Ms. Sandhya R. S., B.Com. CFA, TTC
Store Assistant	:	Ms. Rema G.S., B.A.
Office Assistant	:	Ms. Silja S., M.Sc.
	:	Ms. Nisha Mathew, M.Sc.
Clerical Assistant	:	Ms. Jancy B. S.
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. Orderly 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, obscenity in word or act or any other acts of misconduct will invite 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 extra-curricular activities.
5. Habitual negligence of College 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 program.
6. Students, if they have any grievance and personal problems shall bring them to the notice of the Staff Advisor or the College authorities individually; but should not have 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 conducts 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.

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 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. 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. 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 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

Mobile phones with or without camera are not allowed on the campus, during working hours. Students bringing the mobile phone must deposit the same in the locker provided at the entrance. If any student is found in possession of a mobile phone, it will be confiscated by the authorities. Emergency calls, if any, can be made from the College Information Desk.

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. 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 Principal and Ethics Committee 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, Software Development and Systems 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 Network to Internet through UTM device and its management.
- Provision 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 INFLIBNET E-ShodhSindhu, DELNET and AICTE-INDEST consortium.

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

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

* Digital Library, * 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.

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. 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.
2. Books in the Reference Section are not open for borrowing.
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. Schedule for the issue of books will be notified from time to time.
4. 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.
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. B.Tech students can borrow 3 books and M. Tech. students can borrow upto 4 books.
7. The period of borrowing will be 14 days including the day of issue for B.Tech and 20 days for M.Tech students. If the member fails to return the book on the 15th day a fine of Rs. 1/- per day, per book will be

levied during the first week, Rs.2/- per day per book during the second week and Rs. 5/- per day thereafter.

8. Members are not permitted to sub-lend books borrowed from the library.
9. Periodicals are regarded as reference books.
10. In case a ID card is lost, the matter must be reported to the Librarian.
11. All the books borrowed should be returned at the end of the Semester Examinations.
12. 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. They should dress modestly while attending Programmes on the campus or outside.

IDENTITY CARD

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

LEAVE

1. For any kind of absence, leave application in the prescribed form sanctioned by the HOD must be submitted to the Class Advisor.
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, application should be submitted on the day on which the student is reporting at the College.

Industrial Training

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 class Advisor.

External Technical/Cultural Fests

Guidelines

1. A student interested to take part in an event should make a request to the Staff-in-Charge through the Staff 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 Staff concerned.
5. A record of every student in the class should be maintained by the respective Class Staff 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 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 (50 points), Extracurricular & Co-curricular activities (50 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 (50 points), Extracurricular & Co- curricular activities (50 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 marks 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 PERFORMACE 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 amount of Rs.25,000/- 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 2010-15 batch** by his parents for one final Year Computer Science & Engineering Student who scores the highest marks till final year,in the University Exams.

iv. **Mr. Jose Lawrence Memorial Award**

This award is instituted in the fond memory of Mr. Jose Lawrence of B.Tech ME 2010-15 Batch by his parents for the Best Final year Project .

v. **Mr. Joel Jiji Memorial Award**

This award is instituted in the fond memory of Mr. Joel Jiji of B.Tech ME 2010-15 Batch by his parents for one male & female outgoing student who excels in both Academics & Arts

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. 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 Academic Advisors ensure effective enrollment of students during registration, ensure that academic regulations are observed by the students, meet them 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.

STUDENT CHAPTERS OF PROFESSIONAL BODIES

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, 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 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. The chapter was inaugurted on 13th November 2017 by the ASCE India Southern Section Secretary Dr. S. Basil Gnanappa and ASCE Student Chapter Practitioner Advisor, Mr. Kesavan Gangadharan.

B- Hub

B'Hub is a unique network centre in the Mar Ivanios Vidyanagar Campus initiated by MBCET. B- Hub, 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.

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, Basket-Ball, 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 Vice-Principal 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.

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 Vilayil
President	:	Dr. Abraham T Mathew (Principal)
Vice- President	:	Mr. Aswin R.B.
Gen. Secretary	:	Mr. Deepak B.
Joint Secretary	:	Mr. Anoop K. Johnson
Treasurer	:	Ms. C. Soji Rajan

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	:	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 regularly after registering their names and getting Yearly passes in advance. Requested 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 Vilayil Phone: 0471-2534415

Warden (1): Fr. Raju Parukkoor

(2): Fr. Daniel Kulangara Phone : 8304841964

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. Jessin 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.

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 2020 - 2021

JUNE		2020		JULY
	1	Mon		
	2	Tue		
	3	Wed	1	
	4	Thu	2	
	5	Fri	3	St. Thomas Day - H
	6	Sat	4	
	7	Sun	5	
	8	Mon	6	
	9	Tue	7	
	10	Wed	8	
	11	Thu	9	
	12	Fri	10	
2nd Saturday	13	Sat	11	2nd Saturday
	14	Sun	12	
	15	Mon	13	
	16	Tue	14	
	17	Wed	15	Mar Ivanios Day - H
	18	Thu	16	
	19	Fri	17	
	20	Sat	18	
	21	Sun	19	
	22	Mon	20	Karkadaka vavu
	23	Tue	21	
	24	Wed	22	
	25	Thu	23	
	26	Fri	24	
	27	Sat	25	
	28	Sun	26	
	29	Mon	27	
	30	Tue	28	
		Wed	29	
		Thu	30	
		Fri	31	Bakrid - H

ACADEMIC CALENDAR 2020 - 2021

AUGUST		2020		SEPTEMBER
	1	Sat		
	2	Sun		
	3	Mon		
	4	Tue	1	Third Onam
	5	Wed	2	Sree Narayana Guru Jayanthi - H
	6	Thu	3	
	7	Fri	4	
2nd Saturday	8	Sat	5	
	9	Sun	6	
	10	Mon	7	
	11	Tue	8	
	12	Wed	9	
	13	Thu	10	Sreekrishna Jayanthi -H
	14	Fri	11	
Independence Day- H	15	Sat	12	2nd Saturday
	16	Sun	13	
	17	Mon	14	
	18	Tue	15	
	19	Wed	16	
	20	Thu	17	
	21	Fri	18	Reunion Day
	22	Sat	19	
	23	Sun	20	
	24	Mon	21	Sree Narayana Guru Samadhi - H
	25	Tue	22	
	26	Wed	23	
	27	Thu	24	
Ayyankali Jayanthi - H	28	Fri	25	
Muharam	29	Sat	26	
First Onam	30	Sun	27	
Thiru Onam	31	Mon	28	
		Tue	29	
		Wed	30	

ACADEMIC CALENDAR 2020 - 2021

OCTOBER		2020		NOVEMBER
	1	Thu		
Gandhi Jayanthi - H	2	Fri		
	3	Sat		
	4	Sun	1	
	5	Mon	2	
	6	Tue	3	
	7	Wed	4	
	8	Thu	5	
	9	Fri	6	
2nd Saturday Mar Gregorios Day	10	Sat	7	
	11	Sun	8	
	12	Mon	9	
	13	Tue	10	
	14	Wed	11	
	15	Thu	12	
	16	Fri	13	
	17	Sat	14	2nd Saturday Deepavali
	18	Sun	15	
	19	Mon	16	
	20	Tue	17	
	21	Wed	18	
	22	Thu	19	
	23	Fri	20	
Mahanavami	24	Sat	21	
	25	Sun	22	
Vijaya Dasami - H	26	Mon	23	
	27	Tue	24	
	28	Wed	25	
Miladi-Sherif - H	29	Thu	26	
	30	Fri	27	
	31	Sat	28	
		Sun	29	
		Mon	30	

ACADEMIC CALENDAR 2020 - 2021

DECEMBER - 2020			JANUARY - 2021	
	1	Tue		
	2	Wed		
	3	Thu		
	4	Fri	1	
	5	Sat	2	Mannam Jayanthi - H Patron's Day
	6	Sun	3	
	7	Mon	4	
	8	Tue	5	
	9	Wed	6	
	10	Thu	7	
	11	Fri	8	
2nd Saturday	12	Sat	9	2nd Saturday
	13	Sun	10	
	14	Mon	11	
	15	Tue	12	
	16	Wed	13	
	17	Thu	14	
	18	Fri	15	
	19	Sat	16	
	20	Sun	17	
	21	Mon	18	Founder's Day
	22	Tue	19	
	23	Wed	20	
	24	Thu	21	
X'Mas - H	25	Fri	22	
	26	Sat	23	
	27	Sun	24	
	28	Mon	25	
	29	Tue	26	Republic Day - H
	30	Wed	27	
	31	Thu	28	
		Fri	29	
		Sat	30	
		Sun	31	

ACADEMIC CALENDAR 2020 - 2021

FEBRUARY		2021		MARCH
	1	Mon	1	
	2	Tue	2	
	3	Wed	3	
	4	Thu	4	
	5	Fri	5	
	6	Sat	6	
	7	Sun	7	
	8	Mon	8	
	9	Tue	9	
	10	Wed	10	
	11	Thu	11	Sivaratri - H
	12	Fri	12	
2nd Saturday	13	Sat	13	2nd Saturday
	14	Sun	14	
	15	Mon	15	
	16	Tue	16	
	17	Wed	17	
	18	Thu	18	
	19	Fri	19	
	20	Sat	20	
	21	Sun	21	
	22	Mon	22	
	23	Tue	23	
	24	Wed	24	
	25	Thu	25	
	26	Fri	26	
Attukal Pongala - H	27	Sat	27	
	28	Sun	28	
		Mon	29	
		Tue	30	
		Wed	31	

ACADEMIC CALENDAR 2020 - 2021

APRIL		2021		MAY
Maundy Thursday - H	1	Thu		
Good Friday - H	2	Fri		
	3	Sat	1	May Day - H
Easter	4	Sun	2	
	5	Mon	3	
	6	Tue	4	
	7	Wed	5	
	8	Thu	6	
	9	Fri	7	
2nd Saturday	10	Sat	8	
	11	Sun	9	
	12	Mon	10	
	13	Tue	11	
Vishu - H	14	Wed	12	
	15	Thu	13	
	16	Fri	14	Eid-ul-Fitr
	17	Sat	15	2nd Saturday
	18	Sun	16	
	19	Mon	17	
	20	Tue	18	
	21	Wed	19	
	22	Thu	20	
	23	Fri	21	
	24	Sat	22	
	25	Sun	23	
	26	Mon	24	
	27	Tue	25	
	28	Wed	26	
	29	Thu	27	
	30	Fri	28	
		Sat	29	
		Sun	30	
		Mon	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 conclusiions using first principles of matematics, 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

Programme Educational Objectives (PEOs)

I. Graduates of the Programme will have 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 :

a) Provide feasible and sustainable solutions to problems in various Civil Engineering disciplines such as Structural, Environmental, Geotechnical, Transportation and Construction Engineering.

b) Apply the principles, methods, software and codes of practices to design various Civil Engineering Systems.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

I. The graduates of the Programme will have 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 for 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

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

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 Engineeirng 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 Managment Techniques in Engineeirng.

KERALA TECHNOLOGICAL UNIVERSITY
Regulations / Rules/ Scheme (2015)

Bachelor of Technology B.Tech./B.Tech. (Honours)

1. Admission to Bachelor of Technology / B.Tech. / B.Tech. (Honours)

a. Eligibility for admission to the B.Tech., programme, admission policy and procedure shall be decided from time to time by following the guidelines issued by the Government of Kerala and the Government of India and other statutory body such as AICTE.

b. Subject to Clause 1(a), Admission to B.Tech., shall be based on the guidelines given by the State and Central Governments on reservation. Candidates for admission to B.Tech., programme shall have passed the Higher Secondary Examination, Kerala or 12th Standard V.H.S.E., C.B.S.E., I.S.C or any other examination considered equivalent to the above mentioned ones. Other eligibility criteria for admission is currently prescribed by the Government of Kerala through Government orders which is based on the entrance examination conducted by the Commission for Entrance Examinations, Government of Kerala and the marks in the qualifying examination subject to the relaxations allowed for backward classes and other communities as specified from time to time.

c. The Branches of study and number of students admitted are to be based on the approval by the All India Council for Technical Education and the Kerala Technological University.

d. Not with standing all that is stated above, the admission policy may be modified from time to time by the University, particularly to confirm to directions from the Government of Kerala and the Government of India.

e. The B.Tech./B.Tech. (Honours) programme is a credit based programme. The duration of the B. Tech./B.Tech. (Honours) programme will normally be four academic years spanning 8 semesters. The maximum duration shall be six academic years spanning 12 semesters.

2. Examination

a. At the end of the semester, end semester examination will be conducted in all lecture based courses offered in the semester and will normally be of three hours duration, unless otherwise specified.

Supplementary examinations shall be conducted before the commencement of the next semester, for students who are eligible and have registered for them.

b. Students, who have completed a course but could not write the end semester examination for valid reasons like illness or personal exigencies, are allowed to write the supplementary examination or the end semester examination at the next opportunity and earn the credits without having to register for the course again provided they meet other eligibility criteria.

c. The main eligibility criteria for the end semester examination are attendance in the course, internal marks and no pending disciplinary action. The minimum attendance for appearing for the end semester examination is 75% in each course. Further, the internal evaluation marks in the course should be 45% or above. Students who do not meet these eligibility criteria are awarded an FE grade and have to register for the course again.

d. Students who could not write the end semester examination due to health reasons or other exigencies can register for the supplementary examination, with the approval of the principal provided they have 45% or above marks in the internal evaluations for the course. Candidates who received F grade can also write the supplementary examination. Grades awarded in the supplementary examination will be taken as the end semester grades in these courses.

3. Eligibility for Award of Degree

The award of B. Tech. / B. Tech. (Honours) degree shall be based on the recommendation of the Academic Committee and the approval of the Board of Governors and in accordance with the academic regulations, if any, issued for the said purpose by the University.

Award of B. Tech. Degree

A student will be eligible for the award of B. Tech. Degree of the University on satisfying the following requirements.

i) Earned credits for all the core courses and the Project.

ii) Earned the required minimum credits as specified in the curriculum for the branch of study.

iii) No pending disciplinary action.

4. Fee charged by the University

Fee charged for the programme shall be decided by the University from time to time and informed to all concerned for compliance.

5. Discipline of the student – Action against breach of discipline

Every college shall have a Student's Welfare Committee and a Disciplinary Action Committee, constituted by the Principal of the college. Each college should have a Grievance Redressal and Appeals Committee constituted by the Principal to address the grievances of the students and to consider their appeals on any decisions made by the college. Details on the constitution and terms of reference are outlined in 7-x, 7-y, and 7-z.

6. Breach of guidelines and unfair practices in Examinations

These are viewed seriously and appropriate actions are to be taken by the colleges as detailed in 7-x.

a. Language of Instruction and Examination.

   Unless otherwise stated, the language of instruction and examinations shall be English.

b. Academic Calendar.

   The University shall publish in its website the academic calendar for every academic semester indicating the commencement of the semester and beginning of instruction. It will specify the course registration and enrolment dates, the schedule for mandatory internal tests for theory courses, dates by which laboratory/practical evaluations are to be completed, date for finalization of internal marks, last instruction day in the semester, planned schedule of end semester examinations and result declaration as well as approved holidays falling within the semester. Schedules for the supplementary examinations and result declaration dates are to be included in the calendar. Summer course schedule and result declaration have also to be indicated in the calendar. Additionally colleges may publish their academic calendar, in line with the University academic calendar, indicating other schedules and events they plan to conduct during the semester.

c. Branches of B. Tech. Programmes.

   The Branches of B. Tech. /B. Tech. (Honours) programme offered by the University are listed separately at the end of this Ordinance.

d. B.Tech. Programme Structure

i) B.Tech. / B.Tech. (Honours) programme in all branches of study is structured on a credit based system following the semester pattern with continuous evaluation allowing flexibility for students to decide on the duration of programme completion.

ii) The duration for the B.Tech. /B.Tech. (Honours) programme in all branches of study, will normally be 8 semesters.

iii) The maximum duration shall be six academic years spanning 12 semesters.

iv) Each semester shall have 72 instructional days, followed by end semester examinations.

v) A student can opt for B.Tech. (Honours) at the end of the fourth semester.

vi) The curriculum of any branch of the B. Tech. programme is designed to have a minimum of 180 academic credits and 2 additional pass/fail credits, for the award of the degree.

vii) The University follows Credit System and Credits are apportioned among the following knowledge segments.

B.Tech. Programme.

Knowledge Segments	Credits
Basic Sciences	10 [8 Theory+ 2 Labs]
Mathematics	16
Humanities	9
Basic Engineering	29 [25 Theory +4 Labs]
Professional Engineering	89 [80 Theory +9 Labs]
Electives	15
Seminar	2
Comprehensive Viva	2
Design Project	2
Project	6
Total Academic Credits:	**180**
Student's Activities	2 [Audit-Pass/Fail]
Total credits for B.Tech. Degree	182

Credits are assigned to courses based on the following general pattern.

One credit for each lecture hour per week for one semester

One credit for each tutorial hour per week for one semester

One credit for each laboratory/ practical session of 2 or 3 hrs, per week for one semester

viii) In a semester normally up to six lecture based courses and three laboratory/practical courses, carrying a maximum credit of 26, could be offered.

ix) University may allow students to transfer credits they have earned at other Universities and Academic Institutions, as per the guidelines given by the Academic Committee and approved by the Board of Governors.

x) Student Activities Points:

To be an engineer capable of competing globally, in addition to technical knowledge and skills, students should develop excellent soft skills, nurture team work and leadership qualities and have an entrepreneurial and trail blazing outlook. To achieve this, in addition to academics, students are to actively engage in co-curricular and extracurricular activities. For such activities, points are allotted. On getting a minimum of 100 activity points the student passes the course and earns 2 credits which do not count for the CGPA but mandatory for the award of the degree. Listing of these activities and the maximum points that could be earned by engaging in them are given at the end of this document. Additional activities could be included in the list with the approval of the Academic Committee.

e. Curriculum, List of Courses and Syllabi

i) Every branch of study in the B.Tech. programme will have a curriculum, list of courses, syllabi and course plans approved by the Academic Committee of the University.

ii) Courses are categorized as Core Theory (CT), Core Practice (CP) and Electives (EL).

iii) Each course has a course number. Course number includes the offering department or knowledge segment code and a three digit number. Knowledge segment code is used when a course is offered by any one or more departments with the same course content and syllabus. Details on this are given under Rule, RU-1.

f. Faculty Advisor / Counselor

All students shall have faculty advisors whose role will be:-

To guide and help students on academics

To monitor their progress in academics and advise them

To counsel them and hand-hold them in any difficulty

g. Course Registration and Enrolment

It is mandatory for students to register for the courses they want to attend in a semester. Students admitted freshly to the first semester, are advised to register for all courses listed for the semester. However they do not have to enroll for the semester. All other students are required to register at the end of the semester for the courses they desire to take in the coming semester. They have to enroll for these courses at the beginning of the new semester, based on the previous semester results. This allows them to make changes in the list of courses already registered for. Before enrolment, students should clear all dues including any fees to be paid and should not have any disciplinary issues pending. The dates for registration and enrolment will be given in the academic calendar. Any late registration or enrolment, allowed up to 7 working days from the stipulated date, will attract a late fee.

A student can withdraw from a course or substitute one already registered by another on valid reasons with the approval of the faculty advisor. However this has to be done within seven working days from the commencement of the semester. The maximum number of credits a student can register in a semester is limited to 26.

h. Course Completion and Earning of Credits

Students registered and later enrolled for a course have to attend the course regularly and meet the attendance rules of the university [RU-2] and appear for all the internal evaluation procedures for the completion of the course. Credits for the course are earned only on getting a pass grade in the composite evaluation.

i) Core courses, Prerequisites and Electives

All courses listed in the curriculum, other than the electives, are core courses. Earning credits in the core courses is mandatory for the B. Tech. degree. For electives, failure to earn credits does not necessarily require repeating the course. Instead another approved elective is

permitted as a replacement course by the faculty advisor concerned. For some courses there could be a prerequisite course completion requirement for registration.

J) Summer Courses

Students who could not earn the required minimum credits at the end of the second or fourth semester have two options to continue with the studies. They may register again for the courses, when they are offered in the next academic year. However, there is also a provision to run summer courses in failed courses for these students who may register and attend the course and write the final examination.

Summer Course Option for 'FE' Grade

Non eligibility conditions	The Conditions for regisstering Summer Course
Shortage of Attendance, and internal marks greater than or equal to 45%.	Register and attend Summer Course if the student has 50% or more attendance in the regular study. 75% attendance in summer course is mandatory Not permitted to write Internal make up test.
Shortage of Attendance and Internal marks less than 45%, but greater than or equal to 35%.	Register and attend summer course if 1. The student has 50% or more attendance and 2. Internal Marks 35% and a more, but less than 45% in the regular study. 3. The student must have written 2 tests as per ordinance in regular study. Requirements in Summer Course : 1. 75% attendance is mandatory in summer course. 2. Permitted to write the internal make up test. The marks obtained in the make up test and marks of one test in the regular study shall be considered for calculating the internal marks. Internal marks thus obtained will be limited to 50% of maximum internal marks.

No attendance shortage and Internal Marks less than 45%, but greater than or equal to 35%	Register and attend summer course if 1. The Student has 35% and more, but less than 45% Internal marks. 2. The student must have written 2 tests as per ordinance in regular study. Requirements in Summer Course: 1. 75% attendance is mandatory in summer course. 2. Permitted to write the internal make up test. The marks obtained in the make up test and marks of one test in the regular study shall be considered for calculating the internal marks. Internal marks thus obtained will be limited to 50% of maximum internal marks.

Options for the fifth and higher semesters

For higher semesters, i.e., fifth semester onwards, summer courses are not offered. Failed students who have less than 45% marks in internal assessments have to register again for the course in the regular semester in which it is offered and complete the course as per the regulations and appear for the end semester examination. Failed students having 45% marks or more in internal assessments have the option to register again for the course as mentioned above or register only for the end semester examination without attending the course again. A separate registration format will be available for this. This option is available in all semesters.

Options for repeating course in B.Tech programme

The options for continuing with studies for students with 'F' or 'FE' grade are given below.

(i) There is no minimum credit requirement for moving from an odd semester to the next even semester.

(ii) If a student has no 'FE' grade in any course but 'F' grade in some course(s), he/she can continue his/her studies if he/she has earned the minimum credits required for promotion at the end of even semester. He/she can pass the failed course in supplementary examinations. If he has not earned the minimum credits required, he/she has to break study for one academic year, earn credits without

registering for the course again (without attending the classes) and can qualify for promotion to the next semester on passing the courses.

(iii) If a student has any 'FE' grade course(s), he/she can register for summer course in 'FE' grade course(s) subject to the eligibility conditions (Minimum 35% IA marks and 50% attendance), attend the summer course classes, make up attendance and/or internal assessment marks as per the rules of summer course. He/She can write the supplementary/ make up examination and continue his/her studies if he/ she earns the minimum credits required at the end of even semester for promotion. He/she can pass the failed ('F' grade) courses in the supplementary examinations. If he/she has not earned the minimum credits required, he/she has to break study for one academic year, earn credits without registering for the 'F' grade course(s). But he/she has to register for 'FE' grade course(s), if any, and attend the regular classes along with the junior batch of students. The summer course will be offered only after second and fourth semesters and will not be offered in higher semesters.

(iv) If he/she has earned the minimum credits at the end of even semester for promotion and still has 'FE' grade course(s) even after attending the summer course, the following options are available.

a) If he/she has only one 'FE' grade course in a semester, he/she can register and attend this course in addition to the courses in the current semester. The college may facilitate this by conducting additional classes for such students in the slot for remedial classes in the time table. The time table may be scheduled so as to have 7 periods per day to facilitate the conduct of remedial classes.

b) If he/she has only one or two 'FE' grade course in a semester, he/she may drop one or two courses of the current odd/even semester having the same slot(s) as that of 'FE' grade courses and attend the 'FE' grade courses along with the junior batch of students. The college has to follow time table suitable for this option.

c) Break up for one academic year and register for 'FE' grade courses along with the junior batch of students. Earn the required credits for promotion.

k) Contact Courses

If a student has to earn credits only just for one course to qualify for the degreeafter completing eight semesters of study, the college concerned may offer a contact course on a written request by the student. The contact course is considered as fresh registration and is to be offered by the teacher concerned who shall conduct the internal evaluation procedures and allot the marks as per the regulations. Minimum contact hours for the course shall be 20. The final examination will be conducted by the college and shall be

monitored by the external academic auditor. Question paper for the examination will be given by the Controller of Examination. No grade above C shall be given for a contact course.

I) Academic Assessment/Evaluation

Academic Evaluation of Courses

University follows a continuous academic evaluation procedure.

Academic evaluation procedure and corresponding weights are as follows:-

a) For theory courses: - 1/3rd weightage for internal evaluation and 2/3rd for end semester examination.

For convenience, the maximum marks for internal evaluation and end semester examination for theory courses are fixed as 50 and 100 respectively.

Scheme of evaluation is as follows.

i) Two internal tests each of 20 marks and of one hour duration.

(Internally by the College)

ii) Tutorials/Assignments/Mini Projects carrying 10 marks.

(Internally by the College)

iii) End Semester examination carrying 100 marks.

(Conducted by the University)

All the above evaluations are mandatory requirements to earn credits. Students who have missed either the first or the second test can register with the consent of the faculty and the Head of the Department (HOD) concerned for a retest which shall be conducted soon after the completion of the second test, but before the end semester examination. The re-test will cover both first and second test course plans. Those who have missed both the tests are not eligible to appear for the end semester examination.

However if one misses both tests due to medical reasons or other personal exigencies, based on genuine evidence, a single test of 2 hour duration for 40 marks will be conducted covering the whole syllabus, before the end semester examinations. Decision on this will be taken by the Principal and verified by the external academic auditor.

b) For Laboratory /Practical /Workshop courses

i)	Practical records /Outputs	60 marks (Internally by the College)
ii)	Regular class Viva	10 marks (Internally by the College)
iii)	Final written test/quiz	30 marks (Internally by the College)

All the above assessments are mandatory to earn credits. If not, the student has to complete the course/assessments during his free time in consultation with the faculty members. On completion of these, grades will be assigned. In case the Practical /Laboratory/Workshop courses are not completed in the semester, grade I (incomplete) will be awarded against the course and the final grade will be given only after the completion of the course/assessments.

c) Comprehensive Examination

As students appear for placements from seventh semester onwards, comprehensive examination is to be completed in the sixth semester. This examination will be a written cum oral examination covering broadly all courses so far completed [RU-5].

d) Seminar

Each student has to give a seminar on a professional topic of current interest in consultation with the faculty member in charge of the seminar in the Department. The seminar will be evaluated based on RU-6.

e) Design Project

Each student or a group of students has to take up a design project. The project topic could be arrived at in consultation with any faculty member in the department. The Evaluation of the project is to be done in two stages. Two project progress evaluations each carrying 20 marks and a final report evaluation and presentation of the project for 60 marks. The project supervisor and two other faculty members from the same or any other department, nominated by the Head of the Department form the evaluation board.

f) Final Semester Project

Students, either individually or in a small batch not exceeding four, have to do a project approved by their faculty supervisor.

Evaluation scheme is given below:-

i) Two progress assessments — 20% by the faculty supervisor/s

ii) Final Project Report — 30% by the Assessment Board

iii) Project presentation and Viva — 50% by the Assessment Board

If the project work is not completed satisfactorily, the student has to put in more work and appear again for assessment on a specified date, not earlier than one month after the first evaluation. If the student fails in the project, a fresh registration for theproject for one semester is mandatory.

The project assessment board shall consist of the following members.

Chairman: Head of the Department

Members : Project supervisor/s of the student

One faculty member from the Department

One faculty member from a sister Department

An external expert, either from an academic/ research institute or industry

m) Eligibility to Continue

A student has to earn a minimum number of credits in a semester to be eligible to register for the new courses offered in the next semester. In odd semesters if this requirement is not met, the student is to be forewarned and allowed to continue to the next even semester. However at the end of even semesters this requirement will be strictly implemented. Summer courses are offered to those who do not satisfy this norm after the 2nd as well as the 4th semesters. Students who do not meet this requirement are not permitted to register for new courses in the higher semesters. They have to register for the failed courses in normal semesters in which they are offered subject to the limitations imposed by the ordinances and course timetable.

Action plan, for dealing with course arrears in theory courses at the end of each semester to continue with the programme, is given below. Faculty advisors shall monitor advice and support the students in

this. Students should be informed about the minimum cumulative credits requirement to register for higher semester courses.

Eligibility Criteria for Registering for Higher Semester Courses

Semester	Allotted Credits	Cumulative Credits	Minimum cumulative credits required to register for courses in higher semesters
First	24	24	Not applicable
Second	23	47	Not insisted
Third	24	71	Not insisted
Fourth	23	94	Not insisted
Fifth	23	117	26 Credits from S1 & S2
Sixth	23	140	Not insisted
Seventh	22	162	52 credits from S1 to S4
Eighth	18	180	Not insisted

n) Course Committees and Class Committees

These committees are to be in place in each college affiliated to the University.

a) Course Committee

This is for common courses (electives are excluded) offered to students admitted for the B. Tech. programme irrespective of their branch of study. Each of such courses will have a course committee constituted by the Principal of the college.

The chairman of the course committee shall be a senior faculty member not offering the course.

Members:-

i) All teachers offering the course.

ii) Four student representatives nominated by the Principal.

b) Class Committee

Beginning from the third semester, all branches of study will have class committees for every semester constituted by the respective Heads of Departments.

The chairman of the committee shall be a senior faculty member who does not offer any course during that semester.

Members:-

i) All faculty members teaching courses in that semester.

ii) Two student representatives nominated by the head of the Department.

The course committees and class committees shall meet at least thrice in a semester – the first at the beginning of the semester, the second and the third after the first and the second internal tests respectively. Both committees should monitor the conduct of the courses, adherence to the course plan and time schedule, completion of the syllabus, standards of internal tests, evaluation process and difficulties faced by the students and take suitable remedial actions at the appropriate time. At the end of the semester, the committee should meet without student representatives to review the conduct of the course and finalize the internal assessment marks and approve them.

o) Eligibility for writing the end semester examination and for grading

Students with 45% or more marks in internal assessment in a course shall only be permitted to write the end semester examination in that course. Those with less than 45% internal marks shall be awarded FE grade and have to register for the course again.

A student should have a minimum of 45% marks in the end semester examination to be eligible for grading in a course. Otherwise he/she will be considered to have failed in the course and an F grade will be awarded.

Internal marks given to the students who got 45% marks or more in the end semester examination shall be regulated in line with the end semester examination performance. Internal mark percentage shall not exceed 25% over the end semester mark %.

(For example if the end semester mark % is 45, then the maximum internal mark % is to be 45+25 = 70 %.)

In case the student writes the supplementary examination, the mark got in that will be taken into consideration for regulating the internal marks.

Those who have more than 45% marks in the end semester examination are awarded the grade based on both internal assessment and end semester examination marks. A student earns credits for a course if the grade is P or above.

p) Award of Grades

Grading is based on the % marks obtained by the student in a course, as given in 7q. The grade card will only give the grades against the courses the student has registered. Semester grade card will give the grade for each registered course, Semester Grade Point Average (SGPA) for the semester as well as Cumulative Grade Point Average (CGPA).

q) Grades and Grade Points

Grades and Grade Points as per UGC guidelines is to be followed by the University (2015 Scheme).

Grades	Grade Point(GP)	%of Total Marks obtained in the course
O (Outstanding)	10	90% and above
A+ (Excellent)	9	85% and above but less than 90%
A (Very Good)	8	80% and above but less than 85%
B+ (Good)	7	70% and above but less than 80%
B (Above Average)	6	60% and above but less than 70%
C (Average)	5	50% and above but less than 60%
P (Pass)	4	45% and above but less than 50%
F (Fail)	0	Less than 45%
FE	0	Failed due to eligibility criteria [7-o]
I		Course Incomplete

SGPA and CGPA are calculated based on the above grading norms and are explained at the end of this document.

r) Academic Auditing

The University shall have a detailed academic auditing procedure in place comprising of an internal academic auditing cell within the colleges and an external academic auditing for each college. The internal academic auditing cell in each college shall oversee and monitor all the academic activities including all internal evaluations and examinations. This cell is to prepare academic audit statements for each semester at regular intervals. These reports are to be presented to the external academic auditor approved by the University, who will use it as a reference for his independent auditing and for the final report to the University.

Academic auditing shall cover:-

i. Course delivery covering syllabus, adherence to course plan, quality of question papers for internal examinations, internal

evaluation, laboratory experiments, practical assignments, mini projects and conduct of practical classes and their evaluation.

ii. Co-curricular and Extra-curricular activities available for students, their organization and the mechanism of monitoring of activities points earned by the students.

iii. Academic functioning of the college encompassing students, faculty and college administration covering punctuality, attendance, discipline, academic environment, academic accountability, academic achievements and benchmarking.

s) Break of Study

A student may break study for a maximum duration of two semesters, preferably in one academic year, to initiate start-up ventures, product development etc. This is however permitted only on successfully completing the courses listed out in the first four semesters. Request for this with ample evidence to the seriousness of the venture should be forwarded to the college principal for approval. [RU-3]

Break of study on serious health reasons is also permitted with the approval of the college Principal. [RU-3]

All such cases of break of study are to be reported to the University. In both the cases, the maximum duration for completing the B. Tech. programme will still be twelve semesters.

t) Revaluation and Grade Improvement

There is no provision for revaluation of the end semester answer books or for improving the grade.

However, the student is permitted to check the answer books of the end semester examination after the results are declared. Any discrepancy in evaluation could be brought to the notice of the teacher concerned who will initiate appropriate action on this. The decision of the Controller of Examination shall be final on this.

u) Grade Cards

Students who have written the end semester examination will be given the grade cards for the registered courses, in every semester by the respective colleges. On earning the required credits for the degree, a consolidated grade sheet for the B. Tech. programme will be given by the University.

v) B.Tech. Degree

B.Tech. degree will not have any classifications like distinction or first class.

w) B.Tech. (Honours)

Accredited departments in institutions, having at least two post graduate programmes, may offer B.Tech. (Honours). It should be noted that students with a CGPA above 8 at the end of the fourth semester and having no credit arrears only are eligible for this option. As only selected institutions may have this provision, students cannot demand this or move later to an institute where this is available. Students have to earn 12 additional credits to get B. Tech (Honours). Furthermore their CGPA at the end of the programme should be 8 or higher. Those who opted for B. Tech (Honours) but unable to earn the required additional credits in 8 semesters or whose final CGPA is less than 8 shall automatically fall back to the B. Tech. programme. However, additional course credits and the grades thus far earned by them will be shown in the grade card but not included for the CGPA.

x) Academic Discipline and Malpractices in Examinations

Every student is required to observe discipline and decorous behaviour.

Any act of indiscipline, misbehaviour and unfair practice in examinations will be referred to the Disciplinary Action Committee (DAC). 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 Principal who in turn shall refer it to DAC. On the basis of the report and evidence available or gathered, DAC shall immediately initiate an enquiry giving the concerned student a chance to explain his/her case. Based on this the committee shall recommend the course of action in line with the guidelines formulated for this by the Controller of Examination of the University and forward it to the Principal for action.

Actions are to be based on the severity of the offence and are to be dealt with, on a course basis. Guidelines on this shall be given by the Controller of Examination which is to be followed by the Disciplinary Action Committee of the college. The student may appeal to the Grievances and Appeals Committee for a relook on the matter. Based on the committee's report, the Principal shall take a final decision on the matter.

DAC shall be headed by a department head and shall have three other faculty members drawn from different departments as members. In case of malpractices in end semester examinations, the report given by the college DAC and the action taken by the

Principal shall be intimated to the Controller of Examination of the University

y) Student's Welfare Committee

Every college shall have a Student's Welfare Committee, constituted by the Principal of the college. This committee shall have at least three faculty members as members and the chairman shall be a senior faculty member in the rank of a Professor. This committee is entrusted with the task of looking after the welfare of the students by taking appropriate steps with the concurrence of the principal.

z) Grievances and Appeals Committee

Each college should have a Grievances Redress Committee constituted by the Principal to address the grievances of the students and to consider their appeals on any decisions made by the college. This committee consisting of at least three faculty members and chaired by a senior professor shall look into student's grievances and appeals and give its recommendations to the Principal for action.

8) Amendment to Ordinance/ Regulations/Rules

Notwithstanding all that has been stated above, the University has the right to modify any of the above Ordinance/Rules/regulations from time to time.

RULES:

RU-1 Course Code and Course Number

Each course is identified by a course code and a three digit number. The two letter code refers to the department offering the course or the knowledge segment of the course. The knowledge segment code is used when the course is to be offered by different departments either individually or together but having the same syllabus and course plan.

Course Number: MA 101 - This refers to a course in Mathematics with the course number 101.

Course Number: BE 102 - This refers to a course in Basic Engineering.

Course Number is a three digit number and the first digit refers to the Academic year in which the course is normally offered, i.e. 1, 2, 3, or 4 for the B. Tech. Programme of four year duration. Of the other two digits, the last digit identifies whether the course is offered normally in the odd (odd number), even (even number) or in both the semesters (zero). The middle number could be any digit.

MA 101 is a course in Mathematics offered in the first semester.

EE 344 is a course in Electrical Engineering offered in the sixth semester.

PH 110 is a course in Physics offered both the first and second semesters.

BE 102 is a course in Basic Engineering offered by one or many departments.

These course numbers are to be given in the curriculum and syllabi.

RU-2 Attendance

Attendance is marked for each course. While 75% attendance is mandatory for writing the end semester examination in that course, students are expected to have 100% attendance. However under unavoidable circumstances students are permitted to take leave. Leave is normally sanctioned for any approved activity taken up by students outside the college covering sports and other extracurricular activities. Leave shall be allowed to the students participating in sports and other extracurricular activities representing the University or the State. The minimum attendance required for appearing the end semester examination of each course will be 75% (as prevailing in existing Ordinance). The Principals are authorised to grant relaxation to the students participating in sports/extracurricular activities representing the University or the State upto a maximum of 10%. Such students should produce the participation certificate countersigned by the University Sports Coordinator/ the Director of Physical Education in the case of sports activities and the Faculty Advisor in the case of other extracurricular activities; within ten days of the event to the respective Head of Department and then to the Principal. Under any circumstances, the certificate will not be considered if the overallattendance of the candidate is less than 65%.

Leave is also permitted on medical grounds or on personal exigencies.In case of long illness or major personal tragedies/ contingencies the college Principal can relax the minimum attendance requirement to 60%, to write the end semester examination. This is permitted for one or more courses registered in the semester. Principal shall keep all records which led to his decision on attendance, for verification by the Academic Auditor. However this concession is applicable only to any two semesters during the entire programme. In case of prolonged illness, break of study is permitted as per RU-3.

RU-3 Break of Study

A student is permitted to have a 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 new product.

iii) In case of any personal reasons that need a break in study.

For break of study due to illness, student should 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 treated him.

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 college 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. In the semester system followed by the University, break of study for an academic year is preferred over a semester break.

Students who want a break in study due to personal reasons shall convince the Principal on the genuine need for it by giving authentic evidence for the same.

RU-4 Leave of Absence

Students who want to take leave under RU2 have to submit a leave letter to the teacher conducting the course. This letter is to be forwarded to the Head of the Department with recommendation of the teacher indicating the total leave of absence the student has so far availed. Leave is to be sanctioned by the Head of the Department. For medical leave over three days, medical certificate indicating the need for leave is required. After any medical leave exceeding five instruction days, on rejoining, the student has to produce the fitness certificate given by the doctor.

RU-5 Comprehensive Examination

This examination consists of two parts. Part one a written test and the other an oral one.

The written examination shall be objective type of 1 hour duration and shall have 50 marks and is to be conducted by the concerned department. Chairman of the oral examination board shall be a senior

faculty in the department and the members include two other faculty members of the department and an external expert from another academic institute or an industry. Oral examination shall carry 50 marks. Comprehensive examination may be conducted any time during the 6th semester with sufficient notice given to the students.

RU-6 Seminar

Students have to prepare a detailed report on the topic of the seminar and submit it to the teacher concerned. The seminar is to be of 20 minutes duration with another 5 minutes given for questions and answers. All students in the class have to attend the seminar without fail. Evaluation will be based on the report, seminar presentation as well as on the ability of the student to answer the questions put forward. Faculty member in charge of the seminar and another faculty member in the department nominated by the Head of the Department are the evaluators for the seminar. Distribution of marks for the seminar is as follows.

Marks for the report: 30%

Presentation: 40%

Ability to answer questions on the topic: 30%

RU-7 Ragging

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. Each student of the Institute, 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 registration.

Addendum:-

1. Calculation of SGPA/CGPA

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

SGPA = $\Sigma(Ci \times GPi)/\Sigma Ci$ where Ci is the credit assigned for a course and GPi is the grade point for that course. Summation is done for all courses registered by the student in the semester. Here the failed courses are also accounted.

CGPA = $\Sigma(Ci \times GPi)/\Sigma Ci$ where Ci is the credit assigned for a course and GPi is the grade point for that course. Summation is done for all courses registered by the student during all the semesters for which

the CGPA is needed. Here the failed courses are also accounted. CGPA of all courses passed may also be given.

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.

2. Student Activity Points

A part from technical knowledge and skills, to be successful as professionals, students should have excellent soft skills, leadership qualities and team spirit. They should have entrepreneurial capabilities and societal commitment.

Inorder to nurture these qualities, KTU has introduced activity points to be earned by the students during their academic stay at the University covering extra-curricular and co-curricular activities. All students have to earn a minimum of 100 activity points from various activity segments listed to qualify for the B.Tech degree. Two credits are given for this on a pass/fail basis and is mandatory for getting the B.Tech Degree. As no grade is given for these two credits, they are not included in the CGPA calculation. For lateral entry students joining from the third semester, the activity point requirement is 75. Points earned by the student will be indicated in the consolidated academic statement.

Colleges shall consolidate the activity points earned by students on a semester basis and enter the consolidated points on an academic year basis in the KTU portal. Incase of NSS and NCC, points can be entered after the completion of two-year Programme. The portal for this will only be open for a specific time period. All documental proof for awarding the activity points should be obtained and kept with the college authorities to be verified by the Academic Auditor.

THE MAIN ACTIVITY SEGMENTS ARE AS GIVEN BELOW:-

1. National Initiatives
2. Sports &Games
3. Cultural Activities
4. Professional Self Initiatives
5. Entrepreneurship and Innovation
6. Leadership& Management

The following table gives the list of activities under each of these segments, the level of achievement expected, activity points, evidence needed to assign the points and the minimum duration needed for certain activities.

Additional activities falling under these segments can be considered, if requested by the college with full details. However this has to be approved by the Academic Committee of the KTU.

Activity Head	Sl. No	Activity	Achievement Levels and Assigned Activity Points					** Approval Document	Max. Points	Min.Duration of activity
National InitiativesParticipation		*Level	I	II	III	IV	V			
	1	N C C	-	-	-	-	-	a/b	60	2 Years
	2	N S S	-	-	-	-	-	a/b	60	2 Years
	For C certificate / outstanding performance supported by certification, additional marks upto 20 can be provided subjected to maximum limit of 80 pointsBest NSS Volunteer Awardee(University level) / Participation in National Integration Camp/Pre Republic Day Parade Camp (South India),supported by certification, additional marks upto 10 can be provided subjected to maximum limit of 70 pointsBest NSS Volunteer Awardee(State / National level)/ Participation in Republic Day Parade Camp / International Youth Exchange Programme, supported by certification, additional marks upto 20 can be provided subjected to maximum limit of 80 points									
Sports &Games Participation	3	Sports:	8	15	25	40	60	a	60	1 Year
	4	Games	8	15	25	40	60	a	60	1 Year
		First Prize	10	10	10	20	20	Additional points can be provided for winning. The maximum limit for activity points is 60. But for Level IVand V winning, the maximum point limit is enhanced to 80.		
		Second Prize	8	8	8	16	16			
		Third Prize	5	5	5	12	12			
Cultural Activities Participation	5	Music	8	12	20	40	60	a	60	1 Year
	6	Performing arts	8	12	20	40	60	a	60	1 Year
	7	Literary arts	8	12	20	40	60	a	60	1 Year
		First Prize	10	10	10	20	20	Additional points can be provided for winning. The maximum limit for activity points is 60. But for Laevel IV and V winning, the maximum point limit is enhanced to 80.		
		Second Prize	8	8	8	16	16			
		Third Prize	5	5	5	12	12			

Professional Self Initiatives	8	Tech Fest,Tech Quiz	10	20	30	40	50	a	50	
	9	MOOC with final assessment certificate	50					a	50	
	10	Competitions conducted by Professional Societies-(IEEE,IET, ASME, SAE, NASAetc.)	10	15	20	30	40	a	40	
	11	Attending Full time Conference/ Seminars/ Exhibitions/ Workshop/ STTPconducted at IITs/NITs	15					a	30	
	11 a	Attending Full time Conference/ Seminars/ Exhibitions/ Workshop/STTP conducted at KTU or its affiliated institutes	6					a	12	
	12	Paper presentation/ publication at IITs/NITs	20					a	40	
		Additional 10 points for certificate of recognition.								
	12 a	Paper presentation/ publication at KTU or its affiliated institutes	8					a	16	
		Additional 2 points for certificate of recognition.								

Professional Self Initiatives	13	Poster Presentation at IITs/ NITs	10	a	20	
		Additional 10 points for certificate of recognition.				
	13 a	Poster presentation at KTU or its affiliated institutes	4	a	8	
		Additional 2 points for certificate of recognition				
	14	Industrial Training/ Internship (at least for 5 full days)	20	a/b	20	
	15	Industrial/Exhibition visits	5	a/b/d	10	
	16	Foreign Language Skill (TOFEL/IELTS/BEC exams etc.)	50	a	50	
Entrepreneurship and Innovation	17	Start-up Company–Registered legally	60	d	60	
	18	Patent-Filed	30	d	60	
	19	Patent -Published	35	d	60	
	20	Patent-Approved	50	d	60	
	21	Patent-Licensed	80	d	80	
	22	Proto type developed and tested	60	d	60	
	23	Awards for Products developed	60	d	60	
	24	Innovative technologies developed and used by industries/users	60	d	60	
	25	Got venture capital funding for innovative ideas/products.	80	d	80	

Leadership&Management	26	Startup Employment (Offering jobs to two persons lessthan Rs. 15000/-per month)		80		d	80	
	27	Societal innovations		50		d	50	
			Core coordinator	Sub coordinator	Volunteer			
	28	Student Professional Societies (IEEE, IET, ASME, SAE,NASA etc.)	15	10	5	d	40	
	29	College Association Chapters (Mechanical, Civil, Electrical etc.)	15	10	5	d	40	
	30	Festival &Technical Events (College approved)	15	10	5	d	40	
	31	Hobby Clubs	15	10	5	d	40	
	32	Special Initiatives (Approval from College and University is mandatory)	15	10	5	d	40	
	33	Elected student representatives	30 (Chairman)	25 (Secretary)	15 (Other Council Members)	d		

*LevelI CollegeEvents
*LevelII Zonal Events
*LevelIII State/ UniversityEvents
*LevelIV National Events
*Level V International Events

**Approval Documents: (a) Certificate (b)Letter from Authorities (c)Appreciation recognition letter (d) Documentary evidence (e) Legal Proof (f) Others (specify)

Scheme (2015)

BRANCH : Civil Engineering

SEMESTER – 3

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 201	Linear Algebra & Complex Analysis	3-1-0	4	A
CE 201	Mechanics of Solids	3-1-0	4	B
CE 203	Fluid Mechanics - I	3-1-0	4	C
CE 205	Engineering Geology	3-0-1	4	D
CE 207	Surveying	3-0-0	3	E
HS200/HS210	Business Economics/ Life Skills	3-0-0/ 2-0-2	3	F
CE 231	Civil Engineering Drafting Lab	0-0-3	1	S
CE 233	Surveying Lab	0-0-3	1	T

Total Credits = 24 **Hours : 28/29** **Cumulative Credits = 71**

SEMESTER – 4

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 202	Probability Statitics and Numerical Methods	3-1-0	4	A
CE 202	Structural Analysis - I	3-1-0	4	B
CE 204	Construction Technology	4-0-0	4	C
CE 206	Fluid Mechanics - II	3-0-0	3	D
CE 208	Geotechnical Engineering - I	3-0-0	3	E
HS210/HS200	Life Skills/ Business Economics	2-0-2/ 3-0-0	3	F
CE 232	Materials Testing Lab - I	0-0-3	1	S
CE 234	Fluid Mechanics Lab	0-0-3	1	T

Total Credits = 23 **Hours : 28/27** **Cumulative Credits = 94**

SEMESTER – 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
CE 301	Design of Concrete Structures - I	3-1-0	4	A
CE 303	Structural Analysis -II	3-0-0	3	B
CE 305	Geotechnical Engineering - II	3-0-0	3	C
CE 307	Geomatics	3-0-0	3	D
CE 309	Water Resources Engineering	3-0-0	3	E
	Elective 1	3-0-0	3	F
CE 341	Design Project	0-1-2	2	S
CE 331	Materials Testing Lab II	0-0-3	1	T
CE 333	Geotechnical Engineering Lab	0-0-3	1	U

Total Credits = 23 **Hours : 28** **Cumulative Credits = 117**

Elective 1 :

1. CE 361 Advanced Concrete Technology
2. CE 363 Geotechnical Investigation
3. CE 365 Functional Design of Buildings
4. CE 367 Water Conveyance Systems
5. CE 369 Disaster Management
6. CE 371 Environment and Pollution
7. CE 373 Advanced Mechanics of Materials

SEMESTER – 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
CE 302	Design of Hydraulic Structures	4-0-0	4	A
CE 304	Design of Concrete Structures II	3-0-0	3	B
CE 306	Computer Programming and Computational Techniques	3-0-0	3	C
CE 308	Transportation Engineering -I	3-0-0	3	D
HS 300	Principles of Managment	3-0-0	3	E
	Elective 2	3-0-0	3	F
CE 332	Transportation Engineering Lab	0-0-3	1	S
CE 334	Computer Aided Civil Engineering Lab	0-0-3	1	T
CE 352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23 **Hours : 27** **Cumulative Credits = 140**

Elective 2 :

1. CE 362 Ground Improvement Techniques
2. CE 364 Advanced Foundation Engineering
3. CE 366 Traffic Engineering and Management
4. CE 368 Prestressed Concrete
5. CE 372 Engineering Hydrology
6. CE 374 Air Quality Management

SEMESTER – 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
CE 401	Design of Steel Structures	4-0-0	4	A
CE 403	Structural Analysis- III	3-0-0	3	B
CE 405	Environmental Engineering - I	3-0-0	3	C
CE 407	Transportation Engineering - II	3-0-0	3	D
CE 409	Quantity Surveying and Valuation	3-0-0	3	E
	Elective 3	3-0-0	3	F
CE 451	Seminar & Project Preliminary	0-1-4	2	S
CE 431	Environmental Engineering Lab	0-0-3	1	T

Total Credits = 22 **Hours : 27** **Cumulative Credits = 162**

Elective 3 :

1. CE 461 Wave Hydrodynamics and Coastal Engineering
2. CE 463 Bridge Engineering
3. CE 465 Geo- Enviornmental Engineering
4. CE 467 Highway Pavement Design
5. CE 469 Enviornmental Impact Assessment
6. CE 471 Advanced Structural Design
7. CE 473 Advanced Computational Techniques and Optimization

SEMESTER – 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
CE 402	Environmental Engineering II	3-0-0	3	A
CE 404	Civil Engineering Project Management	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
CE 492	Project		6	S

Total Credits = 18 **Hours : 30** **Cumulative Credits = 180**

Elective 4 :

1. CE 462 Town and Country Planning
2. CE 464 Reinforced Soil Structures and Geosynthetics
3. CE 466 Finite Element Methods
4. CE 468 Structural Dynamics and Earthquake Resistant Design
5. CE 472 Transportation Planning
6. CE 474 Municipal Solid Waste Management

Elective 5 (Non Departmental Elective Courses)

(Note :- If a student has studied or chosen the elective course given within the brackets then the corresponding ND elective cannot be chosen)

1. AO 482 FLIGHT AGAIST GRAVITY
2. AE 482 INDUSTRIAL INSTRUMENTATION
3. AE484 INSTRUMENTATION SYSTEM DESIGN
4. AU484 MICROPROCESSOR AND EMBEDDED SYSTEMS
5. AU486 NOISE, VIBRATION AND HARSHNESS
6. BM482 BIOMEDICAL INSTRUMENTATION
7. BM484 MEDICAL IMAGING & IMAGE PROCESSING TECHNIQUES
8. BT461 DESIGN OF BIOLOGICAL WASTEWATER SYSTEMS
9. BT362 SUSTAINABLE ENERGY PROCESSES
10. CH482 PROCESS UTILITIES AND PIPE LINE DESIGN
11. CH484 FUEL CELL TECHNOLOGY
12. CS482 DATA STRUCTURES

13.	CS484	COMPUTER GRAPHICS
14.	CS486	OBJECT ORIENTED PROGRAMMING
15.	CS488	C # AND .NET PROGRAMMING
16.	EE482	ENERGY MANAGEMENT AND AUDITING
17.	EE484	CONTROL SYSTEMS
18.	EE486	SOFT COMPUTING
19.	EE488	INDUSTRIAL AUTOMATION
20.	EE494	INSTRUMENTATION SYSTEMS
21.	EC482	BIOMEDICAL ENGINEERING
22.	FT482	FOOD PROCESS ENGINEERING
23.	FT484	FOOD STORAGE ENGINEERING
24.	FT486	FOOD ADDITIVES AND FLAVOURING
25.	IE482	FINANCIAL MANAGEMENT
26.	IE484	INTRODUCTION TO BUSINESS ANALYTICS
27.	IE486	DESIGN AND ANALYSIS OF EXPERIMENTS
28.	IE488	TOTAL QUALITY MANAGEMENT
29.	IC482	BIOMEDICAL SIGNAL PROCESSING
30.	IT482	INFORMATION STORAGE MANAGEMENT
31.	MA482	APPLIED LINEAR ALGEBRA
32.	MA484	OPERATIONS RESEARCH
33.	MA486	ADVANCED NUMERICAL COMPUTATIONS
34.	MA488	CRYPTOGRAPHY
35.	ME484	FINITE ELEMENT ANALYSIS (CE 466 FINITE ELEMENT METHODS)
36.	ME482	ENERGY CONSERVATION AND MANAGEMENT
37.	ME471	OPTIMIZATION TECHNIQUES (CE 473 ADVANCED COMPUTATIONAL TECHNIQUES AND OPTIMISATION)
38.	MP482	PRODUCT DEVELOPMENT AND DESIGN
39.	MP469	INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR
40.	MT482	INDUSTRIAL SAFETY
41.	MR482	MECHATRONICS
42.	FS482	RESPONSIBLE ENGINEERING
43.	SB482	DREDGERS AND HARBOUR CRAFTS
44.	HS482	PROFESSIONAL ETHICS

BRANCH: Computer Science & Engineering

SEMESTER – 3

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 201	Discrete Mathematical Structures	3-1-0	4	A
CS 201	Data Structures	3-1-0	4	B
CS 203	Logic System Design	3-1-0	4	C
CS 205	Object Oriented Programming			
	Using JAVA	3-1-0	4	D
EST 200	Design & Engineering	2-0-0	3	E
HUT 200	Professional Ethics	2-0-0		1/2
MNC 201	Sustainable Engineering	2-0-0	3	F
CSL 201	Data Structures Lab	0-0-3	1	S
CSL 203		0-0-3	1	T
VAC	Remedial/Minor course	3-1-0	4	R/M

Total Credits = 22 **Hours : 26/29** **Cumulative Credits = 71**

SEMESTER – 4

Course Code	Course Name	L-T-P	Credits	Exam Slot
MAT 206	Graph Theory	3-1-0	4	A
CST 202	Computer Organization and Architecture	3-1-0	4	B
CST 204	Database Management System	3-1-0	4	C
CST 206	Operating System	3-1-0	3	D
EST 200	Design & Engineering	2-0-0	3	E
HUT 200	Professional Ethics	2-0-0	2	
MNC 202	Constitution Of India	2-0-2		F
CSL 202	Digital Lab	0-0-3	2	S
CSL 204	Operating Systems Lab	0-0-3	2	T
VAC	Remedial/Minor/Honourse course	3-1-0	4	R/M/H

Total Credits = 23 **Hours : 28/27** **Cumulative Credits = 94**

SEMESTER – 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
CS 301	Theory of Computation	3-1-0	4	A
CS 303	System Software	2-1-0	3	B
CS 305	Microprocessors and Microcontrollers	2-1-0	3	C
CS 307	Data Communication	3-0-0	3	D
CS 309	Graph Theory and Combinatorics	2-0-2	3	E
	Elective 1	3-0-0	3	F
CS 341	Design Project	0-1-2	2	S
CS 331	System Software Lab	0-0-3	1	T
CS 333	Application Software Development Lab	0-0-3	1	U

Total Credits = 23 **Hours : 29** **Cumulative Credits = 117**

Elective 1 :

1. CS 361 Soft Computing
2. CS 363 Signals and Systems
3. CS 365 Optimization Techniques
4. CS 367 Logic for Computer Science
5. CS 369 Digital System Testing & Testable Design

SEMESTER – 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
CS 302	Design and Analysis of Algorithms	3-1-0	4	A
CS 304	Compiler Design	3-0-0	3	B
CS 306	Computer Networks	3-0-0	3	C
CS 308	Software Engineering and Project Management	3-0-0	3	D
HS 300	Principles of Management	3-0-0	3	E
	Elective 2	3-0-0	3	F
CS 332	Microprocessor Lab	0-0-3	1	S
CS 334	Network Programming Lab	0-0-3	1	T
CS 352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23 **Hours : 27** **Cumulative Credits = 140**

Elective 1 :

1. CS 362 Computer Vision
2. CS 364 Mobile Computing
3. CS 366 Natural Language Processing
4. CS 368 Web Technologies
5. CS 372 High Performance Computing

SEMESTER – 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
CS 401	Computer Graphics	4-0-0	4	A
CS 403	Programming Paradigms	3-0-0	3	B
CS 405	Computer System Architecture	3-0-0	3	C
CS 407	Distributed Computing	3-0-0	3	D
CS 409	Cryptography and Network Security	3-0-0	3	E
	Elective 3	3-0-0	3	F
CS 451	Seminar & Project Preliminary	0-1-4	2	S
CS 431	Compiler Design Lab	0-0-3	1	T

Total Credits = 22 **Hours : 27** **Cumulative Credits = 162**

Elective 3 :

1. CS 461 Computational Geometry
2. CS 463 Digital Image Processing
3. CS 465 Bio Informatics
4. CS 467 Machine Learning
5. CS 469 Computational Complexity

SEMESTER – 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
CS 402	Data Mining and Ware Housing	3-0-0	3	A
CS 404	Embedded Systems	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
CS 492	Project		6	

Total Credits = 18 **Hours : 30** **Cumulative Credits = 180**

Elective 4 :

1. CS 462 Fuzzy Set Theory and Applications
2. CS 464 Artificial Intelligence
3. CS 466 Data Science
4. CS 468 Cloud Computing
5. CS 472 Principles of Information Security

BRANCH : Electrical & Electronics Engineering

SEMESTER – 3

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 201	Linear Algebra & Complex Analysis	3-1-0	4	A
EE 201	Circuits and Networks	3-1-0	4	B
EE 203	Analog Electronics Circuits	3-1-0	4	C
EE 205	DC Machines and Transformers	3-1-0	4	D
EE 207	Computer Programming	2-1-0	3	E
HS200/HS210	Business Economics/Life Skills	3-0-0/2-0-2	3	F
EE 231	Electronic Circuits Lab	0-0-3	1	S
EE 233	Programming Lab	0-0-3	1	T

Total Credits = 24 **Hours : 28/29** **Cumulative Credits = 71**

SEMESTER – 4

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 202	Probability ,Random Processes and Numerical Methods	3-1-0	4	A
EE 202	Synchronous and Induction Machines	3-1-0	4	B
EE 204	Digital Electronics and Logic Design	2-1-0	3	C
EE 206	Material Science	3-0-0	3	D
EE 208	Measurements and Instrumentation	3-1-0	4	E
HS210/HS200	Life Skills/ Business Economics	2-0-2/3-0-0	3	F
EE 232	Electrical Machines Lab I	0-0-3	1	S
EE 234	Circuits and Measurements Lab	0-0-3	1	T

Total Credits = 23 **Hours : 28/27** **Cumulative Credits = 94**

SEMESTER – 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
EE 301	Power Generation, Transmission & Protection	3-1-0	4	A
EE 303	Linear Control Systems	2-1-0	3	B
EE 305	Power Electronics	3-0-0	3	C
EE 307	Signals and Systems	3-0-0	3	D
EE 309	Microprocessor and Embedded Systems	2-1-0	3	E
	Elective 1	3-0-0	3	F
EE 341	Design Project	0-1-2	2	S
EE 331	Digital Circuits & Embedded Systems Lab	0-0-3	1	T
EE 333	Electrical Machines Lab II	0-0-3	1	U

Total Credits = 23 **Hours : 28** **Cumulative Credits = 117**

Elective 1:

1.	EE 361	Object Oriented Programming
2.	EE 363	Computer Organisation & Architecture
3.	EE 365	Digital System Design
4.	EE 367	New & Renewable Energy Systems
5.	EE 369	High Voltage Engineering

SEMESTER – 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
EE 302	Electromagnetics	2-1-0	3	A
EE 304	Advanced Control Theory	3-1-0	4	B
EE 306	Power System Analysis	3-0-0	3	C
EE 308	Electric Drives	3-0-0	3	D
HS 300	Principles of Management	3-0-0	3	E
	Elective 2	3-0-0	3	F
EE 332	Systems and Control Lab	0-0-3	1	S
EE 334	Power Electronics and Drives Lab	0-0-3	1	T
EE 352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23 **Hours : 27** **Cumulative Credits = 140**

Elective 2:

1.	EE 362	Data Structures and Algorithms
2.	EE 364	Switched Mode Power Converters
3.	EE 366	Illumination Technology
4.	EE 368	Soft Computing
5.	EE 372	Biomedical Instrumentation

SEMESTER – 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
EE 401	Electronic Communication	2-1-0	3	A
EE 403	Distributed generation and smart grids	3-0-0	3	B
EE 405	Electrical system design	3-1-0	4	C
EE 407	Digital Signal Processing	3-0-0	3	D
EE 409	Electrical Machine Design	3-0-0	3	E
	Elective 3	3-0-0	3	F
EE 451	Seminar & Project Preliminary	0-1-4	2	S
EE 431	Power system Lab	0-0-3	1	T

Total Credits = 22 Hours : 27 Cumulative Credits = 162

Elective 3:

1.	EE 461	Modern Operating Systems
2.	EE 463	Computer Aided Power Systems Analysis
3.	EE 465	Power Quality
4.	EE 467	Nonlinear Control Systems
5.	EE 469	Electric and Hybrid Vehicles

SEMESTER –8

Course Code	Course Name	L-T-P	Credits	Exam Slot
EE 402	Special Electric Machines	3-0-0	3	A
EE 404	Industrial Instrumentation & Automation	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
EE 492	Project		6	S

Total Credits = 18 Hours : 29 Cumulative Credits = 180

Elective 4:

1.	EE 462	Design of Digital Control Systems
2.	EE 464	FACTS
3.	EE 466	Digital Image Processing
4.	EE 468	Computer Networks
5.	EE 472	Internet of things
6.	EE 474	Energy Management and Auditing

ELECTIVE 5 (NON DEPARTMENTAL ELECTIVE COURSES)

(Note:- If a student has studied or chosen the elective course given within the brackets then the corresponding ND elective cannot be chosen)

1. AE482 INDUSTRIAL INSTRUMENTATION
2. AE484 INSTRUMENTATION SYSTEM DESIGN
3. AO482 FLIGHT AGAIST GRAVITY
4. AU484 MICROPROCESSOR AND EMBEDDED SYSTEM
5. AU486 NOISE, VIBRATION AND HARSHNESS
6. BM482 BIOMEDICAL INSTRUMENTATION
7. BM484 MEDICAL IMAGING & IMAGE PROCESSING TECHNIQUES
8. BT362 SUSTAINABLE ENERGY PROCESSES
9. BT461 DESIGN OF BIOLOGICAL WASTE WATER TREATMENT SYSTEMS
10. CE482 ENVIRONMENTAL IMPACT ASSESSMENT
11. CE484 APPLIED EARTH SYSTEMS

12.	CE486	GEO INFORMATICS FOR INFRASTRUCTURE MANAGEMENT
13.	CE488	DISASTER MANAGEMENT
14.	CE494	ENVIRONMENTAL HEALTH AND SAFETY
15.	CH482	PROCESS UTILITIES AND PIPE LINE DESIGN
16.	CH484	FUEL CELL TECHNOLOGY
17.	CS482	DATA STRUCTURES
18.	CS484	COMPUTER GRAPHICS
19.	CS486	OBJECT ORIENTED PROGRAMMING
20.	CS488	C # AND .NET PROGRAMMING
21.	EC482	BIOMEDICAL ENGINEERING
22.	EE482	ENERGY MANAGEMENT AND AUDITING
23.	EE484	CONTROL SYSTEMS
24.	EE486	SOFT COMPUTING
25.	EE488	INDUSTRIAL AUTOMATION
26.	EE494	INSTRUMENTATION SYSTEMS
27.	FS482	RESPONSIBLE ENGINEERING
28.	FT482	FOOD PROCESS ENGINEERING
29.	FT484	FOOD STORAGE ENGINEERING
30.	FT486	FOOD ADDITIVES AND FLAVOURING
31.	IC482	BIOMEDICAL SIGNAL PROCESSING
32.	IE482	FINANCIAL MANAGEMENT
33.	IE484	INTRODUCTION TO BUSINESS ANALYTICS
34.	IE486	DESIGN AND ANALYSIS OF EXPERIMENTS
35.	IE488	TOTAL QUALITY MANAGEMENT
36.	IT482	INFORMATION STORAGE MANAGEMENT
37.	ME471	OPTIMIZATION TECHNIQUES
38.	ME482	ENERGY CONSERVATION AND MANAGEMENT
39.	ME484	FINITE ELEMENT ANALYSIS
40.	MP469	INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR
41.	MP482	PRODUCT DEVELOPMENT AND DESIGN
42.	MP484	PROJECT MANAGEMENT
43.	MR482	MECHATRONICS
44.	MT482	INDUSTRIAL SAFETY
45.	SB482	DREDGERS AND HARBOUR CRAFTS

Note:- The table gives the list of branches and the corresponding courses which are NOT eligible for that branch. In the column under "Courses Conditionally eligible" a student can choose a course if he/she did not study the elective course given in the bracket.

Branch	Courses not eligible	Courses conditionally eligible
1. Aeronautical Engg.	AO482, ME 484	ME 471 (AO467)
2. Applied Electronics & instrumentation Engg.	AE482, AE484, EE484, AU484 EE492, EE486, BM482	MP469 (AE362)
3. Automobile Engg.	AU484, AU486	MP482 (AU465)
4. Biomedical Engg.	BM482, BM484, IC482, AU484 EE484, EC482	MR482 (BM362)
5. Biotechnology	BT362, BT461	FT482(BT464)
6. Chemical Engg.	CH482, CH484	ME 471 (CH369)
7. Civil Engg.	CE 482, CE484, CE486, CE488, CE492, MP484	ME484 (CE466), ME471 (CE473)
8. Computer Science & Engg.	CS482, CS484, CS486, CS488, AU484	EE486 (CS361),ME471 (CSE65)
9. Electrical & Electronics Engg.	EE482, EE484, EE486, EE488, EE492, AU484, AE482	CS486 (EE361),CS482,(EE362) BM482 (EE372),ME482(EE474)
10. Electronics & Biomedical Engg.	BM482, BM484, IC482, AU484, EE484, EC482	MR482 (BM362)
11. Electronics & Communication Engg.	EC482, AU484, CS486, EE484 (EC363)	EE486 (EC360), ME471
12. Food Technology	FT482, FT484, FT486	
13. Industrial Engg.	IE 482, IE484,IE486, IE488, CS486, ME471, EE488	
14. Information Technology	IT482, CS482, CS484, CS486, AU484	
15. Instrumentation & Control Engg.	AE482, AE484, AU484, EE484, EE492, BM482	EE488(IC362), IE488,(IC364)
16. Mechanical Engg.	ME482, ME484, ME471, EE482, MR482	EE484(ME362), EE488 (ME464)
17. Mechanical (Automobile) Engg.	AU482, AU484, AU486, ME482, ME484, ME471, MR482	
18. Mechanical (Production) Engg.	ME482, ME484, ME471, MP482 MP469, MP484, MR482	EE488 (ME464)
19. Mechatronics	MR482, AU484, EE482, BM482 EE488, EE486	CS486(MR363), ME484 (ME369)
20. Metallurgy	MT482	
21. Naval Architecture & Ship Building	SB482	ME484(SB468)
22. Production Engg.	MP482, MP469, MP484, MR482, IE488, ME471	EE486(MP369),EE488(MP372) ME484(ME369)
23. Safety & Fire Engg.	FS482, MT482, CE488	

BRANCH : Electronics & Communication Engineering

SEMESTER – 3

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 201	Linear Algebra & Complex Analysis	3-1-0	4	A
EC 201	Network Theory	3-1-0	4	B
EC 203	Solid State Devices	3-1-0	4	C
EC 205	Electronic Circuits	3-1-0	4	D
EC 207	Logic System Design	3-0-0	3	E
HS200/HS210	Business Economics/Life Skills	3-0-0/2-0-2	3	F
EC 231	Electronic Devices & Circuits Lab	0-0-3	1	S
EC 233	Electronic Design Automation Lab	0-0-3	1	T

Total Credits = 24 **Hours : 28/29** **Cumulative Credits = 71**

SEMESTER – 4

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 204	Probability Random Processes and Numerical Methods	3-1-0	4	A
EC 202	Signals & Systems	3-1-0	4	B
EC 204	Analog Integrated Circuits	4-0-0	4	C
EC 206	Computer Organization	3-0-0	3	D
EC 208	Analog Communication Engineering	3-0-0	3	E
HS210/HS200	Life Skills/ Business Economics	2-0-2/3-0-0	3	F
EC 230	Logic Circuit Design Lab	0-0-3	1	S
EC 232	Analog Integrated Circuits Lab	0-0-3	1	T

Total Credits = 23 **Hours : 27/28** **Cumulative Credits = 94**

SEMESTER – 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
EC 301	Digital Signal Processing	3-1-0	4	A
EC 303	Applied Electromagnetic Theory	3-0-0	3	B
EC 305	Microprocessors & Microcontrollers	2-1-0	3	C
EC 307	Power Electronics & Instrumentation	3-0-0	3	D
HS 300	Princples of Management	3-0-0	3	E
	Elective 1	3-0-0	3	F
EC 333	Digital Signal Processing Lab	0-0-3	1	S
EC 335	Power Electronics & Instrumentation Lab	0-0-3	1	T
EC 341	Design Project	0-1-2	2	U

Total Credits = 23 **Hours : 28** **Cumulative Credits = 117**

Elective 1:

1.	EC 361	Digital System Design
2.	EC 363	Optimization Techniques
3.	EC 365	Biomedical Engineering
4.	EC 360	Soft Computing

SEMESTER – 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
EC 302	Digital Communication	4-0-0	4	A
EC 304	VLSI	3-0-0	3	B
EC 306	Antenna & Wave Propagation	3-0-0	3	C
EC 308	Embedded System	3-0-0	3	D
EC 312	Object Oriented Programming	3-0-0	3	E
	Elective 2	3-0-0	3	F
EC 332	Communication Engineering Lab (Analog & Digital)	0-0-3	1	S
EC 334	Microcontroller Lab	0-0-3	1	T
EC 352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23 **Hours : 27** **Cumulative Credits = 140**

Elective 2:

1.	EC 362	Modelling and Simulation of Communication Systems
2.	EC 366	Real Time Operating Systems
3.	EC 368	Robotics
4.	EC 370	Digital Image Processing

SEMESTER – 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
EC 401	Information Theory & Coding	4-0-0	4	A
EC 403	Microwave & Radar Engineering	3-0-0	3	B
EC 405	Optical Communication	3-0-0	3	C
EC 407	Computer Communication	3-0-0	3	D
EC 409	Control Systems	3-0-0	3	E
	Elective 3	3-0-0	3	F
EC 451	Seminar & Project Preliminary	0-1-4	2	S
EC 431	Communication Systems Lab (Optical & Microwave)	0-0-3	1	T

Total Credits = 22 **Hours : 27** **Cumulative Credits = 162**

Elective 3:

1.	EC 461	Microwave Devices and Circuits
2.	EC 463	Speech and Audio Processing
3.	EC 465	MEMS
4.	EC 467	Pattern Recognition
5.	EC 469	Opto Electronic Devices

SEMESTER – 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
EC 402	Nano electronics	3-0-0	3	A
EC 404	Advanced Communication Systems	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
EC 492	Project	0-0-0	6	All free hours

Total Credits = 18 **Hours : 29** **Cumulative Credit = 180**

Elective 4:

1.	EC 462	Mixed Signal Circuit Design
2.	EC 464	Low Power VLSI Design
3.	EC 466	Cyber Security
4.	EC 468	Secure Communication
5.	EC 472	Integrated Optics & Photonic Systems
6.	EC 474	Computer Vision

ELECTIVE 5 (NON DEPARTMENTAL ELECTIVE COURSES)

1. AO482 FLIGHT AGAIST GRAVITY
2. AE482 INDUSTRIAL INSTRUMENTATION
3. AE484 INSTRUMENTATION SYSTEM DESIGN
4. AU484 MICROPROCESSOR AND EMBEDDED SYSTEMS
5. AU486 NOISE, VIBRATION AND HARSHNESS
6. BM482 BIOMEDICAL INSTRUMENTATION
7. BM484 MEDICAL IMAGING & IMAGE PROCESSING TECHNIQUES
8. BT461 DESIGN OF BIOLOGICAL WASTE WATER SYSTEMS
9. BT362 SUSTAINABLE ENERGY PROCESSES
10. CH482 PROCESS UTILITIES AND PIPE LINE DESIGN
11. CH484 FUEL CELL TECHNOLOGY
12. CE482 ENVIRONMENTAL IMPACT ASSESSMENT
13. CE484 APPLIED EARTH SYSTEMS
14. CE486 GEO INFORMATICS FOR INFRASTRUCTURE MANAGEMENT

15. CE488 DISASTER MANAGEMENT
16. CE492 ENVIRONMENT HEALTH AND SAFETY
17. CS482 DATA STRUCTURES
18. CS484 COMPUTER GRAPHICS
19. CS486 OBJECT ORIENTED PROGRAMMING
20. CS488 C # AND .NET PROGRAMMING
21. EE482 ENERGY MANAGEMENT AND AUDITING
22. EE484 CONTROL SYSTEMS
23. EE486 SOFT COMPUTING
24. EE488 INDUSTRIAL AUTOMATION
25. EE492 INSTRUMENTATION SYSTEMS
26. EC482 BIOMEDICAL ENGINEERING
27. FT482 FOOD PROCESS ENGINEERING
28. FT484 FOOD STORAGE ENGINEERING
29. FT486 FOOD ADDITIVES AND FLAVOURING
30. IE482 FINANCIAL MANAGEMENT
31. IE484 INTRODUCTION TO BUSINESS ANALYTICS
32. IE486 DESIGN AND ANALYSIS OF EXPERIMENTS
33. IE488 TOTAL QUALITY MANAGEMENT
34. IC482 BIOMEDICAL SIGNAL PROCESSING
35. IT482 INFORMATION SYSTEM MANAGEMENT
36. MA482 APPLIED LINEAR ALGEBRA
37. MA484 OPERATIONS RESEARCH
38. MA486 ADVANCED NUMERICAL COMPUTATIONS
39. MA488 CRYPTOGRAPHY (Not for IT branch)
40. ME469 FINITE ELEMENT ANALYSIS
41. ME482 ENERGY CONSERVATION AND MANAGEMENT
42. ME471 OPTIMIZATION TECHNIQUES
43. MP482 PRODUCT DEVELOPMENT AND DESIGN
44. MP469 INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR
45. MP484 PROJECT MANAGEMENT
46. MT482 INDUSTRIAL SAFETY
47. MR482 MECHATRONICS
48. FS482 RESPONSIBLE ENGINEERING
49. SB482 DREDGERS AND HARBOUR CRAFTS
50. HS482 PROFESSIONAL ETHICS

BRANCH : Mechanical Engineering

SEMESTER – 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
ME 301	Mechanics of Machinery	3-1-0	4	A
ME 303	Machine Tools & Digital Manufacturing	3-0-0	3	B
ME 305	Computer Programming & Numerical Methods	2-0-1	3	C
EE 311	Electrical Drives & Control for Automation	3-0-0	3	D
HS 300	Principles of Management	3-0-0	3	E
	Elective 1	3-0-0	3	F
ME 341	Design Project	0-1-2	2	S
EE 335	Electrical and Electronics Lab	0-0-3	1	T
ME 331	Manufacturing Technology Lab 1	0-0-3	1	U

Total Credits = 23 **Hours : 28** **Cumulative Credits = 117**

Elective 1 :

1. ME 361 Advanced Fluid Mechanics
2. ME 363 Composite Materials and Mechanics
3. ME 365 Advanced Metal Casting
4. ME 367 Non- Destructive Testing
5. ME 369 Tribology
6. ME 371 Nuclear Engineering
7. ME 373 Human Relations Management

SEMESTER – 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
ME 302	Heat & Mass Transfer	3-1-0	4	A
ME 304	Dynamics of Machinery	2-1-0	3	B
ME 306	Advanced Manufacturing Technology	3-0-0	3	C
ME 308	Computer Aided Design and Analysis	3-0-0	3	D
ME 312	Metrology and Instrumentation	3-0-0	3	E
	Elective 2	3-0-0	3	F
ME 332	Computer Aided Design & Analysis Lab	0-0-3	1	S
ME 334	Manufacturing Technology Lab II	0-0-3	1	T
ME 352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23 **Hours : 27** **Cumulative Credits = 140**

Elective 2 :

1. ME 362 Control System Engineering
2. ME 364 Turbo Machinery
3. ME 366 Advanced Metal Joining Technology
4. ME 368 Marketing Management
5. ME 372 Operations Research
6. ME 374 Theory of Vibration
7. ME 376 Maintenance Engineering

SEMESTER – 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
ME 401	Design of Machine Elements - I	3-1-0	4	A
ME 403	Advanced Energy Engineering	3-0-0	3	B
ME 405	Refrigeration and Air Conditioning	2-1-0	3	C
ME 407	Mechatronics	3-0-0	3	D
ME 409	Compressible Fluid Flow	2-1-0	3	E
	Elective 3	3-0-0	3	F
ME 451	Seminar & Project Preliminary	0-1-4	2	S
ME 431	Mechanical and Engineering Lab	0-0-3	1	T

Total Credits = 22 **Hours : 27** **Cumulative Credits = 162**

Elective 1 :

1. ME 461 Aerospace Engineering
2. ME 463 Automobile Engineering
3. ME 465 Industrial Hydraulics
4. IE 306 Supply Chain and Logistics Management
5. ME 467 Cryogenic Engineering
6. ME 469 Finite Element Analysis
7. ME 471 Optimization Techniques

SEMESTER – 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
ME 402	Design of Machine Elements II	3-0-0	3	A
ME 404	Industrial Engineering	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
ME 492	Project		6	

Total Credits = 18 **Hours : 30** **Cumulative Credits = 180**

Elective 4 :

1. ME 462 Populsion Engineering
2. ME 464 Robotics and Automation
3. ME 466 Computational Fluid Dynamics
4. ME 468 Nanotechnology
5. ME 472 Failure Analysis and Design
6. ME 474 Micro and Nano Manufacturing
7. ME 476 Material Handling & Facilities Planning

ELECTIVE 5 (NON DEPARTMENTAL ELECTIVE COURSES)

1. AO482 AUTOMOTIVE AERODYNAMICS
2. AE482 INDUSTRIAL INSTRUMENTATION
3. AE484 INSTRUMENTATION SYSTEM DESIGN
4. AU484 MICROPROCESSOR AND EMBEDDED SYSTEMS
5. AU486 NOISE, VIBRATION AND HARSHNESS
6. BM482 BIOMEDICAL INSTRUMENTATION
7. BM484 MEDICAL IMAGING & IMAGE PROCESSING TECHNIQUES
8. BT482 DESIGN OF BIOLOGICAL WASTEWATER SYSTEMS
9. BT484 SUSTAINABLE ENERGY PROCESSES
10. CH482 PROCESS UTILITIES AND PIPE LINE DESIGN
11. CH484 FUEL CELL TECHNOLOGY
12. CE482 ENVIRONMENTAL IMPACT ASSESSMENT
13. CE484 APPLIED EARTH SYSTEMS
14. CE486 GEO INFORMATICS FOR INFRASTRUCTURE MANAGEMENT
15. CE488 DISASTER MANAGEMENT
16. CE492 ENVIRONMENT HEALTH AND SAFETY
17. CS482 DATA STRUCTURES
18. CS484 COMPUTER GRAPHICS
19. CS486 OBJECT ORIENTED PROGRAMMING
20. CS488 C # AND .NET PROGRAMMING
21. EE482 ENERGY MANAGEMENT AND AUDITING
22 EE484 CONTROL SYSTEMS
23 EE486 INDUSTRIAL AUTOMATION
24. EE488 INSTRUMENTATION SYSTEMS
25 EE492 SOFT COMPUTING
26. EC482 BIOMEDICAL ENGINEERING
27. FT482 FOOD PROCESS ENGINEERING
28. FT484 FOOD STORAGE ENGINEERING
29. FT486 FOOD ADDITIVES AND FLAVOURING
30. IE482 FINANCIAL MANAGEMENT
31. IE484 INTRODUCTION TO BUSINESS ANALYTICS
32. IE486 DESIGN AND ANALYSIS OF EXPERIMENTS
33. IE488 TOTAL QUALITY MANAGEMENT

34. IC482 BIOMEDICAL SIGNAL PROCESSING
35. IT482 INFORMATION SYSTEM MANAGEMENT
36. MA482 APPLIED LINEAR ALGEBRA
37. MA484 OPERATIONS RESEARCH
38. MA486 ADVANCED NUMERICAL COMPUTATIONS
39. MA488 CYPTOGRAPHY (Not for IT branch)
40. ME469 FINITE ELEMENT ANALYSIS
41. ME482 ENERGY CONSERVATION AND MANAGEMENT
42 ME471 OPTIMIZATION TECHNIQUES
43. MP482 PRODUCT DEVELOPMENT AND DESIGN
44. MP469 INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR
45 MP484 PROJECT MANAGEMENT
46. MT482 INDUSTRIAL SAFETY
47. MR482 MECHATRONICS
48. FS482 RESPONSIBLE ENGINEERING
49. SB482 DREDGERS AND HARBOUR CRAFTS
50. HS482 PROFESSIONAL ETHICS

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
M-Tech - Curriculum

Cluster : *01*
Branch : *Civil Engineering*
Stream : *Structural Engineering*
Year : *2015*
No. of Credits : *67*

SEMESTER 1

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	01CE6101	Advanced Numerical Methods	3-0-0	40	60	3	3
B	01CE6103	Theory of Elasticity	3-1-0	40	60	3	4
C	01CE6105	Structural Dynamics	3-1-0	40	60	3	4
D	01CE6107	Advanced Theory and Design of RC Structures	3-0-0	40	60	3	3
E		Elective I	3-0-0	40	60	3	3
S	01CE6999	Research Methodology	0-2-0	100			2
T	01CE6191	Seminar I	0-0-2	100			2
U	01CE6193	Structural Engineering and Computational Lab	0-0-2	100			1
		TOTAL	**15-4-4**	**500**	**300**	**-**	**22**

TOTAL CONTACT HOURS : 23
TOTAL CREDITS : 22

Elective I
01CE6111 Experimental Methods and Instrumentation
01CE6113 Forensic Engineering
01CE6115 Structural Optimisation

SEMESTER 2

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	01CE6102	Advanced Metal Structures	3-1-0	40	60	3	4
B	01CE6104	Finite Element Method	3-0-0	40	60	3	3
C	01CE6106	Analysis and Design of Earthquake Resistant Structures	3-0-0	40	60	3	3
D		Elective II	3-0-0	40	60	3	3
E		Elective III	3-0-0	40	60	3	3
V	01CE6192	Mini Project	0-0-4	100			2
U	01CE6194	Structural Dynamics Lab	0-0-2	100			1
		TOTAL	**15-1-6**	**400**	**300**	**-**	**19**

TOTAL CONTACT HOURS : 22

TOTAL CREDITS : 19

Elective II

01CE6112 Theory and Design of Plates and Shells
01CE6114 Composite Structures
01CE6116 Fracture Mechanics

Elective III

01CE6118 Advanced Prestressed Concrete Design
01CE6122 Analysis and Design of Substructures
01CE6124 High Rise Structures

SEMESTER 3

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A		Elective IV	3-0-0	40	60	3	3
B		Elective V	3-0-0	40	60	3	3
T	01CE7191	Seminar II	0-0-2	100			2
W	01CE7193	Project (Phase 1)	0-0-12	50			6
		TOTAL	**6-0-14**	**230**	**120**	**-**	**14**

TOTAL CONTACT HOURS : 20
TOTAL CREDITS : 14

Elective IV

01CE7111 Design of Bridges
01CE7113 Structural Reliability
01CE7115 Operations Research

Elective V

01CE7117 Stability of structures
01CE7119 Random Vibration
01CE7121 Engineering Application of Artificial Intelligence and Expert Systems

SEMESTER 4

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
W	01CE7194	Project (Phase 2)	0-0-23	70	30		12
		TOTAL	**0-0-23**	**70**	**30**	**-**	**12**

TOTAL CONTACT HOURS : 23
TOTAL CREDITS : 12

TOTAL NUMBER OF CREDITS : 67

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
M-Tech - Curriculum

Cluster : *01*
Branch : *Computer Science & Engineering*
Stream : *Computer Science & Engineering*
Year : *2015*
No. of Credits : *67*

SEMESTER 1

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	01CS6101	Mathematical Foundations of Computing Systems	3-0-0	40	60	3	3
B	01CS6103	Advanced Data Structures and Algorithms	3-1-0	40	60	3	4
C	01CS6105	Topics in Database Technology	3-1-0	40	60	3	4
D	01CS6107	Advanced Software Engineering	3-0-0	40	60	3	3
E		Elective I	3-0-0	40	60	3	3
S	01CS6999	Research Methodology	0-2-0	100			2
T	01CS6191	Seminar I	0-0-2	100			2
U	01CS6193	Algorithm Design Laboratory	0-0-2	100			1
		TOTAL	**15-4-4**	**500**	**300**	**-**	**22**

TOTAL CONTACT HOURS : 23
TOTAL CREDITS : 22

Elective I

01CS6151 Data Warehousing & Mining
01CS6153 Data Compression Techniques
01CS6155 Advanced Topics in Distributed Systems
01CS6157 Image Processing
01CS6159 Cloud Computing

SEMESTER 2

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	01CS6102	Soft Computing	3-1-0	40	60	3	4
B	01CS6104	Operating System Design	3-0-0	40	60	3	3
C	01CS6106	Advanced Computer Networks	3-0-0	40	60	3	3
D		Elective II	3-0-0	40	60	3	3
E		Elective III	3-0-0	40	60	3	3
V	01CS6192	Mini Project	0-0-4	100			2
U	01CS6194	Network & OS Laboratory	0-0-2	100			1
		TOTAL	**15-1-6**	**400**	**300**	**-**	**19**

TOTAL CONTACT HOURS : 22
TOTAL CREDITS : 19

Elective II

01CS6152 Parallel Algorithms
01CS6154 Parallel Computer Architecture
01CS6156 Computational Geometry
01CS6158 Semantic Web Technology
01CS6162 Advanced Complier Design

Elective III

01CS6172 Machine Learning
01CS6174 Advanced Graph Theory
01CS6176 Cyber Laws & Ethics
01CS6178 Principles of Information Security

SEMESTER 3

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A		Elective IV	3-0-0	40	60	3	3
B		Elective V	3-0-0	40	60	3	3
T	01CS7191	Seminar II	0-0-2	100			2
W	01CS7193	Project (Phase 1)	0-0-12	50			6
		TOTAL	**6-0-14**	**230**	**120**	**-**	**14**

TOTAL CONTACT HOURS : 20

TOTAL CREDITS : 14

Elective IV

01CS7151 Complexity Theory
01CS7153 Distributed Algorithms
01CS7155 Advanced Computer Graphics
01CS7157 Ad-hoc and Sensor Networks

Elective V

01CS7171 Principles of Network Security
01CS7173 Fuzzy Set Theory & Applications
01CS7175 Decision Support Systems
01CS7177 Advanced Software Project Management

SEMESTER 4

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
W	01CS7194	Project (Phase 2)	0-0-23	70	30		12
		TOTAL	**0-0-23**	**70**	**30**	**-**	**12**

TOTAL CONTACT HOURS : 23

TOTAL CREDITS : 12

TOTAL NUMBER OF CREDITS : 67

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
M-Tech - Curriculum

Cluster : *01*
Branch : *Electrical and Electronics Engineering*
Stream : *Power Control and Drives*
Year : *2015*
No. of Credits : *67*

SEMESTER 1

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	01MA6021	Advanced Mathematics & Optimisation Techniques	3-0-0	40	60	3	3
B	01EE6101	Dynamics of Linear Systems	3-1-0	40	60	3	4
C	01EE6301	Modelling of Electrical Machines	3-1-0	40	60	3	4
D	01EE6501	Power Converter Circuits	3-0-0	40	60	3	3
E	01EE6503	Advanced Signal Processing	3-0-0	40	60	3	3
S	01EE6999	Research Methodology	0-2-0	100			2
T	01EE6591	Seminar I	0-0-2	100			2
U	01EE6593	Power Electronics Lab	0-0-2	100			1
		TOTAL	**15-4-4**	**500**	**300**	**-**	**22**

TOTAL CONTACT HOURS : 23
TOTAL CREDITS : 22

SEMESTER 2

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	01EE6302	Electric Drives	3-1-0	40	60	3	4
B	01EE6502	Design Principles of power converters	3-0-0	40	60	3	3
C		Elective-I	3-0-0	40	60	3	3
D		Elective-II	3-0-0	40	60	3	3
E		Elective-III	3-0-0	40	60	3	3
V	01EE6592	Mini Project	0-0-4	100			2
U	01EE6594	Drives & Simulation Lab	0-0-2	100			1
		TOTAL	**15-1-6**	**400**	**300**	**-**	**19**

TOTAL CONTACT HOURS : 22
TOTAL CREDITS : 19

Elective I

01EE6112 Process Control & Industrial Automation
01EE6412 New and Renewable Sources of Energy
01EE6512 Applications of Power Electronics in Power Systems
01EE6514 Embedded Systems and Real time Applications

Elective II

01EE6418 Flexible AC Transmission Systems
01EE6516 Microcontroller Applications in Power Electronics
01EE6518 Power Electronics for Renewable Energy Systems
01EE6522 Digital Simulation of Power Electronic Systems

Elective III

01EE6126 Soft Computing Techniques
01EE6524 Modern Power Converters
01EE6318 Finite Element Methods for Electrical Machines

SEMESTER 3

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A		Elective IV	3-0-0	40	60	3	3
B		Elective V	3-0-0	40	60	3	3
T	01EE7591	Seminar II	0-0-2	100			2
W	01EE7593	Project (Phase I)	0-0-12	50			6
		TOTAL	**6-0-14**	**230**	**120**	**-**	**14**

TOTAL CONTACT HOURS : 20
TOTAL CREDITS : 14

Elective IV

01EE7113 Advanced Instrumentation
01EE7511 Digital controllers in Power Electronics
01EE7513 Power System Protection
01EE7411 EHVAC and DC Transmission

Elective V

01EE7515 Switched Mode Power Converters
01EE7121 Biomedical Instrumentation
01EE7315 Hybrid Electric Vehicles

SEMESTER 4

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
W	01EE7594	Project (Phase 2)	0-0-23	70	30		12
		TOTAL	**0-0-23**	**70**	**30**	**-**	**12**

TOTAL CONTACT HOURS : 23
TOTAL CREDITS : 12

TOTAL NUMBER OF CREDITS : 67

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
M-Tech - Curriculum

Cluster : *1*
Branch : *Electronics & Communication Engineering*
Stream : *Telecommunication Engineering*
Year : *2015*
No. of Credits : *67*

SEMESTER 1

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	01EC6301	Applied Linear Algebra	3-0-0	40	60	3	3
B	01EC6303	Random Processes and Applications	3-1-0	40	60	3	4
C	01EC6205	Advanced Digital Communication	3-1-0	40	60	3	4
D	01EC6105	Advanced Digital Signal Processing	3-0-0	40	60	3	3
E		Elective I	3-0-0	40	60	3	3
S	01EC6999	Research Methodology	0-2-0	100			2
T	01EC6591	Seminar I	0-0-2	100			2
U	01EC6593	Telecommunication Lab I	0-0-2	100			1
		TOTAL	**15-4-4**	**500**	**300**	**-**	**22**

TOTAL CONTACT HOURS : 23
TOTAL CREDITS : 22

Elective I

01EC6211 Optical Communication Systems
01EC6213 Modelling and Simulation of Communication Systems
01EC6515 Spread Spectrum and CDMA Systems

SEMESTER 2

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A	01EC6302	Estimation and Detection Theory	3-1-0	40	60	3	4
B	01EC6204	Antenna Theory and Design	3-0-0	40	60	3	3
C	01EC6506	Wireless Communication and Networks	3-0-0	40	60	3	3
D		Elective II	3-0-0	40	60	3	3
E		Elective III	3-0-0	40	60	3	3
V	01EC6592	Mini Project	0-0-4	100			2
U	01EC6594	Telecommunication Lab II	0-0-2	100			1
		TOTAL	**15-1-6**	**400**	**300**	**-**	**19**

TOTAL CONTACT HOURS : 22
TOTAL CREDITS : 19

Elective II

01EC6312 Adaptive Signal Processing
01EC6514 Digital Microwave Communication
01EC6516 Embedded Systems for Communication

Elective III

01EC6518 Information Theory
01EC6522 Image and Video Processing
01EC6524 High Performance Communication Networks

SEMESTER 3

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A		Elective IV	3-0-0	40	60	3	3
B		Elective V	3-0-0	40	60	3	3
T	01EC7591	Seminar II	0-0-2	100			2
W	01EC7593	Project (Phase 1)	0-0-12	50			6
		TOTAL	**6-0-14**	**230**	**120**	**-**	**14**

TOTAL CONTACT HOURS : 20
TOTAL CREDITS : 14

Elective IV

01EC7511 Neuro Fuzzy Systems
01EC7213 Secure Communication
01EC7313 Space Time Coding and MIMO Systems

Elective V

01EC7515 WDM Optical Network and Optical switching
01EC7517 RF MEMS
01EC7519 Radio Frequency System Design

SEMESTER 4

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
W	01EC7594	Project (Phase 2)	0-0-23	70	30		12
		TOTAL	**0-0-23**	**70**	**30**	**-**	**12**

TOTAL CONTACT HOURS : 23
TOTAL CREDITS : 12

TOTAL NUMBER OF CREDITS : 67

SEMESTER 3

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A		Elective IV	3-0-0	40	60	3	3
B		Elective V	3-0-0	40	60	3	3
T	01EC7391	Seminar II	0-0-2	100			2
W	01EC7393	Project (Phase 1)	0-0-12	50			6
		TOTAL	**6-0-14**	**230**	**120**	**-**	**14**

TOTAL CONTACT HOURS : 20

TOTAL CREDITS : 14

Elective IV

01EC7311 VLSI Structures for Digital Signal Processing

01EC7313 Space Time Coding and MIMO Systems

01EC7315 Computer Vision

Elective V

01EC7317 Array Signal Processing

01EC7319 Bio Informatics

01EC7213 Secure Communication

SEMESTER 4

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
W	01EC7394	Project (Phase 2)	0-0-23	70	30		12
		TOTAL	**0-0-23**	**70**	**30**	**-**	**12**

TOTAL CONTACT HOURS : 23

TOTAL CREDITS : 12

TOTAL NUMBER OF CREDITS: 67

KTU Academic Regulations, 2019

This may be called the A. P. J. Abdul Kalam Technological University Academic Regulations, 2019. These are subject to the provisions of the APJ Abdul Kalam Technological University Act, 2015, the statutes and ordinances if any issued in the subject from time to time. It is the express understanding that these regulations are subject to the approval of the concerned statutory bodies of the University.

1. Preamble	
R1.1	The University has the right to modify the regulations from time to time.
R1. 2	In all matters related to the regulations, the decision of the University and its interpretation given by the Chairman of the BOG shall be final and binding.
2. Admission	
R2.1	Admission policy, eligibility for admission and admission procedure shall be decided by the University or the competent statutory authority for admissions from time to time.
R2.2	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 concerned statutory body, the Vice Chancellor may revoke the admission of the candidate and report the matter to the BOG.
R2.3	No student shall be permitted, under any circumstances, to change the branch/stream to which he/she is admitted by the competent authority for admission.
R2.4	A student admitted to a particular institute shall continue studying in that institute till the completion of the course, unless he/she is permitted an inter college transfer as per R9.1 to 9.12.
3. Structure of B.Tech. Program.	
R3.1	The duration of the B.Tech. Program shall be 4 years (8 semesters)
R3.2	The maximum duration shall be six academic years spanning 12 semesters.
R3.3	Every academic year shall have two semesters "1st July to 31st December (Odd semester)" and "1st January to 30th June (Even semester)". Each semester shall have minimum of 72 working

days. The vacation of the faculty and staff shall be as per the Government orders from time to time.

R3.4 Every branch of the B.Tech Program shall have a curriculum and syllabi for the courses approved by the Academic Council. Syllabus for any course shall be normally modified/updated once in four 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. All revisions shall be only based on the recommendations of the concerned Board of Studies.

R3.5 The academic programs of the University follow the credit system. The general pattern is as below:

1 Hr. Lecture (L) per week	1 credit
1 Hr. Tutorial (T) per week	1 credit
1 to 2 Hours Practical(P) per week	1 credit
3 to 4 Hours Practical(P) per week	2 credit
The work load of the faculty shall be the actual number of Hours engaged by the faculty member.	

R3.6 The curriculum of any branch of the B.Tech. Program shall have a total of 162credits.

R3.7 Every course of B. Tech. Program shall be placed in one of the nine categories as listed in table below.

S. No.	Category	Code	Breakup of Credits
1	Humanities and Social Sciences including Management courses	HSMC	13
2	Basic Science courses	BSC	25
3.	Engineering Science courses including workshop,drawing, basics of electrical/mechanical/ computer etc	ESC	18
4	Professional core courses	PCC	68
5	Professional Elective courses relevant to chosen specialization/ branch	PEC	17

	6.	Open subjects – Electives from other technical and /or emerging subjects ' as specified in the concerned curriculum.	OEC	09
	7	Project work, seminar and internship in industry or elsewhere	PROJ	10
	8	Mandatory Courses [Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Traditional Knowledge]	MC	Non credit
	9	Mandatory Student Activities (Pass/Fail)	SA	2
			Total Credits	162
R3.8	No semester shall have more than six lecture-based courses and two laboratory and/or drawing/seminar/project courses in the curriculum. Credit per semester shall not be less than 15 or greater than 25 and cumulative credits shall not be less than 162.			
R3.9	The medium of instruction shall be English. All examinations, project/seminar reports and presentations shall be in English.			
	4. Academic Monitoring and Student Support.			
R4.1	Advisory System: There shall be one Senior Faculty Advisor (SFA) and a faculty advisor (FA) each for 25 to 35 students in a class. The Principal shall appoint a permanent faculty member with minimum five years of experience as the Senior Faculty Advisor (SFA) on the recommendations of the concerned Head of Department.			
R4.2	The documents regarding all academic and non academic matters of students under an advisory group shall be kept under the custody of Faculty Advisor/Senior Faculty Advisor.			
R4.3	All requests/applications from a student or parent to higher offices are to be forwarded/recommended by his/her Faculty Advisor/ Senior Faculty Advisor. Students and parents shall first approach their Faculty Advisor/ Senior Faculty Advisor for all kinds of advices, clarifications and permissions of academic matters. It is the official responsibility of the FA/SFA to provide the required guidance, clarifications and advices to the students and parents strictly			

	based on the prevailing academic regulations. The FA shall make appropriate recommendations or remarks on the applications submitted by the students and parents before forwarding it to the Senior Faculty Advisor. The SFA shall verify the recommendations/ remarks of FA for the compliance of University regulations before forwarding it to the HoD/other concerned officials.
R4.4	The SFA shall arrange separate or combined meetings with advisors; course faculty, Parents and students as and when required and discuss the academic progress of students under their advisory group. The Senior Faculty Advisor shall also offer guidance and help to solve the issues on academic and non-academic matters including personal issues of the students in their advisory group. Mandatory advisory meetings shall be convened: 1. Immediately after the commencement of the semester. 2. Immediately after announcing the marks of first internal evaluation test. The internal marks, activity points earned during the semester and eligibility of attendance shall be uploaded in the University portal only after displaying the same in the department notice board at least for two working days. This is for the information and feed back of the students. Any concerns raised by the students regarding attendance and internal marks and activity points shall be looked into in the combined meetings of advisors, course faculty and the concerned students. This meeting shall be mandatorily chaired by the Principal/ HoD. The principal/ HoD shall ensure the proper redressal of the concerns raised by the students regarding internal assessment and attendance. The FA/SFA shall be the custodian of the minutes and action taken reports of the advisory meetings.
R4.5	The SFA shall get the minutes and action taken reports of advisory meetings approved by the Head of Department and the Principal. It shall be the duty of the HoD and the Principal to produce it before the University as and when required.
R4.6	The FA/SFA shall keep a hard copy of the consolidated statement of attendance, activity points and internal marks of the students in their advisory group. It shall be kept with the HoD without fail for all sorts of inspections.

R4.7	Regular communication with the parents of students in respect of progress in academic matters and other general issues shall be the responsibility of the Senior Faculty Advisor.
R4.8	The Principal shall inform/forward all regulations, guide lines, communications, announcements etc issued by the University regarding student academic and other matters to the HoDs/ Senior Faculty Advisors for information and timely action.
R4.9	It shall be the official responsibility of the Principal to arrange necessary orientation programmes to the HoDs, SFAs and SAs regarding student counseling, the prevailing University norms, regulations, guidelines and procedures on all academic and other University related matters.
	5. Academic Auditing of affiliated institutions.
R5.1	There shall be academic auditing in each affiliated college at stipulated intervals. The academic auditing shall be conducted jointly by an Internal Quality Assurance Cell (IQAC) within the college and external academic auditor/auditors appointed by the University. The Internal Quality Assurance Cell (IQAC) in each college shall oversee and monitor all the academic activities including all internal evaluations and examinations. This cell shall prepare academic audit statements in the formats prescribed by the University for each semester at regular intervals. These reports shall be presented to the external academic auditor/ auditors, who shall use it as reference for independent auditing. The external auditors shall submit the final audit report to the University in the prescribed format. Academic auditing shall cover:- 1. Course delivery and adherence to the course plan, syllabus coverage, quality of question papers used for internal examinations, internal evaluation, maintenance of laboratory experimental set ups and equipments, practical assignments, mini projects and conduct of practical classes and their evaluation. 2. Co-curricular and Extra-curricular activities available for students, the monitoring mechanism of activity points to be earned by the students. 3. Academic functioning of the college encompassing students, faculty and college administration covering punctuality, attendance, discipline, academic, environment, learning

ecosystem, academic accountability, academic achievements and benchmarking.

6. Assessment

R6.1 There shall be End Semester Examinations (ESE) in every semester for all courses as prescribed under the respective curriculum, except for 1 & 2 semesters Lab/ workshops courses. The End Semester Examinations shall be conducted by the University. Semester classes shall be completed at least ten working days before the commencement of the End Semester Examination.

R6.2 The End Semester Examinations (ESE) shall be held twice in a year– May/Junesession (for even semesters) and November/ December session (for odd semesters). However, the End Semester Examinations of the VII and VIII Semesters shall be conducted in both the sessions.

R6.3 Candidates in each semester shall be evaluated both by Continuous Internal Evaluation (CIE) and End Semester Examinations (ESE). The ratio of Continuous Internal Evaluation (CIE) to End Semester Examinations (ESE) shall be as below :

1. Theory Courses : 1 : 2
2. Laboratory Courses : 1 : 1
3. Project : CIE only
4. Seminar : CIE only

R6.4 Continuous Internal Evaluation (CIE)): The Continuous Internal Evaluation shall be on the basis of the day-to-day work, periodic tests (minimum two in a semester) and assignments (minimum two). The faculty member (s) concerned shall carry out the Continuous Internal Evaluation (CIE) for the course allotted to him/ her. The CIE marks for individual subjects shall be computed by giving weightage to the following parameters unless otherwise specified in the curriculum.

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

a. Work assessed by the project guide – 30%

b. Three member Continuous Internal Evaluation Committee – 40% (Guide shall be one member in the CIE committee)

<table>
<tr><td></td><td>
<table>
<tr><td>Project work</td><td>c. Final Evaluation by a three member Committee comprising of the department project coordinator, guide and an external expert. The external expert shall be an academician or from industry. The industry expert is preferred : 30%
d. One third of the project credit shall be completed in VII semester and two third in VIII semester.
e. There shall be no separate minimum requirement for credit attainment.</td></tr>
<tr><td>Seminar</td><td>The report and the presentation shall be evaluated by a team of internal members comprising three senior faculty members based on the style of presentation, technical content, adequacy of reference, depth of knowledge and overall quality of the report.
a) Attendance : 10%
b) Guide : 20%
c) Quality of report : 30%
d) Presentation : 40%</td></tr>
</table>
The CIE marks for the attendance (20%) for each theory, practical and drawing shall be awarded in full, only if the candidate has secured 90% attendance or above in the subject. If a student has attendance for a subject below 90%, reduction in the marks for the attendance shall be made proportionally. The CIE marks obtained by the student for all subjects in a semester are to be published at least 5 days before the commencement of the University examinations.</td></tr>
<tr><td>R6.5</td><td>Students, who have completed a course but could not write the end semester examination, shall be awarded “F’ Grade, provided they meet other eligibility criteria (R6.6). They shall appear for the end semester examination at the next opportunity and earn the credits without having to register for the course again.</td></tr>
<tr><td>R6.6</td><td>The main eligibility criteria for registering to the End Semester Examination are attendance in the course and no pending disciplinary action. The minimum attendance for appearing for</td></tr>
</table>

	the End Semester Examination is 75% in each course. Students who do not meet these eligibility criteria are awarded an FE grade.
R6.7	The students with FE grade shall register for the courses during the normal semesters in which the courses are offered. However, for the seventh and eighth semester FE grade students can register for the courses in the next immediate chance, if offered by their institute.
R6.8	A student who does not register for all the courses listed in the curriculum for a semester shall not be eligible to enroll for the next higher semester.
R6.9	The maximum number of credits a student can register (course registration) for, in a semester is limited to 08 credits in excess of the total credits allotted in the curriculum for that semester.
R6.10	A student will be eligible for the award of B. Tech. Degree of the University on satisfying the following requirements: 1. Fulfilled all the curriculum requirements within the stipulated duration of the course. 2. Earned the required minimum credits as specified in the curriculum for the branch of study (R3.6 and R3.7). 3. No pending disciplinary action.
R6.11	Students registered for a course have to attend the course regularly and undergo the Continuous Internal Evaluation (CIE) and appear for the End Semester Examinations (ESE). Credits for the course are deemed to be earned only on getting a pass grade 'P' or better in the composite evaluation.
R6.12	Pass minimum for a course shall be 40% for the End Semester Examination and 50% of CIE and ESA put together. Letter grade 'F' will be awarded to the student for a course if either his/her mark for the End Semester Examination (ESE) is below 40 % or the overall mark [Continuous Internal Evaluation (CIE) + End Semester Examination (ESE)] is below 50 %.
R6.13	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.
R6.14	Continuous Internal Evaluation mark percentage shall not exceed 30% over the End Semester Examination mark %. CIE marks awarded to a student shall be normalised accordingly. For example

	if the end semester mark % is 40, then the maximum eligible CIE mark % is 40+30 = 70 %.)		
R6.15	Grading is based on the overall % marks obtained by the student in a course, as given in 6.16. 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).		
R6.16	Grade and Grade Points		
	Grades	Grade Point (GP)	% of Total Marks obtained in the course
	O	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)	0	Below 50% (CIE + ESE) or Below 40 % for ESE
	FE	0	Failed due to eligibility criteria (R6.6)
	Classification of Tech Degree.	First Class with Distinction First Class	CGPA 8.0 and above B. CGPA 6.5 and above
	Equivalent percentage mark shall be = 10 * CGPA		
R6.17	**Minimum Cumulative Credit Requirements for Registering to Higher Semesters**		
	Semester	**Allotted Credits**	**Cumulative Credits**	**Minimum Cumulative Credits required**
	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	24	129	Not Insisted
	Seventh	15	144	47 Credits from S1 to S4
	Eight	16	160	Not Insisted

R6.18	For the students admitted under lateral entry scheme, credits for the first and second semester courses are deemed to have been earned from the qualifying programme.
R6.19	There is no provision for improving the grade. However, the student is permitted to check the answer books of the End Semester Examination after the results are declared on payment of the prescribed fee. Any discrepancy in evaluation could be brought to the notice of the Controller of Examination, who shall initiate appropriate action as per the University Examination Manuel.
R.6.20	The students can apply for revaluation of the answer books of the end semester examination after the results are declared. The final mark awarded will be the better of the two marks. If the difference in marks obtained in revaluation and the original valuation is more than 15% of the maximum marks, it shall be sent for third valuation. The final mark shall then be the average of the closer of the two marks obtained in the three valuations to the advantage of the student or the mark obtained in the original valuation whichever is higher. The Controller of Examination shall examine such cases and conduct proper enquiry to see whether any of the examiners is responsible for negligent valuation of answer script and initiate suitable action as per the University Examination Manuel. The answer scripts already valued by two examiners shall not be re-valued again.
R6.21	Grade cards shall be made available in the student login for the registered courses, in every semester by the University. On earning the required credits for the degree, the University will issue the final consolidated grade sheet for the B. Tech program including CGPA.
R6.22	**Calculation of SGPA/CGPA**
	Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are calculated as follows. SGPA = Ó(Ci×GPi)/ÓCi , where 'Ci' is the credit assigned for a course and 'GPi' is the grade point for that course. Summation is done for all courses specified in the curriculum of that semester. The failed and incomplete courses shall also be considered in the calculation. CGPA = Ó(Ci×GPi)/ÓCi , where 'Ci' is the credit assigned for a course and 'GPi' 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. Here the failed courses shall also be accounted. CGPA of all courses passed may also be given. 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.

	For students admitted under lateral entry scheme, credits for the first and second semester courses shall not be accounted for the calculation of CGPA. Equivalent percentage mark shall be = 10 * CGPA
R6.23	Any act of violation of University directions, indiscipline, misbehavior, or unfair practice in examinations from the part of students, faculty members, staff, institution, management or any other source shall be viewed very seriously. It is the legal responsibility of the principal and the college management to see that the examinations are conducted strictly as per the directions of the University. Malpractices in examinations observed or reported by an official employed by the University, faculty member, invigilator or anybody shall be immediately reported to the Principal. The principal shall in turn conduct a preliminary enquiry giving the concerned student a chance to explain his/her case. The Principal shall then forward the case with his/her preliminary enquiry report and remarks to the Controller of Examinations along with all related documents and evidences within two working days. The Controller of examination shall decide the course of action on the issue as per the prescribed norms in the University Examination Manuel.
R6.24	A student shall earn 2 credits by actively involving in co – curricular and extra curricular activities as per the guidelines issued by the University from time to time. On getting minimum 100 activity points the student passes the course and earns the two credits which shall not be counted for the calculation of CGPA but mandatory for the award of the Degree. For the students admitted under lateral entry scheme the 2 credits shall be considered to be earned on getting 75 activity points. The students are required to keep a file containing documentary proofs of activities done by him/her attested by the Senior Faculty Advisor/ Faculty Advisor.
	7. Break of Study
R7.1	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. 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 treated him. 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 college 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. Students who require a break in study due to personal reasons shall convince the Principal on the genuine need for it by giving authentic evidence for the same. Students who require break in study for 'internship leading to employment' shall produce the offer letter obtained from the concerned employer. The principal shall verify the authenticity of the offer and submit his recommendation to the University sufficiently in advance for approval. Only campus placed students with an annual compensation more than 6 lakhs are eligible to avail this facility. In the semester system followed by the University, break of study for an academic year is the preferred option than break of study for a semester. The student can avail the break of study only with the prior approval of the University. The Principal shall upload the request of the student with all relevant documents to the University portal for the approval with his/her recommendations. Students shall have to rejoin on the first working day of the same semester on which he/she had started availing the break of study.
	8.Attendance
R8.1	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.

	On medical ground the college Principal can relax the minimum attendance requirement to 60%, to write the end semester examination. This is permitted for one or more courses registered in the semester. Principal shall keep all records which led to his decision on attendance, for verification by the Academic Auditors/ University officials. This provision is applicable only to any two semesters during the entire program period. In case of prolonged illness, break of study is permitted as per R7.1.
R8.2	The Principals are authoriesd to grant attendance relaxation to the students representing the University in officially sponsored national level competitions/championships/ tournaments when called upon to do so, up to a maximum of 10%. In this case 65% of attendance is mandatory for registering to the end semester examination for a course. Such students should produce the participation certificate countersigned by the University Sports Coordinator/ the 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 any circumstances, the principal shall not consider the certificate if the overall attendance of the candidate is less than 65%. Late applications received shall not be considered on any account. The student shall get official prior permission from the University for representing the University.
9.Inter College Transfer	
R9.1	Inter college transfer shall be applicable only for regular B.Tech students.
R9.2	The transfer shall be permitted just before the commencement of third semester.
R9.3	The transfer shall be with effect from the first working day of the third semester.
R9.4	The transfer shall be only within the sanctioned strength of the receiving college.
R9.5	The following Category of students shall not be eligible for inter college transfer 1. Govt. of India Nominee.

	2. Management Quota in Aided colleges. 3. Management Quota in private Self Financing Colleges 4. Students admitted under NRI/PIO quota. 5. Lateral Entry students. 6. Students admitted under TFW Scheme. 7. Students admitted in any supernumerary seats. 8. Any other category which are ineligible as per the conditions for admission prescribed by Govt. of Kerala/Govt. of India.
R9.6	The transfer shall be permitted : 1. Between Govt/ Govt. Aided Colleges. 2. Between Self – Financing Colleges. (Including Govt. Controlled SFC).
R9.7	Notification inviting application for inter college transfer shall be issued by the University just before the commencement of the third semester.
R9.8	The candidate should fulfill the academic eligibility requirement for promotion to the third semester.
R9.9	If the number of applicants is more than the vacant seats available, the transfer may be based on the Kerala Engineering Entrance Rank.
R9.10	The students shall opt only one college for inter college transfer.
R9.11	The selected candidates shall remit a fee of Rs 3000/- (No fee for SC/ST students)within the stipulated date to the University. However, this rule is not applicable to the students transferred to other institutes under “Shift College” University order.
R9.12	The College transfer once approved by the receiving college will be final and binding on the applicant. No student will be permitted, under any circumstances, to refuse the change of college once offered.
10. Migration from other Universities	
R10.1	Migration to the University from other Universities shall be permitted only if the parent University and the APJ Abdul Kalam Technological University enters into a bipartite agreement/ MoU for this purpose. However, this condition is not applicable to the students in any of the Engineering colleges/ institutions, which, before the commencement of KTU Act remained affiliated to Universities except Deemed to be Universities in the State of Kerala.

R10.2	The student shall be permitted to migrate only if he/she fulfills the University eligibility criteria for admission to the course applied for migration.
R10.3	The migration shall be permitted only up to the fifth semester of the B. Tech program and half the duration of the program in the case of other programs.
R10.4	The admission shall be offered on migration basis through lateral transfer of credits. Lateral credit transfer shall be as recommended by the concerned Board of Studies.
R10.5	The students shall be allowed to migrate to the University subject to satisfying the rules and regulations of the University as regards to, maximum number of backlogs, grade points, minimum credit requirement for promotion to higher semesters, etc.
R10.6	The student shall be offered admission in any of the affiliated colleges/institutions of the University subject to availability of seats. The student shall produce no objection certificate from the concerned college/institute in this regard.
R10.7	The students offered admission shall have to take transitory courses/ additional courses of the previous semesters to satisfy the program requirement as recommended by the concerned board of studies.
R10.8	The students offered admission shall pay the migration fees and the University fees as prescribed by the University. The application processing fee (University fee) shall be Rs 5000/- (Rupees five thousand only) and the migration fees shall be Rs 20000/-(Rupees twenty thousand only). The migration fee is charged for the meeting expenses of the concerned Board of studies to decide on the student suitability for migration and to recommend the transitory courses/ additional courses to be done by the student to fulfill the academic requirement of the University. The processing fee shall be paid along with the application, and the migration fee shall be paid to the University at the time of offering admission. The fee once paid shall not be refunded under any circumstances. The students in any of the Engineering colleges / institutions, which, before the commencement of KTU Act remained affiliated to Universities except Deemed to be Universities in the State of Kerala, are exempted from paying the processing fee and the migration fee.

R10.9	The migrated students shall follow the rules and regulations of the University.
R10.10	The students offered admission shall produce a migration certificate from the parent University at the time of admission.
R10.11	The student offered admission shall produce a character certificate from the parent institute/University at the time of admission.
R10.12	Regulations, Scheme and Syllabus of the respective specialization attested by the Registrar of the parent University or equivalent authority shall be submitted to the University along with the application seeking migration to the University.
R10.13	Attested copies of all certificates and mark lists from 10th onwards shall be submitted along with the application for migration (Original certificates and mark lists shall be produced as and when required by the University).
R10.14	Assessment of the student suitability for migration in terms of programs, backlogs, grade points, credit requirements, etc shall be done by the concerned Board of Studies.
R10.15	Assessment of the transitory courses/ additional courses to be done by the student as per the academic requirement of the University shall be as recommended by the concerned Board of Studies.
11. Minor in Engineering.	
R11.1	All B. Tech students shall be eligible to register for Minor in Engineering.
R11.2	The Minor in Engineering registration shall be along with the registration of the 3rd semester.
R11.3	If a student fails in any course of the minor, he/she shall not be eligible to continue the B.Tech (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.
R11.4	The student shall earn additional 20 credits to be eligible for the award of B. Tech Degree with Minor. R11.5 Out of the 20 Credits, 12 credits shall be earned by undergoing a minimum of four courses, during the specified period. The total number of contact

	hours for these four courses shall be 168 Hrs (42Hrs/course). The duration of a course shall be minimum 14 weeks. The remaining 8 credits could be acquired through MOOCs recommended by the Board of studies and approved by the Academic Council.
R11.6	Curriculum and the syllabus of the four courses shall be approved by the Board of studies and the Academic Council.
R11.7	The assessment of the courses other than MOOCs and earning of credits shall be as per R6.1 to R6.24. 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.
R11.8	Under graduate Degree with minor shall be issued by the University to the students who fulfill all the academic eligibility requirements for the B. Tech program and Minor in Engineering.

12. B. Tech (Honours)

R12.1	All B. Tech students are eligible to register B.Tech (Honours). However, their CGPA at the end of eighth semesters shall be 8.5 or higher to be eligible for the award of B. Tech (Honours).
R12.2	The B. Tech (Honours) registration shall be along with the registration of the 4th semester.
R12.3	If a student fails in any course including the course chosen for B. Tech (Honours), he/she shall not be eligible to continue the B.Tech(Honours). 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.
R12.4	The student shall earn additional 20 credits to be eligible for the award of B. Tech (Honours) Degree.
R12.5	Out of the 20 Credits, 12 credits shall be earned by undergoing minimum four specified B. Tech (Honours) Elective courses of the respective stream. A student shall not be permitted to select the normal elective courses of the respective B. Tech programs for attaining the credit requirements of B. Tech (Honours). The remaining 8 credits could be acquired through MOOCs of the respective streams recommended by the Board of studies and approved by the Academic Council.

R12.6	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.
R12.7	The institutions offering B. Tech Honours programs shall not charge any additional fee from the students.
R12.8	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) programs.
	13. Grace Marks for Sports /Arts Competitions.
R13.1	Only bona-fide, regular candidates are eligible for the award of Grace Marks.
R13.2	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.
R13.3	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 University conducts End Semester Examinations.
R13.4	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 aggregate marks of End Semester Examination of the course.
R13.5	The Grace Marks shall not be awarded to a student for Practical/ Lab/ Viva Voce/ internal assessment/ Seminar etc even though she/he fails for the same.
R13.6	Eligible Grace Marks shall be distributed equally on all theory papers/courses of an examination.
R13.7	The Grace Marks shall be awarded for all theory papers/courses/ subjects in a semester.
R13.8	Re – distribution of Grace Marks shall be allowed only in the case of those courses of an examination for which the candidate have 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.
R13.9	Re- distribution shall be done only for enabling a candidate to obtain the minimum marks required for a pass.
R13.10	Grace Marks shall not be re – distributed from one semester to another semester.
R13.11	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.
R13.12	Eligible Grace Marks shall be awarded for the regular examination of the performing semester only. Grace Marks shall not be awarded for supplementary examinations.
R13.13	The performing semester shall be considered from 1st July to 31st December (Odd semester) and 1st January to 30th June (Even Semester).
R13.14	Grace Marks shall be awarded on the basis of performance in the respective semester.
R13.15	The request for Grace Marks shall be submitted to the Controller of Examinations through the principal along with all relevant documents, within the time limit prescribed by the University. The request for Grace Marks received after the time limit shall not be entertained on any account.
R13.16	Only a single highest achievement during the period of a semester shall be considered for awarding the grace marks.
14.Grace Marks for Persons With Disability (PWD)	
R14.1	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.
R14.2	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.

R14.3	Transfer of marks from one paper 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.
R14.4	PWD candidates who are eligible for Grace Marks shall be awarded Grace Marks for regular and supplementary chances until they pass the whole examination.
R14.5	Grace Marks shall be awarded only for the marks of the End Semester Examinations conducted by the University.
R14.6	The request for Grace Marks shall be submitted to the Controller of Examinations through the principal along with all relevant documents, within the time limit prescribed by the University. The request for Grace Marks received after the time limit shall not be entertained on any account.
	16. Transitory provision.
16.1	Notwithstanding anything contained in these regulations, the Vice-Chancellor shall, for a period of two years from the date of coming into force of these regulations, has the power to provide by order that these Regulations shall be applied to any B. Tech program with such modifications as may be necessary.

CURRICULUM TEMPLATE FROM SEMESTERS I TO VIII

Every course of B. Tech. Program shall be placed in one of the nine categories as listed in table below.

Sl. No	Category	Code	Credits
1	Humanities and Social Sciences including Management courses	HMC	10
2	Basic Science courses	BSC	26
3	Engineering Science Courses	ESC	20
4	Program Core Courses	PCC	66
5	Program Elective Courses	PEC	19
6	Open Elective Courses	OEC	9
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**	
10	Value Added Course (Optional)	VAC	20

No semester shall have more than six lecture-based courses and two laboratory and/or drawing/seminar/project courses in the curriculum. Semester-wise credit distribution shall be as below:

Sem	1	2	3	4	5	6	7	8	Total
Credits	17	21	22	22	23	24	15	16	160
Activity Points	25		25		25		25		100
MSA	2								2
G.Total									162

Basic Science Courses: Maths, Physics, Chemistry, Biology for Engineers, Life Science etc

Engineering science courses: Basic Electrical, Engineering Graphics, Programming, Workshop, Basic Electronics, Basic Civil, Engineering Mechanics, Mechanical Engineering, Thermodynamics, Introduction to —— Engineering, Design Engineering, Materials Engineering etc.

Humanities and Social Sciences including Management courses: English, Humanities, Professional Ethics, Management-I, (Organizational Behaviour)/ Finance & Accounting, Economics etc

Mandatory non-credit courses: Environmental Science, Constitution of India/ Essence of Indian Knowledge Tradition, Industrial Safety Engineering, disaster management etc.

Scheme 2019

BRANCH : Electrical & Electronics Engineering
SEMESTER - 3

Slot	Course No	Name of the Course	L-T-P	Hourse	Credit
A	MAT 201	Partial Differential Equation and Complex Analysis	3-1-0	4	4
B	EET 201	Circuits and Networks	2-2-0	4	4
C	EET 203	Measurements and Instrumentation	3-1-0	4	4
E	EET 205	Analog Electronics	3-1-0	4	4
E	EST 200	Design and Engineering	2-0-0	2	2
1/2	HUT 200	Professional Ethics	2-0-0	2	2
F	MCN 201	Sustainable Engineering	2-0-0	2	
S	EEL 201	Circuits and Measurements Lab	0-0-3	3	2
T	EEL 203	Analog Electronics Lab	0-0-3	3	2
R/M	VAC	Remedial / Minor course	3-1-0	4	4
		Total credits		**26/30**	**22/26**

Minors	Course No.	Name of the course
Basket 1	EET 281	Electric circuits
Basket 2	EET 283	Introduction toPower Engineering
Basket 3	EET 285	Dynamic Circuits and Systems

SEMESTER - 4

Slot	Course No.	Name of the course	L-T-P	Hours	Credits
A	MAT 204	Probability, Random Process and Numerical Methods	3-1-0	4	4
B	EET 202	DC Machines and Transformers	2-2-0	4	4
C	EET 204	Electromagnetic Theory	3-1-0	4	4
E	EET 206	Digital Electronics	3-1-0	4	4
E	EST 200	Design and Engineering	2-0-0	2	2
1/2	HUT 200	Professional Ethics	2-0-0	2	2
F	MCN 202	Constitution of India	2-0-0	2	
S	EEL 202	Electrical Machines Lab I	0-0-3	3	2
T	EEL 204	Digital Electronics Lab	0-0-3	3	2
R/M	VAC	Remedial / Minor course / Honours Course	3-1-0	4	4
Total credits				**26/30**	**22/26**

Minors	Course No.	Name of the course
Basket 1	EET 282	Electrical Machines
Basket 2	EET 284	Energy Systems
Basket 3	EET 286	Principles of Instrumentation

Honours	Course No.	Name of the course
Basket 1	EET 292	Network Analysis and Synthesis
Basket 2	EET 292	Network Analysis and Synthesis
Basket 3	EET 292	Network Analysis and Synthesis

BRANCH : Electronics and Communication Engineering

SEMESTER - 3

Slot	Course No.	Name of the course	L-T-P	Hours	Credits
A	MAT 201	Partial Differential Equation and Complex Analysis	3-1-0	4	4
B	ECT 201	Solid State Devices	3-1-0	4	4
C	ECT 203	Logic Circuit Design	3-1-0	4	4
E	ECT 205	Network Theory	3-1-0	4	4
E	EST 200	Design and Engineering	2-0-0	2	2
1/2	HUT 200	Professional Ethics	2-0-0	2	2
F	MCN 201	Sustainable Engineering	2-0-0	2	
S	ECL 201	Scientific Computing Lab	0-0-3	3	2
T	ECL 203	Logic Design Lab	0-0-3	3	2
R/M	VAC	Remedial / Minor course	3-1-0	4	4
Total credits				**26/30**	**22/26**

Minors	Course No.	Name of the course
Basket 1	ECT 281	Electronics circuits
Basket 2	ECT 283	Analog Communication
Basket 3	ECT 285	Introduction to Signals and Systems

SEMESTER - 4

Slot	Course No.	Name of the course	L-T-P	Hours	Credits
A	MAT 204	Probability, Random Process and Numerical Methods	3-1-0	4	4
B	ECT 202	Analog Circuits	3-1-0	4	4
C	ECT 204	Signals and Systems	3-1-0	4	4
E	ECT 206	Computer Architecture and Microcontrollers	3-1-0	4	4
E	EST 200	Design and Engineering	2-0-0	2	2
1/2	HUT 200	Professional Ethics	2-0-0	2	2
F	MCN 202	Constitution of India	2-0-0	2	
S	ECL 202	Analog Circuits and Simulation Lab	0-0-3	3	2
T	ECL 204	Microcontroller Lab	0-0-3	3	2
R/M	VAC	Remedial / Minor course / Honours Course	3-1-0	4	4
Total credits				**26/30**	**22/26**

Minors	Course No.	Name of the course
Basket 1	ECT 282	Microcontrollers
Basket 2	ECT 284	Digital Communication
Basket 3	ECT 286	Introduction to Digital Signal Processing

Honours	Course No.	Name of the course
Basket 1	ECT 292	Nanoelectronics
Basket 2	ECT 294	Stochastic Processes for Communication
Basket 3	ECT 296	Stochastic Signal Processing

BRANCH : Mechanical Engineering

SEMESTER - 3

Slot	Course No.	Name of the course	L-T-P	Hours	Credits
A	MAT201	PARTIAL DIFFERENTIAL EQUATION AND COMPLEX ANALYSIS	3-1-0	4	4
B	MET201	MECHANICS OF SOLIDS	3-1-0	4	4
C	MET203	MECHANICS OF FLUIDS	3-1-0	4	4
D	MET205	METALLURGY & MATERIAL SCIENCE	3-1-0	4	4
E	EST200	DESIGN AND ENGINEERING	2-0-0	2	2
1/2	HUT200	PROFESSIONAL ETHICS	2-0-0	2	2
F	MCN201	SUSTAINABLE ENGINEERING	2-0-0	2	-
S	MEL201	COMPUTER AIDED MACHINE DRAWING	0-0-3	3	2
T	MEL203	MATERIALS TESTING LAB	0-0-3	3	2
R/M	VAC	REMEDIAL/MINOR COURSE	3-1-0	4	4
Total credits				**26/30**	**22/26**

Minors	Course No.	Name of the course
Basket 1	MET281	MECHANICS OF MATERIALS
Basket	MET283	FLUID MECHANICS & MACHINERY
Basket 3	MET285	MATERIAL SCIENCE & TECHNOLOGY

SEMESTER - 4

Slot	Course No.	Name of the course	L-T-P	Hours	Credits
A	MAT202	PROBABILITY,STATISTICS			
		AND NUMERICALMETHODS	3-1-0	4	4
B	MET202	ENGINEERINGTHERMO			
		DYNAMICS	3-1-0	4	4
C	MET204	MANUFACTURINGPROCESS	3-1-0	4	4
D	MET206	FLUID MACHINERY	3-1-0	4	4
E	EST200	DESIGNAND ENGINEERING	2-0-0	2	2
1/2	HUT200	PROFESSIONAL ETHICS	2-0-0	2	2
F	MCN202	CONSTITUTION OF INDIA	2-0-0	2	-
S	MEL202	FM & HM LAB	0-0-3	3	2
T	MEL204	MACHINE TOOLS LAB-I	0-0-3	3	2
R/M/H	VAC	REMEDIAL/MINOR/HONORS COURSE	3-1-0	4	4
Total credits				**26/30**	**22/26**

Minors	Course No.	Name of the course
Basket 1	MET282	THEORY OF MACHINES
Basket 2	MET284	THERMODYNAMICS
Basket 3	MET286	MANUFACTURING TECHNOLOGY

Honours	Course No.	Name of the course
Basket 1	MET292	CONTINUUM MECHANICS
Basket 2	MET294	ADVANCED MECHANICS OF FLUIDS
Basket 3	MET296	MATERIALS IN MANUFACTURING

BRANCH : Civil Engineering

SEMESTER - 3

Slot	Course No.	Name of the course	L-T-P	Hours	Credits
A	MAT201	Partial Differential Equation and Complex Analysis	3-1-0	4	4
B	CET201	Mechanics of Solids	3-1-0	4	4
C	CET203	Fluid Mechanics & Hydraulics	3-1-0	4	4
E	CET205	Surveying & Geomatics	4-0-0	4	4
E	EST200	Design & Engineering	2-0-0	2	2
1/2	HUT200	Professional Ethics	2-0-0	2	2
F	MCN201	Sustainable Engineering	2-0-0	2	—
S	CEL201	Civil Engineering Planning & Drafting Lab	0-0-3	3	2
T	CEL203	Survey Lab	0-0-3	3	2
R/M	VAC	Remedial / Minor course	3-1-0	4	4
Total credits				**26/30**	**22/26**

Minors	Course No.	Name of the course
Basket 1	CET 281	Building Construction & Structural Systems
Basket 2	CET 283	Introduction to Geotechnical Engineering
Basket 3	CET 285	Informatics for Infrastructure Management

SEMESTER - 4

Slot	Course No.	Name of the course	L-T-P	Hours	Credits
A	MAT202	Probability, Statistics and Numerical Methods	3-1-0	4	4
B	CET202	Engineering Geology	3-0-1	4	4
C	CET204	Geotechnical Engineering - I	4-0-0	4	4
D	CET206	Transportation Engineering	4-0-0	4	4
E	EST200	Design and Engineering	2-0-0	2	2
1/2	HUT200	Professional Ethics	2-0-0	2	2
F	MCN202	Constitution of India	2-0-0	2	—
S	CEL202	Material Testing Lab - I	0-0-3	3	2
T	CEL204	Fluid Mechanics Lab	0-0-3	3	2
R/M/H	VAC	Remedial / Minor course / Honours Course	3-1-0	4	4
Total credits				**26/30**	**22/26**

Minors	Course No.	Name of the course
Basket 1	CET 282	Building Drawing
Basket 2	CET 284	Introduction to Transportation Engineering
Basket 3	CET 286	Climate Change & Hazard Mitigation

Honours	Course No.	Name of the course
Basket 1	CET292	Advanced Mechanics of Solids
Basket 2	CET294	Pavement Construction and Management
Basket 3	CET296	Geographical Information Systems

BRANCH : Computer Science and Engineering

SEMESTER - 3

SLOT	COURSE NO.	COURSES	L-T-P	HOURS	CREDIT
A	MAT 203	DISCRETE MATHEMATICAL STRUCTURES	3-1-0	4	4
B	CST 201	DATA STRUCTURES	3-1-0	4	4
C	CST 203	LOGIC SYSTEM DESIGN	3-1-0	4	4
D	CST 205	OBJECTORIENTED PROGRAMMING USING JAVA	3-1-0	4	4
E	EST 200	DESIGN & ENGINEERING	2-0-0	2	2
(1/2)	HUT 200	PROFESSIONAL ETHICS	2-0-0	2	2
F	MNC 201	SUSTAINABLE ENGINEERING	2-0-0	2	—
S	CSL 201	DATASTRUCTURES LAB	0-0-3	3	2
T	CSL 203	OBJECTORIENTED PROGRAMMING LAB (IN JAVA)	0-0-3	3	2
R/M	VAC	Remedial/Minor course	3-1-0	4	4
		TOTAL		26*	22/26

* Excluding Hours to be engaged for Remedial/Minor course.

SEMESTER - 4

SLOT	COURSE NO.	COURSES	L-T-P	HOURS	CREDIT
A	MAT 206	GRAPH THEORY	3-1-0	4	4
B	CST 202	C OMPUTER ORGANISATIONAND ARCHITECTURE	3-1-0	4	4
C	CST 204	DATABASE MANAGEMENT SYSTEMS	3-1-0	4	4
D	CST 206	OPERATING SYSTEMS	3-1-0	4	4
E	EST 200	DESIGN & ENGINEERING	2-0-0	2	2
(1/2)	HUT 200	PROFESSIONAL ETHICS	2-0-0	2	2
F	MNC 202	CONSTITUTION OF INDIA	2-0-0	2	—
S	CSL 202	DIGITAL LAB	0-0-3	3	2
T	CSL204	OPERATING SYSTEMS LAB	0-0-3	3	2
R/M/ H	VAC	Remedial/Minor/ Honors course	3-1-0	4	4
	TOTAL			**26***	**22/26**

* Excluding Hours to be engaged for Remedial/Minor/Honors course.

MINOR

Minor is an additional credential a student may earn if s/he does 20 credits worth of additional learning in a discipline other than her/his major discipline of B.Tech degree. The objective is to permit a student to customize their Engineering degree to suit their specific interests. Upon completion of an Engineering Minor, a student will be better equipped to perform interdisciplinary research and will be better employable. Engineering Minors allow a student to gain interdisciplinary experience and exposure to concepts and perspectives that may not be a part of their major degree programs.

The academic units offering minors in their discipline will prescribe the set of courses and/or other activities like projects necessary for earning a minor in that discipline. A specialist basket of 3-6 courses is identified for each Minor. Each basket may rest on one or more foundation courses. A basket may have sequences within it, i.e., advanced courses may rest on basic courses in the basket. S/he accumulates credits by registering for the required courses, and if the requirements for a particular minor are met within the time limit for the course, the minor will be awarded. This will be mentioned in the Degree Certificate as "Bachelor of Technology in xxx with Minor in yyy". The fact will also be reflected in the consolidated grade card, along with the list of courses taken. If one specified course cannot be earned during the course of the programme, that minor will not be awarded. The individual course credits earned, however, will be reflected in the consolidated grade card.

i. The curriculum/syllabus committee/BoS shall prepare syllabus for courses to be included in the curriculum from third to eight semesters for all branches. The minor courses shall be identified by M slot courses.

ii. Registration is permitted for Minor at the beginning of third semester. Total credits required is 182 (162 + 20 credits from value added courses)

iii. Out of the 20 Credits, 12 credits shall be earned by undergoing a minimum of three courses listed in the curriculum for minor, of which one course shall be a mini project based on the chosen area. They can do miniproject either in S7 or in S8. The remaining 8 credits could be acquired by undergoing 2 MOOCs recommended by the Board of studies and approved by the Academic Council or through courses listed in the curriculum. The classes for Minor shall be conducted along with regular classes and no extra time shall be required for conducting the courses.

iv. There won't be any supplementary examination for the courses chosen for Minor.

v. On completion of the program, “Bachelor of Technology in xxx with Minor in yyy” will be awarded.

vi. The registration for minor program will commence from semester 3 and the all academic units offering minors in their discipline should prescribe set of such courses. The courses shall be grouped into maximum of 3 baskets. The basket of courses may have sequences within it, i.e., advanced courses may rest on basic courses in the basket. Reshuffling of courses between various baskets will not be allowed. In any case, they should carry out a mini project based on the chosen area in S7 or S8. For example, students who have registered for B.Tech Minor in ELECTRONICS AND COMMUNICATION can opt to study the courses listed below:

Semester	Basket I				Basket II				Basket III			
	Course No:	Course name	Hours	Credits	Course No:	Course name	Hours	Credits	Course No:	Course name	Hours	Credits
S3	ECT 281	Electronics Circuits	4	4	ECT 283	Analog Communication	4	4	ECT 285	Introduction to Signals and Systems	4	4
S4	ECT 282	Micro controllers	4	4	ECT 284	Digital Communication	4	4	ECT 286	Introduction to Digital Signal Processing	4	4
S5	ECT 381	Embeded System Design	4	4	ECT 383	Communication Systems	4	4	ECT 385	Topics in Digital Image Processing	4	4
S6	ECT 382	VLSI Circuits	4	4	ECT 384	Data Networks	4	4	ECT 386	Topics in Computer Vision	4	4
S7	ECD 481	Miniproject	4	4	ECD 481	Miniproject	4	4	ECD 481	Miniproject	4	4
S8	ECD 482	Miniproject	4	4	ECD 482	Miniproject	4	4	ECD 482	Miniproject	4	4

HONOURS

Honours is an additional credential a student may earn if s/he opts for the extra 20 credits needed for this in her/his own discipline. Honours is not indicative of class. KTU is providing this option for academically extra brilliant students to acquire Honours. Honours is intended for a student to gain expertise/specialise in an area inside his/her major B.Tech discipline and to enrich knowledge in emerging/advanced areas in the branch of engineering concerned. It is particularly suited for students aiming to pursue higher studies. Upon completion of Honours, a student will be better equipped to perform research in her/his branch of engineering. On successful accumulation of credits at the end of the programme, this will be mentioned in the Degree Certificate as "Bachelor of Technology in xxx, with Honours." The fact will also be reflected in the consolidated grade card, along with the list of courses taken. If one specified course cannot be earned during the course of the programme, Honours will not be awarded. The individual course credits earned, however, will be reflected in the consolidated grade card. The courses shall be grouped into maximum of 3 groups, each group representing a particular specialization in the branch. The students shall select only the courses from same group in all semesters. It means that the specialization is to be fixed by the student and cannot be changed subsequently. The internal evaluation, examination and grading shall be exactly as for other mandatory courses. The Honours courses shall be identified by H slot courses.

i. The curriculum/syllabus committee/BoS shall prepare syllabus for courses to be included in the curriculum from fourth to eight semesters for all branches. The honours courses shall be identified by H slot courses.

ii. Registration is permitted for Honours at the beginning of fourth semester. Total credits required is 182 (162 + 20 credits from value added courses).

iii. Out of the 20 Credits, 12 credits shall be earned by undergoing a minimum of three courses listed in the curriculum for honours, of which one course shall be a mini project based on the chosen area. The remaining 8 credits could be acquired by undergoing 2 MOOCs recommended by the Board of studies and approved by the Academic Council or through courses listed in the curriculum. The classes for Honours shall be conducted along with regular classes and no extra time shall be required for conducting the courses. The students should earn a grade of 'C' or better for all courses under honours.

iv. There won't be any supplementary examination for the courses chosen for honours.

v. On successful accumulation of credits at the end of the programme, "Bachelor of Technology in xxx, with Honours" will be awarded if overall CGPA is greater than or equal to 8.5, earned a grade of 'C' or

better for all courses chosen for honours and without any history of 'F' Grade.

vi. The registration for Honours program will commence from semester 4 and the all academic units offering honours in their discipline should prescribe set of such courses. The courses shall be grouped into maximum of 3 groups, each group representing a particular specialization in the branch. The students shall select only the courses from same group in all semesters. It means that the specialization is to be fixed by the student and cannot be changed subsequently. In any case, they should carry out a mini project based on the chosen area in S8. For example, students who have registered for B.Tech Honours in ELECTRONICS AND COMMUNICATION ENGINEERING can opt to study the courses listed below:

Semester	Group I				Group II				Group III			
	Course No:	Course name	Hours	Credits	Course No:	Course name	Hours	Credits	Course No:	Course name	Hours	Credits
S4	ECT 292	Nano Electronics	4	4	ECT 294	Stochastic Processes for Communication	4	4	ECT 296	Stochastic Signal Processing	4	4
S5	ECT 393	FPGA based System Design	4	4	ECT 395	Detection and Estimation Theory	4	4	ECT 397	Computational Tools for Signal Processing	4	4
S6	ECT 394	Electronic Design and Automation Tools	4	4	ECT 396	MIMO and Multiuser Communication Systems	4	4	ECT 398	Detection and Estimation Theory	4	4
S7	ECT 495	RF MEMS	4	4	ECT 497	Design and Analysis of Antennas	4	4	ECT 499	Multi rate Signal Processing and Wavelets	4	4
S8	ECD 496	Miniproject	4	4	ECD 496	Miniproject	4	4	ECD 482	Miniproject	4	4

CLASSIFICATION

After successful completion of the programme, degree will be awarded as per the following classifications based on the CGPA.

a) Students who complete all the courses in the first attempt and in four years and complete the requirements (additional 20 credits) with CGPA of 8.5 and above shall be awarded B.Tech (Honours) degree.

b) Students who complete the programme within ten consecutive semesters getting a CGPA of 8.5 and above, will be declared to have passed in first class with distinction.

c) Students who complete all the courses in the first attempt and in four years and complete the requirements (additional 20 credits) above with CGPA of 6.5(?) and above shall be awarded B.Tech (Minor) degree.

d) Students who get a CGPA of 6.5 and above, but below 8.5 and who complete the course within 12 semesters will be declared to have passed in first class.

ONLINE COURSES

KTU permits credit transfer upto a maximum of 8 through ONLINE Courses. The MOOC courses can be opted by students for Minor and Honours Program.

ONLINE EXAMINATION

Online examination can be conducted for first and second semester lab exams, comprehensive exam, Life skills, Professional Communication, Basics of Civil & Mech, Basics of Electrical & Electronics.

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Academic Calendar June 2020 – January 2021

Day		Jun - 20		Jul - 20		Aug - 20
Mon	1					
Tue	2					
Wed	3		1			
Thu	4		2			
Fri	5		3			
Sat	6		4		1	
Sun	7		5		2	
Mon	8		6		3	Commencement of class and registration
Tue	9		7		4	
Wed	10		8		5	
Thu	11		9		6	
Fri	12		10		7	
Sat	13		11		8	
Sun	14		12		9	
Mon	15		13		10	
Tue	16		14		11	
Wed	17		15		12	
Thu	18		16		13	
Fri	19		17		14	
Sat	20		18		15	Independence Day
Sun	21		19		16	
Mon	22		20	Karkadaka Vavu	17	Commencement of class and registration
Tue	23		21		18	
Wed	24		22		19	
Thu	25		23		20	
Fri	26		24		21	
Sat	27		25		22	
Sun	28		26		23	
Mon	29		27		24	
Tue	30		28		25	
Wed			29		26	Course selection registration and mapping begins
Thu			30		27	
Fri			31	Bakrid	28	Birthday of Ayyankali Onam vocation begins
Sat					29	Muhharram
Sun					30	First Onam
Mon					31	Thiruvonam

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Academic Calendar June 2020 – January 2021

Day		Sep - 20		Oct - 20		Nov - 20
Tue	1	Third Onam				
Wed	2	Fourth Onam / Sree Narayana Guru Jayanthi				
Thu	3		1			
Fri	4		2	Gandhi Jayanthi		
Sat	5		3			
Sun	6	Onam Vacation ends	4		1	
Mon	7		5		2	
Tue	8		6		3	
Wed	9		7		4	
Thu	10	Sreekrishna Jayanthi	8		5	
Fri	11		9		6	
Sat	12		10		7	
Sun	13		11		8	
Mon	14		12	Exam registration begins	9	
Tue	15		13		10	
Wed	16	Course selection registration and mapping ends	14		11	
Thu	17		15	Test 1 to be completed	12	
Fri	18		16		13	
Sat	19		17	Sports meet (College level) to be completed)	14	Deepavali
Sun	20		18		15	
Mon	21	Sree Narayana Guru Samadhi	19		16	
Tue	22		20		17	
Wed	23		21		18	
Thu	24		22		19	
Fri	25		23	Exam registration ends	20	
Sat	26		24	Mahanavami	21	Sports meet (Zonal level) to be completed
Sun	27		25		22	
Mon	28		26	Vijayadasami	23	
Tue	29		27		24	
Wed	30		28		25	
Thu			29	Milad - i - sherif	26	
Fri			30		27	
Sat			31		28	
Sun					29	
Mon					30	Test 2 to be completed

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Academic Calendar June 2020 – January 2021

Day		Jun - 20		Jul - 20
Tue	1			
Wed	2			
Thu	3			
Fri	4		1	
Sat	5		2	Mannam Jayanthi
Sun	6		3	
Mon	7		4	
Tue	8		5	
Wed	9		6	
Thu	10	Class ends	7	
Fri	11	Publish IA marks and attendance	8	
Sat	12		9	
Sun	13		10	
Mon	14	Start date to forward the IA marks and attendance to Uty	11	
Tue	15		12	
Wed	16	Last date for evaluation for Jury (BArch & BDes)	13	
Thu	17	Last date to forward the IA marks and attendance to University	14	
Fri	18	(Last date for uploading marks of Jury BArch & BDes)	15	
Sat	19	Christmas vacation begins	16	
Sun	20		17	
Mon	21		18	Reporting of S7 BArch to students to college after practical training
Tue	22		19	
Wed	23		20	
Thu	24		21	
Fri	25	Christmas	22	
Sat	26		23	
Sun	27	Christmas vacation ends	24	
Mon	28		25	
Tue	29	Odd semester exam begins	26	Republic Day
Wed	30		27	Jury for practical training (S7 Batch)
Thu	31		28	
Fri			29	
Sat			30	
Sun			31	

KERALA TECHNOLOGICAL UNIVERSITY

REGULATIONS / RULES

O-1 Admission to the M. Tech. Programme

Candidates who have been awarded or qualified for the award of the Bachelor's degree in Engineering / Technology, from an Institution approved by AICTE are eligible for admission to the M. Tech., Programme. Eligibility of candidates having MCA/MSc qualifications will be decided from time to time by following the guidelines issued by All India Council for Technical Education (AICTE) and the Government of Kerala and notified separately. Other important eligibility criteria are as listed out by the Director of Technical Education with the approval of the Government of Kerala.

O-1.1 Candidates qualified in Graduate Aptitude Test in Engineering (GATE) and admitted to the M. Tech. programme are eligible to receive Half Time Teaching Assistantship (HTTA) as per the rules of the All India Council for Technical Education (AICTE)/Ministry of Human Resource Development (MHRD).

O-1.2 Sponsored candidates from Industries, R&D organizations, National Laboratories as well as Educational Institutions, with a bachelor's degree in engineering are eligible for admission to the M. Tech. programme.

O-1.3 Foreign nationals whose applications are received through Indian Council of Cultural Relations, Government of India are also eligible for admission to the M.Tech. programme.

O-1.4 Announcements for M. Tech. Programmes will be made by the DTE, Government of Kerala.

O-1.5 Selection of candidates for the M. Tech programme will be done centrally or monitored by the Directorate of Technical Education as per the guidelines given on this by the Government of Kerala

O-1.6 The number of candidates to be admitted to each M. Tech stream will be as per the approval of the University which shall be based on decision on this given by the All India Council for Technical Education.

O-1.7 Admission will be complete only on meeting all the other requirements mentioned in the letter of admission and on payment of the fees.

O-1.8 Candidates who have the Associate Membership of Professional Bodies that are approved by the University and have qualified in GATE shall also be eligible for admission to the M.Tech. programme.

O-1.9 The reservation policy of the Government of Kerala and the Government of India shall be followed in admission to the M. Tech. programme.

O-1.10 All admission will be governed by the procedure laid down for this by the Director of Technical Education, Kerala and the Government of Kerala.

O-1.11 Notwithstanding all that is stated above, the admission policy may be modified from time to time by the University, particularly to confirm to directions from the Government of Kerala and the Government of India.

O-2 Duration of the Programme

The normal duration of the M. Tech programme, including the project work, shall be four semesters.

O-3 Post Graduate Programme Clusters

The University shall identify clusters of colleges offering M. Tech programmes in different streams and allow them to formulate procedures for the smooth conduct of all academic activities associated with the M. Tech programme, in line with the ordinances/ regulations of the University. These clusters shall have academic autonomy, regulated by a Cluster level Graduate Committee [CGPC] consisting of all the principals of the colleges in the cluster. The Chairman of CGPC shall be an eminent academician nominated by the Vice Chancellor. The CGPC will be responsible for all academic matters including the curriculum, syllabi, course plans, internal evaluations, end semester examinations, and grading for all streams of M. Tech. programme offered by the colleges in the cluster. The CGPC can formulate additional rules for other academic aspects that are not covered by this Ordinance.

O-4 Specialization Streams in M.Tech. Programme

The M.Tech. programme streams offered by each cluster as well as the eligibility of candidates of different B. Tech. branches or having other qualifications, for each of them shall be approved by the CGPC.

O-5 M. Tech. Programme Structure

i) The M. Tech programme in all streams of specialization will be structured on a credit based system following the semester pattern with continuous evaluation.

ii) The University permits regular as well as external registration (part time) for those in employment.

iii) The duration for the M. Tech. programme in all streams of specialization will normally be 4 semesters. The maximum duration is 6 semesters.

iv) For students admitted on external registration, the normal duration will be 6 semesters. Here the maximum duration is 7 semesters.

v) The University permits a regular student to change over to external registration during the programme, under specific circumstances like initiating a start up venture or to take up a job.

vi) Each semester shall have a minimum of 72 instruction days followed by the end semester examination.

vii) A common course structure for the M. Tech programmes in all streams of specialization is to be followed and consists of the following.

Core Courses

Elective Courses

Laboratory Courses

Seminar

Project

viii) Every stream of specialization in the M.Tech. programme will have a curriculum and syllabi for the courses. The curriculum should be so drawn up that the minimum number of credits for successful completion of the M.Tech. programme in any stream of specialization is not less than 64 and not more than 68.

Ix) Credits are assigned as follows, for one semester

1 credit for each lecture hour per week

1 credit for each tutorial hour per week

1 credit for each laboratory/ practical of 2 or 3 hours per week

2 credits for the seminar

2 credits for Mini Project

6 credits for Project in the 3rd Semester

12 credits for Project in the 4th Semester

x) A pass is mandatory in all core courses. In case of failure in an elective course, there is the provision to choose another elective listed in the curriculum.

xi) On their request, CGPC shall examine the academic records and permit candidates with B.Tech. (Honours) who have earned credits for any relevant graduate level courses to transfer credits towards the M.Tech. programme. Candidates who received B.Tech. (Honours) degree just prior to their M.Tech. admission are permitted to transfer up to 9 credits. For those who received the B.Tech. (Honours) degree within three years prior to their M.Tech. admission are permitted to transfer up to 6 credits.

Xii) The maximum number of lecture based courses and laboratory courses in any semester shall not exceed 5 and 2 respectively. The maximum credits in a semester shall be 23.

Xiii) Extension of Programme duration

The normal duration of the programme shall be four semesters.

In case of prolonged illness or other personal exigencies, the university may allow a student who has earned credits for at least one semester, to extend the programme up to the maximum Duration of six semesters.

Students who have earned credits for the courses listed in the first two semesters are permitted to transfer their registration as external candidates if they take up a job. However, they have to complete the programme within six semesters.

O-6. Course Registration and Enrolment

All students have to register for the courses they desire to attend in a semester. Students admitted to the first semester are advised to register for all courses offered in the first semester. They do not have to enrol for the semester. All other students are required to register at the end of the semester for the courses they desire to take in the next semester. Later they have to enrol for these courses in the new semester based on the results in the previous semester. This allows

them to make minor changes in the list of courses already registered for. Before enrolment, students should clear all dues including any fees to be paid and should not have any disciplinary proceedings pending. The dates for registration and enrolment will be given in the academic calendar. Any late registration or enrolment, allowed only up to 7 working days from the commencement of the semester, will attract a late fee.

A student can drop a course or substitute one already registered for by another, for valid reasons with the approval of the faculty advisor. However this has to be done within 7 working days from the commencement of the semester.

The maximum number of credits a student can register for in a semester is limited to 24.

O-7. Recommended Credit distribution over the semesters

First Semester : 20 to 23 credits

Second Semester : 18 to 19 credits

Third Semester : 14 credits

Fourth Semester : 12 credits [Project]

O-8. Academic Assessment/Evaluation

The University follows a continuous academic evaluation procedure.

The Assessment procedure and corresponding weights recommended are as follows:-

For theory courses

i) Two internal tests, each having 15%

ii) Tutorials/Assignments/ Mini projects having 10%

iii) End Semester examination having 60%

All the above are mandatory requirements to earn credits.

Students who have missed either the first or the second test can register with the consent of the faculty member and the Head of the Department concerned for a re-test which shall be conducted soon after the completion of the second test and before the end semester examination. The re-test will cover both the first and the second test course plans. If a student misses both the scheduled tests, there is no provision for any retests and zero marks will be given for each test. In case of serious illness and where the attendance is above 70% the Principal may permit the conduct of the tests for a student

based on his application and other relevant medical reports. Such cases are to be reported to CGPC.

For Laboratory /Practical courses

i) Practical Records /outputs 40%

ii) Regular Class Viva-Voce 20%

iii) Final Test (Objective) 40%

O-9. Course Completion and earning of credits

Students registered and later enrolled for a course have to attend the course regularly and meet the attendance rules of the University and appear for all internal evaluation procedures for the completion of the course. However, earning of credits is only on completion of the end Semester/supplementary examination and on getting a pass grade. Students, who had completed a course but could not write the end semester/supplementary examination for genuine health reasons or personal exigencies, if otherwise eligible are permitted to write the semester examination, at the next opportunity and earn credits without undergoing the course again. Failed candidates having more than 45% marks in their internals can also avail of this option. However,

those who are not eligible to appear for the end semester examination have to register and undergo the course again, whenever it is offered, to earn the credits.

O-10. End Semester and Supplementary Examinations

At the end of the semester, the end semester examination will be conducted in all courses offered in the semester and will be of three hours duration unless otherwise specified. Supplementary examinations are to be conducted for eligible candidates registered for them, before the commencement of the next semester.

O-10.1 Eligibility to write the End Semester Examination and Grading Eligibility criteria to appear for the semester examination are the attendance requirements in the course, 45% or more marks in the internal evaluation and having no pending disciplinary action. The minimum attendance for appearing for the semester examination is 85% in the course. In case of serious illness there is a relaxation for attendance [O-14.xvi]. Those who do not meet the eligibility criteria shall be awarded an FE Grade and have to register again for the course. A student should have a minimum of 45% marks in

the end semester examination to be eligible for grading in a course. Otherwise he/she will be considered to have failed in the course and an F grade will be awarded.

O-10.2 Eligibility to write the Supplementary Examination Only failed students and those who could not write the semester examination due to health reasons or other personal exigencies that are approved by the Principal can register for the supplementary examination provided they meet the eligibility requirements given in O-10.1. Grades awarded in the supplementary examination will be taken as the semester grades in these courses.

O-11. Conduct of End Semester Examination

The Clusters will prepare the question papers, conduct the end semester examinations, organize the valuation of the answer scripts, finalise the results and submit it to the University, as per the academic calendar.

O-12. Award of M. Tech., Degree

The award of the M. Tech. Degree shall be in accordance with the Ordinances and Procedures given by the University.

A student will be eligible for the award of M. Tech. Degree of the University on meeting the following requirements;

i) Registered and earned the minimum credits, as prescribed in the curriculum, for the stream of specialization.

ii) No pending disciplinary action.

O-13. Amendments to Ordinance:

Notwithstanding all that has been stated above, the University has the right to modify any of the above provisions of the ordinance from time to time.

O- 14. Miscellaneous provisions:

i) Stream of Specialization:

The streams of specializations are to be in line with the approval given on this by the All India Council for Technical Education.

ii) Language of Instruction

Unless otherwise stated, the language of instruction shall be English.

iii) Academic Calendar

The University shall publish in its website the academic calendar for every academic semester indicating the date of commencement of the semester as well as instruction. It will specify the course registration and enrolment dates, the schedule for mandatory internal tests for theory courses, dates by which laboratory/practical evaluations are to be completed, date for finalization of internal marks, last instruction day in the semester, planned schedule of end semester examinations and result declaration as well as approved holidays falling within the semester. Schedules for the supplementary examinations and result declaration dates are to be included in the calendar. Additionally colleges may publish their academic calendar, in line with the University academic calendar, indicating other schedules and events they plan to conduct during the semester.

Iv) Eligibility to continue with the programme

A student has to earn a minimum number of credits in a semester to register for higher semester courses. This should be at least 2/3rd of the credits for the courses listed in for the semester. CGPC shall formulate the rules based on thisand spell out the procedure to proceed with the programme.

Failed students who have more than 45% marks in the internal course evaluation are permitted to write the semester examination without registering and undergoing the course. Those with less than 45% in internal course evaluation have to register again for the course, attend the classes and earn the credits.

iv) Seminar

Students have to register for the seminar and select a topic in consultation with any faculty member offering courses for the programme. A detailed write-up on the topic of the seminar is to be prepared in the prescribed format given

by the Department. The seminar shall be of 30 minutes duration and a committee with the Head of the department as the chairman and two faculty members from the department as members shall evaluate the seminar based on the report and coverage of the topic, presentation and ability to answer the questions put forward by the committee.

Suggested evaluation procedure:-

Faculty member in charge of the seminar and another faculty member in the department nominated by the Head of the Department are the evaluators for the seminar. Distribution of mar.ks for the seminar is as follows.

Marks for the report: 30%

Presentation: 40%

Ability to answer questions on the topic: 30%

v) Project work

Project work is spread over the third and fourth semesters. Project work is to be evaluated both in the third and the fourth semesters. Based on these evaluations the grade is finalised only in the fourth semester.

Project evaluation weights shall be as follows:-

For convenience the marks are allotted as follows.

Total marks for the Project: 150

In the 3rd Semester:- Marks:50

Project Progress evaluation details:

Progress evaluation by the Project Supervisor : 20 Marks

Presentation and evaluation by the committee : 30 Marks

In the 4th Semester:- Mraks:100

Project evaluation by the supervisor/s : 30 Marks

Presentation & evaluation by the Committee : 40 Marks

Evaluation by the External expert : 30 Marks

vi) Faculty Advisor, Class Committee

a) Faculty Advisor

The Head of the Department offering the M. Tech. programme shall nominate senior faculty members as faculty advisors who shall advise the students in academic matters and support them in their studies. Their role is to help the students in academics and personal difficulties related to studies. A faculty advisor may support a group of students in a semester.

b) Class Committees are to be in place for all M. Tech. programs in the college.

Class Committee

All M.Tech. streams of specialization will have class committees for each semester, constituted by the respective Heads of Departments.

The Chairman of the committee shall be a senior faculty member who does not offer any course for that stream in that semester.

Members:-

i) All faculty members teaching courses for the stream in that semester.

ii) Two student representatives nominated by the Head of the Department, from the stream.

Class committees shall meet at least thrice in a semester - one in the beginning and one around the middle of the semester and one at least two weeks before the semester examinations. These committees should monitor the conduct of the courses, adherence to the course plan and time schedule, completion of the syllabus, standards of internal tests and evaluation process and address the difficulties faced by the students and take suitable remedial actions at the appropriate time. Before the end semester examination, the committee should meet without the student representatives and finalise the internal marks. A report on the student performance in each course should be prepared and submitted to the CGPC by the colleges.

vii) Award of Grades

Grading is based on the marks obtained by the student in a course. [O-14 ix]

The grade card will only show the grades against the courses the student has registered.

The semester grade card will show the grade for each registered course, Semester

Grade Point Average (SGPA) for the semester as well as Cumulative Grade Point Average (CGPA).

viii) Grades and Grade Points

Grades and Grade Points as per UGC guidelines are to be followed by the University

Grades	Grade Point	% of Total Marks obtained in the course
O	10	90% and above
A+	9	85% and above but less than 90%
A	8.5	80% and above but less than 85%
B+	8	70% and above but less than 80%
B	7	60% and above but less than 70%
C	6	50% and above but less than 60%
P	5	45% and above but less than 50%
F	0	Less than 45%
FE	0	Failed due to eligibility criteria [O.10.1] Course Incomplete

Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA) are calculated based on the above grading norms and are explained at the end of this document.

ix) Academic Auditing

The University shall have a detailed academic auditing procedure in place comprising of an internal academic auditing cell within the college and an external academic auditing for each college. The internal academic auditing cell in each college shall oversee and monitor all academic activities including all internal evaluations and semester

examinations. This cell is to prepare academic audit statements for each semester at regular intervals of four weeks of instruction. These reports are to be presented to the external academic auditor appointed by the University, who will use it as a reference for his independent auditing and for the final report to the University.

Academic auditing will cover:-

i) Course delivery covering syllabus, adherence to course plan, quality of question papers for internal examinations, internal evaluation, laboratory experiments, practical assignments, mini projects, conduct of practical classes and their evaluation. Semester examination and academic performance of the students.

ii) Co-curricular and Extra-curricular activities available for students, and their organization.

iii) Academic functioning of the college encompassing students, faculty and college administration covering punctuality, attendance, discipline, academic environment, academic accountability, academic achievements and benchmarking.

x) Revaluation and Grade improvement

There is no provision for revaluation of the semester answer books or for improving the grade.

Students are permitted to check the answer books of the semester examination, after the results are declared. Any discrepancies in evaluation could be brought to the notice of the teacher concerned who will initiate appropriate action on this and report to the CGPC for a final decision on this.

xi) Grade Cards

Students who have written the semester examination will be given the grade cards for the registered courses, in every semester by the respective colleges. On earning the required credits for the degree, a consolidated grade sheet for the M.Tech. programme will be issued by the University on the recommendation of the respective CGPC.

The M. Tech. degree will not have any classification like distinction or first class.

xiii) Academic Discipline and Malpractices in Examinations

Every student is required to observe discipline and decorous behaviour.

Any act of indiscipline, misbehaviour and unfair practice in examinations will be referred to the **Disciplinary Action Committee (DAC)**. 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 Principle who in turn shall refer it to DAC. On the basis of the report and evidence available or gathered, DAC shall immediately initiate an enquiry giving the concerned student a chance to explain his/her case. Based on this the committee shall recommend the course of action in line with the guidelines formulated for this by the Controller of Examination of the University and forward it to the Principal for action.

Actions are to be based on the severity of the offence and are to be dealt with, on a course basis. Guidelines on this shall be given by the Controller of Examination which is to be followed by the Disciplinary Action Committee of the college.

DAC shall be headed by a department head and shall have three other faculty members drawn from different departments as members. In case of malpractices in end semester examinations, the report given by the college DAC and the action taken by the Principal shall be intimated to the Controller of Examination of the University.

xiv) Student's Welfare Committee

Every college shall have a Student's Welfare Committee, constituted by the Principal of the college. This committee shall have at least three faculty members as members and the chairman shall be a senior faculty member in the rank of a Professor. This

committee is entrusted with the task of looking after the welfare of the students by taking appropriate steps with the concurrence of the principal.

xv) Grievances and Appeals Committee

Each college should have a Grievances Redress Committee constituted by the Principal to address the grievances of the students and to consider their appeals on any decisions made by the college. This committee consisting of at least three faculty members and chaired by a senior professor shall look into student's grievances and appeals and give its recommendations to the Principal for action.

xvi) Attendance

Attendance is marked for each course. 85% attendance is mandatory for writing the semester examination in a course. Students who get Part Time Teaching Assistantship (PTTA) or Scholarships from the Central or State Governments or any other agencies are expected to have 100 % attendance. However, under unavoidable circumstances students are permitted to take leave. Leave is normally sanctioned for any approved activity taken up by students outside the college covering sports and other extra-curricular activities. Leave is also permitted on medical grounds or on personal exigencies. Leave of absence for all these is limited to 15 % of the academic contact hours for the course.

In case of long illness or major personal tragedies/ exigencies the Principal can relax the minimum attendance requirement to 70%, to write the semester examination. This is permitted for one or more courses registered in the semester. The Principal shall keep all records which led to his decision on attendance, for verification by the Academic Auditor. However this concession is applicable only to any one semester during the entire programme. In case of prolonged illness, break of study is permitted up to two semesters which could extend the programme up to six semesters, the maximum permitted by the regulations.

xvii) Leave of Absence

Students who desire to take leave have to apply for it to the teacher conducting the course. This application together with any supporting documents like doctor's certificate or other relevant information is to be forwarded to the Head of the Department with the recommendation of the teacher indicating the total leave of absence the student has so far availed. Approval for leave is to be given by the head of the department. After any prolonged medical leave, normally exceeding five instruction days, on rejoining, the student has to produce the fitness certificate given by the doctor.

xviii) Project Evaluation

Normally students are expected to do the project within the college. However they are permitted to do the project in an industry or in a government research institute under a qualified supervisor from that organization. Progress of the project work is to be evaluated at the end of the third semester. For this a committee headed by the head of the department with two other faculty members in the area of the project and the project supervisor/s. If the project is done outside the college, the external supervisor associated with the student shall also be a member of the committee.

Final evaluation of the project will be taken up only if the student has earned all course credits listed in the first three semesters. Project evaluation shall be done by the same committee mentioned above with an external expert, either from an academic/R&D organization or from Industry, as an additional member. Final project grading shall take into account the progress evaluation done in the third semester and the project evaluation in the fourth semester. If the quantum of work done by the candidate is found to be unsatisfactory, the committee may extend the duration of the project up to one more semester, giving reasons for this in writing to the student. Normally further

extension will not be granted and there shall be no provision to register again for the project.

Xix) Project work outside the College

While students are expected to do their projects in their colleges, provision is available for them to do it outside the college either in an industry or in an institute of repute. This is only possible in the fourth semester and the topic of investigation should be in line with the project part planned in the 3rd semester.

Student should apply for this through the project supervisor indicating the reason for this well in advance, preferably at the beginning of the 3rd semester. The application for this shall include the following:-

Topic of the Project:

Project work plan in the 3rd Semester:

Reason for doing the project outside:

Institution/Organization where the project is to be done:

External Supervisor – Name:

Designation:

Qualifications:

Experience:

Letter of consent of the External Supervisor as well as from the organization is to be obtained.

This application is to be vetted by the head of the department and based on the decision taken the student is permitted to do the project outside the college.

Ragging

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. Each student of the Institute, 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 registration.

Calculation of SGPA/CGPA

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

SGPA = $\Sigma(Ci \times GPi)/\Sigma Ci$ where Ci is the credit assigned for a course and GPi is the grade point for that course. Summation is done for all courses registered by the student in the semester. Here the failed courses are also accounted.

CGPA = $\Sigma(Ci \times GPi)/\Sigma Ci$ where Ci is the credit assigned for a course and GPi is the grade point for that course. Summation is done for all courses registered by the student during all the semesters for which the CGPA is needed. Here the failed courses are also accounted. CGPA of all courses passed may also be given.

Mar Baselios College of Engineering & Technology

Department:_____

Academic Year:…….…….. Semester: ….....…. Starting date:……...

Time Table

Odd Semester

Faculty name: ……..

Day Time	8.30 - 9.20	9.40 - 10.30	Break	10.40 - 11.30	11.50 - 12.30	12.45 - 1.30
Mon						
Tue						
Wed						
Thu						
Fri	8.00 - 8.50	9.00 - 9.50		10.00 - 10.50	11.10 -12.00	12.10 - 1.00
Sat	8.30 - 9.20	9.40 - 10.30		10.40 - 11.30	11.50 - 12.30	12.45 - 1.30

Sub Code	Name	Faculty Name

Title	Name	Office Hour*	Office
1.Advisor(Coordinator)		Day: Hr.	
2. Advisor		Day: Hr.	

Mar Baselios College of Engineering & Technology

Department:_____

Academic Year:…….. Semester: ….....…. Starting ate:……...

Time Table

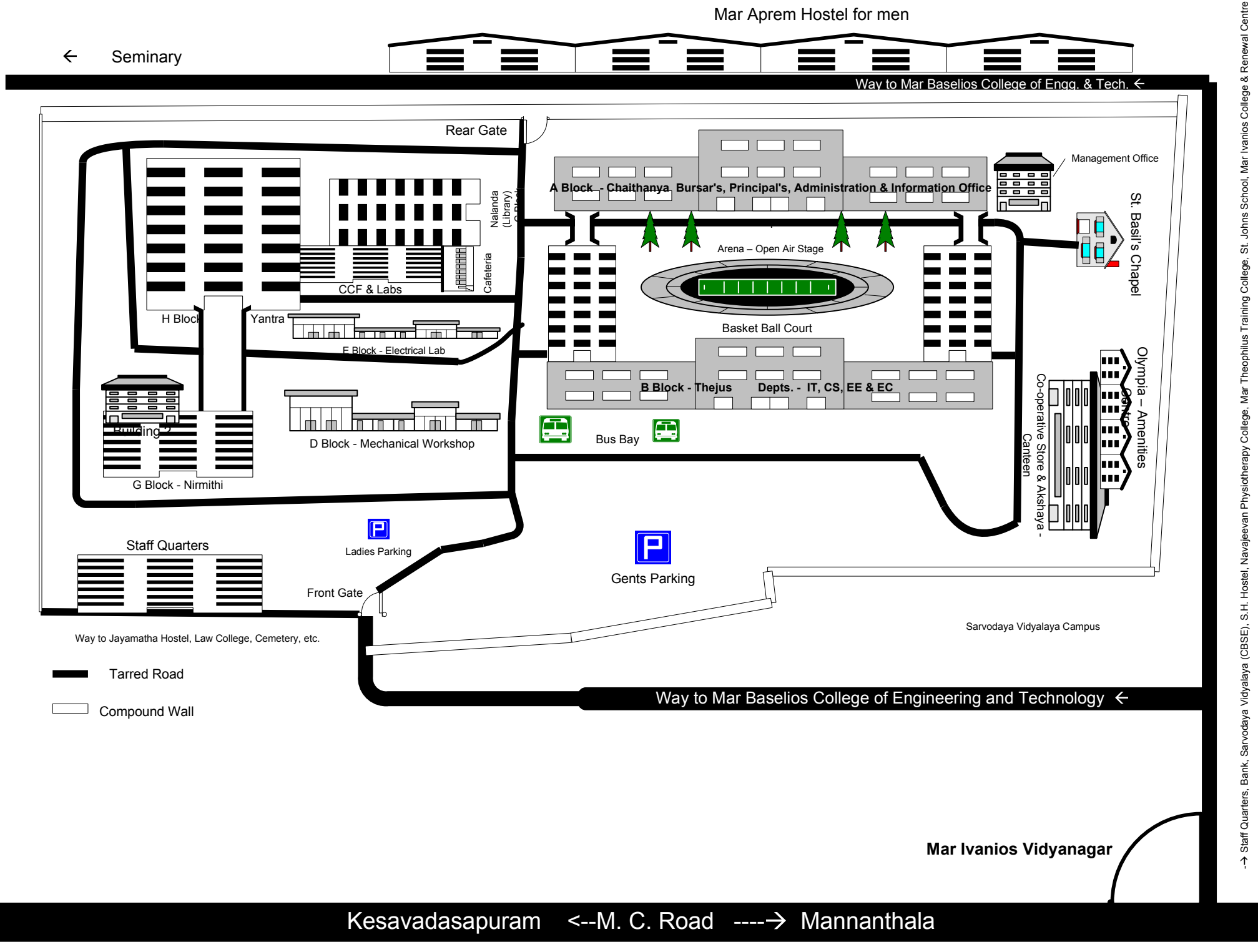
Even Semester

Faculty name: …….....

Day Time	8.30 - 9.20	9.40 - 10.30	10.40 - 11.30	11.50 - 12.30	12.45 - 1.30
Mon					
Tue					
Wed					
Thu					
Fri	8.00 - 8.50	9.00 - 9.50	10.00 - 10.50	11.10 -12.00	12.10 - 1.00
Sat	8.30 - 9.20	9.40 - 10.30	10.40 - 11.30	11.50 - 12.30	12.45 - 1.30

Sub Code	Name	Faculty Name

Title	Name	Office Hour*	Office
1.Advisor(Coordinator)		Day: Hr.	
2. Advisor		Day: Hr.	


Mar Aprem Hostel for men
← Seminary
Way to Mar Baselios College of Engg. & Tech. ←
Rear Gate
Nalanda (Library) & Block
Cafeteria
CCF & Labs
H Block
Yantra
F Block - Electrical Lab
Building 2
G Block - Nirmithi
D Block - Mechanical Workshop
A Block - Chaithanya, Bursar's, Principal's, Administration & Information Office
Management Office
St. Basil's Chapel
Arena – Open Air Stage
Basket Ball Court
B Block - Thejus
Depts. - IT, CS, EE & EC
Bus Bay
Co-operative Store & Akshaya - Canteen
Olympia – Amenities Centre
Staff Quarters
Ladies Parking
Gents Parking
Front Gate
Sarvodaya Vidyalaya Campus
Way to Jayamatha Hostel, Law College, Cemetery, etc.
Tarred Road
Compound Wall
Way to Mar Baselios College of Engineering and Technology ←
Mar Ivanios Vidyanagar
-→ Staff Quarters, Bank, Sarvodaya Vidyalaya (CBSE), S.H. Hostel, Navajeevan Physiotherapy College, Mar Theophilus Training College, St. Johns School, Mar Ivanios College & Renewal Centre
Kesavadasapuram <--M. C. Road ----→ Mannanthala

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