

HAND BOOK

2019 – 2020



MAR BASELIOS **COLLEGE OF ENGINEERING AND TECHNOLOGY**

(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.

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Website : www.mbcet.ac.in

PERSONAL INFORMATION

Name:

Date of Birth: Sex:

Branch:

Class and Roll No:

ID card No:

Name & Address of Parent:

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Email ID:

Name & Address of Local Guardian:

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Phone No:

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.

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
Rt. Rev. Msgr. Dr. Varkey Attapurath	- Member
Fr. Nelson Valiyaveetil	- Member
Fr. John Vilayil	- Member
Fr. Wilson Thattaruthundil	- Member
Dr. M. Ayyappan	- Member
Mr. Biju B. Varghese	- Member
Dr. T. M. George	- Member & Secretary
Prof. S. Viswanatha Rao	- Member
Ms. Jomole Joseph Peedikayil	- Member
Nominee of the Regional Officer AICTE	- Ex Officio
Director of Technical Education	- Ex Officio
Nominee of the University	- Ex Officio
An Industrialist/Technologist/Educationist from the region nominated by the State Government.	

Advisory Board

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

Mr. Jacob Punnoose, IPS (Retd.), former DGP, 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. T. M. George (Principal)
3. Prof. S. Viswanatha Rao (Vice Principal)
4. Prof. Paul Thomas (Dean) - P G
5. Dr. Neethu Roy (Asst. Dean) – R&D
6. Dr. Tessy Mathew (HoD – CS)
7. Dr. M. J. Jayashree (HoD – EC)
8. Dr. M. Satyakumar (HoD – CE)
9. Prof. A.S. Shajilal (HoD – EE)
10. Mr. T.N. Rajesh (HoD – ME)
11. Prof. Joseph Cherian (HoD – SH)
12. Ms. Christi Francis (ADPE)
13. Ms. Asha S.(Asst.Prof – CSE) - Nominated
14. Dr. George Zacharia (Prof – S & H) – Nominated
15. Dr. Nisha G.K.(Asst. Prof. - EE) - Nominated

Management Administration

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

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. T. M. George, Principal - Chairman

Management Representative:

Fr. John Vilayil (Bursar)

Senior Administrative Officers:

Prof. S. Viswanatha Rao, Vice-Principal

Prof. 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, ECE)

Dr. Tessy Mathew (HoD, CSE)

Dr. M. Satyakumar (HoD, CE)

Mr. Rajesh T.N. (HoD, ME)

Prof. A.S. Shajilal (HoD, EEE)

Prof. Joseph Cherian (HoD, S& H)

Mr. Deepak Raj (ADPE)

Mr. Praveen G.L. (Asst. Prof., Dept. of CS)

Ms. Ann George (Asst. Prof., Dept. of CE)

Mr. Aravind P. (Asst. Prof., Dept. of ME)

Ms. Deepa P.L. (Asst. Prof. Dept. of ECE)

Ms. P. Sandhya (Asst. Prof. Dept of EEE)

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 Wavier)
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	30
2)	Machine Design	18
3)	Power Control and Drives	18
4)	Telecommunication Engineering	18
5)	Structural Engineering	18
6)	Control Systems	18
7)	Signal Processing	18

COLLEGE STAFF

Principal	: Dr. T. M. George, M.Sc. (Engg), Ph.D.
Vice - Principal	: Prof. S. Viswanatha Rao M.E., Senior Member IEEE
Deans	: Prof. Paul Thomas (PG) : Dr. Neethu Roy (Asst. Dean-R &D)

Department of Civil Engineering

Professor & Head	: Dr. M. Satyakumar, M.Tech., Ph.D.
Professors	: Prof. P. S. Abraham, B.Arch., MCP : Dr. Neethu Roy, M.Tech., Ph.D.
Associate Professor	: Dr. S. Jayasree, 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. Muthulakshmi, M.Tech.
- : Ms. Jean Molly Simon, M.Tech.
- : Mr. Jaya S. Pillai, M.Tech.
- : Ms. Anupama Krishnan, M. Tech.
- : Ms. Lekshmi Chandran M., M.Tech.
- : Ms. Parvathy U., M.Tech.
- : Ms. Sherin Mathew, 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 Cheriyaath, 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.

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.

Asst. Professors : Ms. S. Asha, M.E.
 : 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.
 : Dr. Jisha John, M.Tech., Ph.D
 : Mr. Shon J. Das, M.Tech,
 : Ms. Merin Kuriakose, M.Tech.
 : Ms. Anjali C, M. Tech.
 : Mr. Robin Joseph, M.Tech.

- : Ms. Aswathy Ravikumar, M.Tech.
- : Ms. Gayathri K S, M.Tech.
- : Mr. Binu Jose A, M.E.
- : 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. Jesna Mohan, M.Tech

Department of Electrical & Electronics Engineering

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

Associate Professors : Dr. G. K. Nisha, M.Tech, Ph.D.
: 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. (Study leave)
: Ms. A V. Soumya, M.Tech.
: Ms. Charivil Sojy Rajan, M.Tech. (Study leave)
: Ms. Manju Sreekumar, M.Tech.
: Ms. Manju Ann Mathews, M.Tech.(Study leave)
: Ms. Surasmi N L., M. Tech
: Ms. Vandana P., M. Tech.
: Ms. Anu Gopinath, M. Tech. (Study leave)
: Mr. Aswin R. B, M. Tech.
: Ms. A. N. Archana, M. Tech.(Study leave)
: Mr. Midhun G, M.Tech.
: Ms. Keerthi S Nair, M.Tech.
: Ms. Jeneena Babu, M.Tech
: Ms. Divya M.D., M.E.
: Ms. Ashni Elisa George, M.Tech.
: Ms. Shilpa Susan Peter, M.Tech.
: Ms. Shilpa George, M.Tech.
: Ms. Anila A.V., M.Tech.
: Ms. Arya S., M.Tech.
: Ms. Anju Jacob, 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
: Prof. Paul Thomas, M.Tech., LLB, PMP,
C (Eng.),FIE, LMASI.
: Dr. Jayakumari J., M.Tech, Ph.D
- Asst. Professors** : Ms. Luxy Mathews, B.Sc., B.Tech., M.Tech.
: Ms. Ancy S.Anselam, M.Tech.
: Ms. P S. Swapna, M.Tech.
: Ms. Teena Rajan, M.Tech.
: Dr. P Sreedevi , M.Tech., Ph.D
: Ms. P L. Deepa, 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.
: 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

- Assistant Professor & Head** : Mr. T.N. Rajesh, M.Tech
- Associate Professors** : Mr. Remil George Thomas, M.Tech.
: Dr. Muraleedharan Nair K.,M.Tech, Ph.D
- Asst. Professors** : Mr. K.S. Venkatesh, M.Tech

- : Mr. M. Pradeep, M.Tech.
- : Dr. M B. Nidhi, M.Tech, Ph.D
- : Mr. Hari Venkit, M.Tech.
- : Mr. A S. Ayswer, M.Tech.
- : Dr. V. Vinod, M.Tech, Ph.D
- : Mr. V P. Premchand, M.Tech.
- : Dr. Rupesh S., M.Tech., Ph.D
- : Mr. Aravind P., M.Tech.
- : Mr. Deepak G. Dilip, M.Tech.
- : Mr. Unnikrishnan G., M.Tech.
- : Mr. Deepak B., M.Tech.
- : Mr. Roshan George Koshy, M.Tech.
- : Mr. Ajeesh M V., M.Tech
- : Ms. Ruby Maria Syriac, M E.
- : Mr. Vinod V., M.Tech.
- : Mr. Sujith S., M.Tech.
- : Mr. Kedar Mohan, M.Tech.
- : Mr. Renjith H., M.Tech.
- : Mr. Vishnu Prasad K.R., M.Tech.
- : Mr. Raveesh G., M.Tech.
- : Mr. Deepak B.S., M.Tech.
- : Mr. Bobin Saji George, M.Tech.
- : Mr. Vishnu Asok J S, M.Tech.
- : Mr. Aashish John, M.Tech.
- : Ms. Melvin Jacob, M.Tech.

Department of Sciences & Humanities

- Professor & Head** : Prof. Joseph Cherian, 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,
: Dr. M. T. Savitha, M.Sc., B.Ed., Ph.D.
: Dr. Dhanya Ramachandran, M.Sc.,M.Phil, Ph.D.
: Dr. Neeradha C. K., M.Sc., M.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.
: Dr. Meena Kumari, M.Sc., Ph.D.

Guest Faculty : Mr. Vinu. V, M.A

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 Counselors

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

Soft Skill Trainers

Reney Varghese, B.Sc., M.B.A

Nursing Station in-Charge

Sr. Alex S H

Technical Staff

Department of Civil Engineering

Trade Instructor : Mr. Manon Mony
: Mr. Babu. R.
Lab. Instructor Gr. I : Mr. Johnson George
: Mr. Edwin Roy E. J.
Lab. Instructor Gr. II : Ms. Dhanalekhmi M. C
: Mr. Vijin V. J.
Lab Assistant Gr. I : Mr. Shijin Kumar R.V.
: Ms. Deeparani V.
: Mr. Arun J.
: Ms. Vidyamol S.
: Ms. Renchu Mohan R.
: Ms. Merlin T. Thomas

Department of Computer Science Engineering

Lab. Instructor Sr. Grade : Ms.K.C. Linumole
Lab. Instructor Gr. I : Ms. G. Priya
: Ms. Rejani L.
: Ms. Naicy M. John
Lab. Assistant : 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.
Lab. Instructor Gr. II : Ms. Shabina N.
: Ms. Smiji R. S.
: Mr. Ratheesh Kumar V. S.
: Mr. Vishnuchandran C. L.
Lab. Assistant Gr. I : Ms. Suchithra M. S.
: 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.
Lab. Instructor Gr. II : Mr. Rajendran H.
: Ms. Smitha S.L.
: Ms. Hanna Varghese
Lab. Assistant Gr. I : Ms. Veeshna G.
: Mr. Dhaneesh Raj. D.

Department of Mechanical Engineering

Workshop Superintendent : Mr. G. Sukumaran Asari, B.Tech.
Trade Instructors : Mr. S. Dharmaraj
: Mr. S. Muraleedharan Nair
: Mr. R. Vijayakumar
: Mr. G. Krishnankutty
Workshop Instructor Gr. I : Mr. Sijo Thomas
: Mr. Anil Kumar R. S.
: Mr. S. C. Aneesh
: Mr. D. Shaji

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.

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.
Junior System Supp. Techn. : Mr. Laiju B. Nair,
Lab. Assistant Gr. I : 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.
Library Assistant : Mr. Sabeesh T., B.A., M.LISc.
Office Assistant : Ms. Sherin Mary Joseph, B.Com, PGDCA

Office Staff

Senior Superintendent : Mr. V. K. Kuriakose, B.Sc.
Section Officers : Mr. Mohan George, B.Com.
: Dr. B. Chandrika, M.Sc., Ph.D.
Senior Office Assistants : Mr. Renny Thomas Abraham, B.Com., PGDCA
: Mr. Jacob Varghese
: Ms. Shiji George, B.A.
: 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.
Clerical Assistant	: Ms. Jancy B. S.
Attender Gr. I	: Mr. Mathew Thomas
Attenders	: Mr. Anish Babu S.
	: 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 (9.30 - 4.30). 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.

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 PERFORMANCE IN THE FIRST YEAR – “Young Wizard of Science”.

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

6. BASELIAN KAYIKA PRATHIBHA PURASKHARAM

- For Outstanding Performance in sports/games in the current Academic Year
- Male and Female category
- In a particular year if a student has an outstanding performance in Chess, the name can be changed as “CHESS MASTER”.

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

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

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

Institution of Engineering and Technology (IET) -

Web: www.theiet.in

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

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

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.

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 Innovative 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. T.M.George
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. T.M. George (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

Wardens (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. Tessa 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, run by Rev. Sisters of the FDJSH Congregation.

Wardens : 1. Rev. Sr. Jessin FDJSH Phone: 8281887569

2. Rev. Sr. Mariat FDJSH

3. Rev. Sr. Lissit FDJSH

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 2019 - 2020

JUNE	2019		JULY
	1	Sat	
	2	Sun	
	3	Mon	1
	4	Tue	2
Ramadan - H	5	Wed	3
	6	Thu	4
	7	Fri	5
2nd Saturday	8	Sat	6
	9	Sun	7
	10	Mon	8
	11	Tue	9
	12	Wed	10
	13	Thu	11
	14	Fri	12
	15	Sat	13
	16	Sun	14
	17	Mon	15
	18	Tue	16
	19	Wed	17
	20	Thu	18
	21	Fri	19
	22	Sat	20
	23	Sun	21
	24	Mon	22
	25	Tue	23
	26	Wed	24
	27	Thu	25
	28	Fri	26
	29	Sat	27
	30	Sun	28
		Mon	29
		Tue	30
		Wed	31
			Karkadaka vavu

ACADEMIC CALENDAR 2019 - 2020

AUGUST	2019		SEPTEMBER
	1	Thu	
	2	Fri	
	3	Sat	
	4	Sun	1
	5	Mon	2
	6	Tue	3
	7	Wed	4
	8	Thu	5
	9	Fri	6
2nd Saturday	10	Sat	7
Bakrid - H	11	Sun	8
	12	Mon	9
	13	Tue	10
	14	Wed	11
Independence Day- H	15	Thu	12
	16	Fri	13
	17	Sat	14
	18	Sun	15
	19	Mon	16
	20	Tue	17
	21	Wed	18
	22	Thu	19
Sreekrishna Jayanthi- H	23	Fri	20
	24	Sat	21
	25	Sun	22
	26	Mon	23
	27	Tue	24
Ayyankali Jayanthi - H	28	Wed	25
	29	Thu	26
	30	Fri	27
	31	Sat	28
		Sun	29
		Mon	30

ACADEMIC CALENDAR 2019 - 2020

OCTOBER		2019		NOVEMBER
	1	Tue		
Gandhi Jayanthi - H	2	Wed		
	3	Thu		
	4	Fri	1	
	5	Sat	2	
	6	Sun	3	
Maha Navami - H	7	Mon	4	
Vijaya Dasami - H	8	Tue	5	
	9	Wed	6	
Mar Gregorios Day	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	
	22	Tue	19	Miladi-Sherif - H
	23	Wed	20	
	24	Thu	21	
	25	Fri	22	
	26	Sat	23	
Deepavali - H	27	Sun	24	
	28	Mon	25	
	29	Tue	26	
	30	Wed	27	
	31	Thu	28	
		Fri	29	
		Sat	30	

ACADEMIC CALENDAR 2019 - 2020

DECEMBER - 2019	JANUARY - 2020			
	1	Sun		
	2	Mon		
	3	Tue		
	4	Wed	1	
	5	Thu	2	Mannam Jayanthi - H Patron's Day
	6	Fri	3	
2nd Saturday	7	Sat	4	
	8	Sun	5	
	9	Mon	6	
	10	Tue	7	
	11	Wed	8	
	12	Thu	9	
	13	Fri	10	
	14	Sat	11	2nd Saturday
	15	Sun	12	
	16	Mon	13	
	17	Tue	14	
	18	Wed	15	
	19	Thu	16	
	20	Fri	17	
X'mas vacation begins	21	Sat	18	Founder's Day
	22	Sun	19	
	23	Mon	20	
	24	Tue	21	
X'Mas - H	25	Wed	22	
	26	Thu	23	
	27	Fri	24	
	28	Sat	25	
	29	Sun	26	Republic Day - H
Re-opening	30	Mon	27	
	31	Tue	28	
		Wed	29	
		Thu	30	
		Fri	31	

ACADEMIC CALENDAR 2019 - 2020

FEBRUARY	2020		MARCH	
	1	Sat		
	2	Sun	1	
	3	Mon	2	Sivaratri - H
	4	Tue	3	
	5	Wed	4	
	6	Thu	5	
	7	Fri	6	
2nd Saturday	8	Sat	7	2nd Saturday
	9	Sun	8	
	10	Mon	9	Attukal Pongala - H
	11	Tue	10	
	12	Wed	11	
	13	Thu	12	
	14	Fri	13	
	15	Sat	14	
	16	Sun	15	
	17	Mon	16	
	18	Tue	17	
	19	Wed	18	
	20	Thu	19	
	21	Fri	20	
	22	Sat	21	
	23	Sun	22	
	24	Mon	23	
	25	Tue	24	
	26	Wed	25	
	27	Thu	26	
	28	Fri	27	
	29	Sat	28	
		Sun	29	
		Mon	30	
		Tue	31	

ACADEMIC CALENDAR 2019 - 2020

APRIL	2020		MAY
	1	Wed	
	2	Thu	
	3	Fri	1 May Day - H
	4	Sat	2
	5	Sun	3
	6	Mon	4
	7	Tue	5
	8	Wed	6
Maundy Thursday - H	9	Thu	7
Good Friday - H	10	Fri	8
2nd Saturday	11	Sat	9 2nd Saturday
Easter	12	Sun	12
	13	Mon	13
Vishu - H Ambadkar Jayanthi	14	Tue	14
	15	Wed	15
	16	Thu	16
	17	Fri	17
	18	Sat	18
	19	Sun	19
	20	Mon	20
	21	Tue	21
	22	Wed	22
	23	Thu	23
	24	Fri	24 Eid-ul-Fitr
	25	Sat	25
	26	Sun	26
	27	Mon	27
	28	Tue	28
	29	Wed	29
	30	Thu	30
		Fri	31

PROGRAMME OUTCOMES (POs)

Engineering Graduates will be able to :

1. **Engineering knowledge** : Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis** : Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions** : Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems** : Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide 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 Engineering systems.
- ii) Apply knowledge of Thermal and Fluid Sciences to solve Engineering Problems.
- iii) Use Simulation Tools and Computer Integrated Systems in Mechanical Engineering.
- iv) Apply advanced manufacturing processes and modern Industrial Management Techniques in Engineering.

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.

<u>Knowledge Segments</u>	<u>Credits</u>
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.

<p>No attendance shortage and Internal Marks less than 45%, but greater than or equal to 35%</p>	<p>Register and attend summer course if</p> <ol style="list-style-type: none"> 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. <p>Requirements in Summer Course:</p> <ol style="list-style-type: none"> 1. 75% attendance is mandatory in summer course. 2. Permitted to write the internal make up test. <p>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.</p> <p>Internal marks thus obtained will be limited to 50% of maximum internal marks.</p>
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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 degree after 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 the project 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

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)	5	80% and above but less than 85%
B+ (Good)	8	70% and above but less than 80%
B (Above Average)	7	60% and above but less than 70%
C (Average)	6	50% and above but less than 60%
P (Pass)	5	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 overall attendance 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.

$SGPA = \frac{\sum(C_i \times GP_i)}{\sum C_i}$ where C_i is the credit assigned for a course and GP_i is the grade point for that course. Summation is done for all courses registered by the student in the semester. Here the failed courses are also accounted.

$CGPA = \frac{\sum(C_i \times GP_i)}{\sum C_i}$ where C_i is the credit assigned for a course and GP_i is the grade point for that course. Summation is done for all courses 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.

In order 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. In case 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 Initiatives Participation		*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 points Best 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 points Best 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 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				
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 Level 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 exam 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 less than Rs. 15000/-per month)				d	80	
	27	Societal innovations	80			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		

*Level I College Events
 *Level II Zonal Events
 *Level III State/ University Events

*Level IV 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 Distributions, Transforms 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 Management	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- Environmental Engineering
4. CE 467 Highway Pavement Design
5. CE 469 Environmental 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 INDUSTRIALAUTOMATION
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	Linear Algebra & Complex Analysis	3-1-0	4	A
CS 201	Discrete Computational Structures	3-1-0	4	B
CS 203	Switching Theory and Logic Design	3-1-0	4	C
CS 205	Data Structures	3-1-0	4	D
CS 207	Electronics Devices & Circuits	3-0-0	3	E
HS210/HS200	Life Skills/Business Economics	2-0-2/3-0-0	3	F
CS 231	Data Structures Lab	0-0-3	1	S
CS 233	Electronics Circuits 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 Distributions, Transforms and Numerical Methods	3-1-0	4	A
CS 202	Computer Organization and Architecture	3-1-0	4	B
CS 204	Operating Systems	3-1-0	4	C
CS 206	Object Oriented Design and Programming	2-1-0	3	D
CS 208	Principles of Database Design	2-1-0	3	E
HS200/HS210	Business Economics/Life Skills	3-0-0/2-0-2	3	F
CS 232	Free and Open Source Software Lab	0-0-3	1	S
CS 234	Digital Systems 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
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 2 :**

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 Distributions, Transforms 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 distributions, 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	Principles 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 364	Computer Vision
3.	EC 366	Real Time Operating Systems
4.	EC 368	Robotics
5.	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	19-1-7	22	

Elective 3:**Cumulative Credits = 162**

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	12-0-0	18	

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

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 GEOINFORMATICS 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 – 3**

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 201	Linear Algebra & Complex Analysis	3-1-0	4	A
ME 201	Mechanics of Solids	3-1-0	4	B
ME 203	Mechanics of Fluids	3-1-0	4	C
ME 205	Thermodynamics	3-1-0	4	D
ME 210	Metallurgy and Materials Engineering	3-0-0	3	E
HS200/HS210	Business Economics/Life Skills	3-0-0/2-0-2	3	F
ME 231	Computer Aided Machine Drawing Lab	0-0-3	1	S
CE 230	Material Testing 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 Distributions, Transforms and Numerical Methods	3-1-0	4	A
ME 202	Advanced Mechanics of Solids	3-1-0	4	B
ME 204	Thermal Engineering	3-1-0	4	C
ME 206	Fluid Machinery	2-1-0	3	D
ME 220	Manufacturing Technology	3-0-0	3	E
HS210/HS200	Life Skills/ Business Economics	2-0-2/3-0-0	3	F
ME 232	Thermal Engineering Lab	0-0-3	1	S
ME 230	Fluid Mechanics & Machines 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
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 = 24**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 3:**

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 GEOINFORMATICS 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 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

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	Parallel Computer Architecture	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 Soft Computing
 01CS6156 Computational Geometry
 01CS6158 Semantic Web Technology
 01CS6162 Advanced Compiler 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 : 01
Branch : Electrical & Electronics Engineering
Stream : Control Systems
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 & Optimization 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 Electronics Systems

Elective III

- 01EE6126 Soft Computing Techniques
- 01EE6524 Modern Power Converters
- 01EE6318 Finite Element Methods for Electical 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 1)	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	01EE7194	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**

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
M-Tech - Curriculum

Cluster : 1
Branch : Electronics & Communication Engineering
Stream : Signal Processing
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	01EC6307	DSP System Design	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	01EC6391	Seminar I	0-0-2	100			2
U	01EC6393	DSP Systems Lab	0-0-2	100			1
		TOTAL	15-4-4	500	300	-	22

TOTAL CONTACT HOURS : 23

TOTAL CREDITS : 22

Elective I

01EC6311 Speech Signal Processing
 01EC6313 Optical Signal Processing
 01EC6315 Biomedical Signal Processing

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	01EC6304	Digital Image Processing	3-0-0	40	60	3	3
C	01EC6306	Multirate Systems and Wavelets	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	01EC6392	Mini Project	0-0-4	100			2
U	01EC6394	Image Processing Lab	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
- 01EC6314 Audio Signal Processing
- 01EC6316 Pattern Recognition and Machine Learning

Elective III

- 01EC6122 Design of VLSI Systems
- 01EC6218 Soft Computing
- 01EC6322 Optimization Techniques

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**

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
M-Tech - Curriculum

Cluster : *Trivandrum*
Branch : *Mechanical Engineering*
Stream : *Machine Design*
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	01MA6011	Special Functions, Partial Differential Equations And Tensors	3-0-0	40	60	3	3
B	01ME6101	Advanced Theory of Vibration	3-1-0	40	60	3	4
C	01ME6103	Finite Element Method	3-1-0	40	60	3	4
D	01ME6105	Continuum Mechanics	3-0-0	40	60	3	3
E	01ME6107	Industrial Tribology	3-0-0	40	60	3	3
S	01ME6999	Research Methodology	0-2-0	100			2
T	01ME6191	Seminar-I	0-0-2	100			2
U	01ME6193	Machine Dynamics 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	01ME6102	Advanced Theory of Mechanisms	3-1-0	40	60	3	4
B	01ME6104	Design of Pressure Vessels and Piping	3-0-0	40	60	3	3
C	01ME6106	Experimental Stress Analysis	3-0-0	40	60	3	3
D		Elective –I	3-0-0	40	60	3	3
E		Elective-II	3-0-0	40	60	3	3
V	01ME6192	Mini Project	0-0-4	100			2
U	01ME6194	Modelling & Analysis Lab	0-0-2	100			1
		TOTAL	15-1-6	400	300	-	19

TOTAL CONTACT HOURS : 22**TOTAL CREDITS : 19****Elective I**

- 01ME6112 Design of Power Transmission Elements
- 01ME6114 Design & Analysis of Composite Structures
- 01ME6116 Advanced Computer Graphics
- 01ME6118 Condition Monitoring & Maintenance Engineering
- 01ME6132 Fracture Mechanics

Elective II

- 01ME6122 Optimization Techniques for Engineering
- 01ME6124 Acoustics and Noise Control
- 01ME6126 Advanced Finite Element Methods
- 01ME6128 Robotics

SEMESTER 3

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
A		Elective III	3-0-0	40	60	3	3
B		Elective IV	3-0-0	40	60	3	3
T	01ME7191	Seminar II	0-0-2	100			2
W	01ME7193	Project (Phase 1)	0-0-12	50			6
		TOTAL	6-0-14	230	120	-	14

TOTAL CONTACT HOURS : 20**TOTAL CREDITS : 14****Elective III**

- 01ME7111 Advanced Numerical Methods
- 01ME7113 Advanced Non Destructive Evaluation
- 01ME7115 Advanced Design Synthesis
- 01ME7117 Mechatronics System Design
- 01ME7119 Computational Plasticity

Elective IV

- 01ME7121 Theory of plates and shells
- 01ME7123 Mechanical Behaviour of Materials
- 01ME7125 Computational Methods in Design & Manufacturing
- 01ME7127 Advanced Vehicle Dynamics
- 01ME7129 Control System

SEMESTER 4

Examination Slot	Course Number	Name	L-T-P	Internal Marks	End Semester Examination		Credits
					Marks	Duration (hours)	
W	01ME7194	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
Academic Calendar July 2019– June 2020

Day		Jul-19		Aug-19		Sep-19
Mon	1					
Tue	2					
Wed	3					
Thu	4		1	Commencement of Classes for all other programmes		
Fri	5		2			
Sat	6		3			
Sun	7		4		1	
Mon	8		5		2	
Tue	9		6		3	
Wed	10		7		4	
Thu	11		8		5	
Fri	12		9	Induction Programme ends : S1	6	
Sat	13		10		7	Onam Vacation begins
Sun	14		11		8	
Mon	15		12	Course-Sel,Reg.&Mapping begins	9	Muharam
Tue	16		13		10	First Onam
Wed	17		14		11	Thiruvonam
Thu	18		15	Independence Day	12	Third Onam
Fri	19		16		13	Fourth Onam
Sat	20		17		14	
Sun	21		18		15	Onam Vacation ends
Mon	22	Commencement of Classes S1	19		16	Classes reopens
Tue	23		20		17	Exam Registrations begins
Wed	24		21		18	
Thu	25		22	Course-Sel,Reg.& Mapping ends	19	
Fri	26		23	Sreekrishna Jayanthi	20	
Sat	27		24		21	SN Guru Samadhi Day
Sun	28		25		22	
Mon	29		26		23	Test 1 to be Completed
Tue	30		27		24	
Wed	31	Karkadaka Vavu	28	Birthday of Ayyankali	25	
Thu			29		26	
Fri			30		27	
Sat			31		28	Sports Meet to Complete
Sun					29	
Mon					30	

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Academic Calendar July 2019– June 2020

Day		Oct-19	Nov-19		Dec-19
Tue	1	Exam Registration ends			
Wed	2	Gandhi Jayanthi			
Thu	3				
Fri	4		1		
Sat	5		2		
Sun	6		3	1	
Mon	7	Mahanavami	4	2	Last date for forwarding IA marks & Attendance to Uty of all programs
Tue	8	Vijayadasami	5	3	
Wed	9		6	Test 2 to be Completed	4 Exam S7 B.Tech and S3 M.Tech Begins
Thu	10		7		5 Exam S3 B.Tech & S1 M.Tech
Fri	11		8		6 Exam S5 B.Tech begins
Sat	12		9		7
Sun	13		10		8
Mon	14		11		9
Tue	15		12		10
Wed	16		13		11
Thu	17		14		12
Fri	18		15	Class ends for S1 Publish attendance	13
Sat	19		16		14
Sun	20		17		15
Mon	21		18	Publish IA Marks for all programs	16 Commence of classes S2
Tue	22		19	Start date for forwarding IA marks & Attendance to Uty of S1	17
Wed	23		20		18
Thu	24		21		19
Fri	25		22	Last date for forwarding IA marks & Attendance to Uty of S1	20
Sat	26		23		21 X' mas vacation begins
Sun	27	Deepavali	24		22
Mon	28	Sports Meet (Zon. Lev) To be Completed	25	Class ends for all other Programs, publish attendace	23
Tue	29		26	Start date for forwarding IA Marks & attendance to Uty of all other Programs	24
Wed	30		27	Exam S1/S8 Begins	25 Christmas
Thu	31		28		26
Fri			29		27
Sat			30		28
Sun					29
					30 Re-opening
					31

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Academic Calendar July 2019– June 2020

Day		Jan-20		Feb-20
Sun				
Mon				
Tue				
Wed	1			
Thu	2	Mannam Jayanthi		
Fri	3			
Sat	4		1	
Sun	5		2	
Mon	6	Commencement of Classes for all other programs	3	
Tue	7		4	
Wed	8		5	
Thu	9		6	
Fri	10		7	
Sat	11		8	
Sun	12		9	
Mon	13		10	
Tue	14		11	
Wed	15		12	
Thu	16		13	
Fri	17		14	
Sat	18		15	
Sun	19		16	
Mon	20		17	
Tue	21		18	
Wed	22		19	
Thu	23		20	
Fri	24		21	Maha Shivarathri
Sat	25		22	
Sun	26	Republic Day	23	
Mon	27		24	
Tue	28		25	
Wed	29		26	
Thu	30		27	
Fri	31		28	

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 conform 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 this and 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 marks 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:- Marks: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	GradePoint	% 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.

$SGPA = \frac{\sum(C_i \times GP_i)}{\sum C_i}$ where C_i is the credit assigned for a course and GP_i is the grade point for that course. Summation is done for all courses registered by the student in the semester. Here the failed courses are also accounted.

$CGPA = \frac{\sum(C_i \times GP_i)}{\sum C_i}$ where C_i is the credit assigned for a course and GP_i is the grade point for that course. Summation is done for all courses 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.

