# DEPARTMENT OF MECHANICAL ENGINEERING

# INFORMATION BULLETIN 2019-2020



# GOVERNMENT ENGINEERING COLLEGE PALAKKAD SREEKRISHNAPURAM

PALAKKAD 695035
KERALA, INDIA
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# 1 COLLEGE AT A GLANCE

## 1.1 Introduction

Government Engineering College, Sreekrishnapuram, Palakkad was established bythe Government of Kerala in the academic year 1999-2000. Within a shortspan of time since inception, the college has achieved notable academicexcellence. The college has been affiliated to the A.P.J. Abdul Kalam Kerala Technological University (KTU). It is under the administrativecontrol of the Director of Technical Education, Government of Kerala. The present principal is Dr. P.C. Reghuraj.

The college offers 4-year full-time B.Tech courses in the following branches: 1. Computer Science and Engineering, 2. Electronics and Communication Engineering, 3. Information Technology 4. Mechanical Engineering, 5. Electrical and Electronics Engineering and M.Tech course in Computational Linguistics

## 1.2 Location

The campus is situated in Palakkad district at awalking distance from Mannampatta junction. It is only 25 km from the Ottapalam railway station and 35 km from Palakkadrailway station. The nearest bus station is the 1 km away.

## 1.3 Governance

The college is functioning under administrative control of Department of Higher Education, Govt. of Kerala.

## Board of Governors

The Governance of the institution is done under the guidance of Board ofGovernors. The governing body of the institution is collectively responsiblefor overseeing the institutions' activities, determining its future direction,and fostering an environment in which the institutional mission is achieved.

The BoG of the institution is chaired by . Dr. A. K. Nandakumaran, Professor, Dept. of Mathematics, IISc Bangalore

| | | | |
|---|---|---|---|
| 1 | Dr. A. K. Nandakumaran, Professor, Dept. of Mathematics, IISc Bangalore, E-Mail: nands@math.iisc.ernet.in, Ph:8023517577 | Chairperson | Educationalist |
| 2 | Dr. K P Indiradevi Director of Technical Education DTE, Thiruvananthapuram. Email: indiradevikp@gmail.com | Member | (Ex-officio) Educationalist |
| 3 | Dr Jayakumar .S (Ex-officio) Director SPFU Email: spfu.teqip.kerala@gmail.com | Member | (Ex-officio) Educationalist |
| 4 | Dr.Asokan.T Professor, Mechanical Dept. IIT Madras,Email : asok@iitm.ac.in | Member | Educationalist |

| | | | |
|---|---|---|---|
| 5 | Joint Secretary/Additional Secretary Higher Education Dept. Thiruvananthapuram | Member | (Ex-officio) State Government Nominee |
| 6 | Dr.RameshUnnikrishnan Regional Officer & Director, AICTE- South Western Regional Office (SWRO) Trivandrum, Email : rameshtrivandrum@rediffmail.com | Member | Educationalist (AICTE Nominee) |
| 7 | Dr. B.S. Manoj, Professor& Head (Avionics / Computer Networking), Indian Institute of Space Science and Technology, Thiruvananthapuram E-Mail: bsmanoj@ieee.org, Ph: 9400016607. | Member | Educationalist |
| 8 | Joint Secretary/Additional Secretary, Finance Dept. Thiruvananthapuram.E-mail:ganiloffice@gmail.com, | Member | (Ex-officio) State Government Nominee |
| 9 | Controller of Examination KTU,Email: controller@ktu.edu.in | Member | University Nominee |
| 10 | Dr. P C. Reghu Raj Principal, GEC Sreekrishnapuram, Palakkad. E-Mail:pcreghu@gmail.com, Ph: 9447315446. | Member Secretary | (Ex-officio) Educationalist |
| 11 | Dr. P C Rafeeque Professor and Head- CSE Dept. GEC, Sreekrishnapuram, Palakkad E-Mail: rafeeqpc@yahoo.co.in, Ph: 9495785370. | Institutional Member | Educationalist |
| 12 | Dr. K.R.Jayadevan Professor and Head- ME Dept. GEC, Sreekrishnapuram, Palakkad. E-Mail:jayadevankr@gecskp.ac.in. Ph: 9447236580 | Institutional Member | Educationalist |

**Vision of the Institute**

Excellence through the wings of science and technology.

**Mission of the institute**

To transform youth to talented engineers with creativity and integrity who can meet the technological challenges for the service of society.

*Department of Mechanical Engineering | Government Engineering College, Palakkad*

# 2 DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering at Government EngineeringCollege, Sreekrishnapuram hill was established in the academic year 2012 and is now headed by Dr. K.R. Jayadevan. The department offers a four-yearB.Tech course in Mechanical Engineering. The faculty of MechanicalEngineering are well qualified and academic as well as industrial expertise is not at dearth.

**Vision of the Department**

To become a recognised center for imparting outstanding education, research, and consultancy in Mechanical Engineering.

**Mission of the Department**

- Impart quality education to mould successful engineers.
- Commitment to continuous improvement in overall quality of teaching, research, and service.
- Provide state-of-the-art infrastructure and research facilities.

**Program Educational Objectives [PEOS]**

PEO-1: Acquire sound knowledge in mechanical engineering to excel in professional life.

PEO-2: Ignite passion for engineering to adapt to changes through lifelong learning.

PEO-3: Instill confidence to take up practical engineering problems, upholding ethical, social, and environmental commitments.

PEO-4: Inculcate team work, leadership, innovation, and entrepreneurship qualities

**Program Specific Outcomes (PSOs)**

PSO-1: Professional competence: Apply engineering knowledge, technical and managerial skills in an engineering industry.

PSO-2: Technical excellence: Create passion in mechanical engineering to pursue higher studies and research.

PSO-3: Social responsibility: Use technology for sustainable development

## 3 FACILITIES

(a) CAD Lab:
Provides training in programming languages such as C and C++, Autocad, Designing, Modelling and analysissoftwares.

(b) Thermal Engineering laboratory:
The lab is equipped with various experimental setups like composite wall, metal rod, lagged pipe, forced convection, free convection, refrigeration test, and multistage compressors, emissivity apparatus, heat pipe apparatus, Stefan BoltzmanHeat Exchanges, Pressure and Temperature and Pressure Calibrators, two stroke and four stroke single cylinder and multicylinder petrol and diesel engine test set up with different types of loading systems, Morse test facility, Retardation test facility, Heat balance test facility, fuel and lubricant properties test facility, compressors and blower.

(c) Instrumentation laboratory:
It is equipped with basic measuring instruments and modern instrumentslike sine bar, profile projector, metallurgical microscope,autocollimator, surface roughness tester,LVDT.strain gauges etc.

(d) Basic mechanical engineering workshops:
Facilities include fitting, carpentry, smithy, foundry, sheet metal, plumbing, welding etc.

(e) Fluid Lab:
The lab is equipped with flow measurement set up's such as orifices, notches, venturimeter, pipe friction apparatus, metacentric height apparatus, Bernoulli's theorem apparatus, Reynolds experiment set up, Pumps and Turbines, Computerised Turbine Test Rigs.

(f) Production engineering lab:

The lab is equipped with Lathe, Milling, shaper, planer, grinding, slotting, drilling, cutting and CNC lathe

## 4. KERALA TECHNOLOGICAL UNIVERSITY ORDINANCE
## (B.Tech 2016 Scheme)

### 4.1 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 toB.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 Commissioner 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) Notwithstanding all that is stated above, the admission policy may be modified from time to time by the University, particularly to confirm to directions from the Government of Kerala and the Government of India.

(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.

### 4.2 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 percent in each course. Further, the internal evaluation marks in the course should be 45 percent 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 percent 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.

### 4.3 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 forthe branch of study.

iii) No pending disciplinary action.

## 4.4 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.

## 4.5 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.

## 4.6 Breach of guidelines and unfair practices in Examinations

These are viewed seriously and appropriate actions are to be taken by the colleges.

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.

# 5. ACADEMIC CALENDER

## APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
### Academic Calendar - Jul 2019 to Jan 2020
(B.Tech, B.Arch, BHMCT, B.DeS, M.Tech, M.Arch, M.Planning, MCA and Evening B.Tech & M.Tech)

Please see separate Academic Calendar for MBA

(Bold Numbers in Class indicates Instructional days)   Page 1/3

| Jul-19 Days | Date | Description | Class | Aug-19 Days | Date | Description | Class | Sep-19 Days | Date | Description | Class | Oct-19 Days | Date | Description | Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mon | 1 | | | Thu | 1 | Commencement of Classess for all other programs | 8 | Sun | 1 | | | Tue | 1 | Exam Registration ends | 43 |
| Tue | 2 | | | Fri | 2 | | 9 | Mon | 2 | | 27 | Wed | 2 | Gandhi Jayanthi | |
| Wed | 3 | | | Sat | 3 | | | Tue | 3 | | 28 | Thu | 3 | | 44 |
| Thu | 4 | | | Sun | 4 | | | Wed | 4 | | 29 | Fri | 4 | | 45 |
| Fri | 5 | | | Mon | 5 | | 10 | Thu | 5 | | 30 | Sat | 5 | | |
| Sat | 6 | | | Tue | 6 | | 11 | Fri | 6 | | 31 | Sun | 6 | | |
| Sun | 7 | | | Wed | 7 | | 12 | Sat | 7 | Onam Vacation begins | | Mon | 7 | Mahanavami | |
| Mon | 8 | | | Thu | 8 | | 13 | Sun | 8 | | | Tue | 8 | Vijayadasami | |
| Tue | 9 | | | Fri | 9 | Induction program ends: S1 B.Tech | 14 | Mon | 9 | Muharam | | Wed | 9 | | 46 |
| Wed | 10 | | | Sat | 10 | | | Tue | 10 | First Onam | | Thu | 10 | | 47 |
| Thu | 11 | | | Sun | 11 | | | Wed | 11 | Thiruvonam | | Fri | 11 | | 48 |
| Fri | 12 | | | Mon | 12 | Course-Sel, Reg & Mapping begins | 15 | Thu | 12 | Third Onam | | Sat | 12 | | |
| Sat | 13 | | | Tue | 13 | | 16 | Fri | 13 | Fourth Onam | | Sun | 13 | | |
| Sun | 14 | | | Wed | 14 | | 17 | Sat | 14 | | | Mon | 14 | | 49 |
| Mon | 15 | | | Thu | 15 | Independence Day | | Sun | 15 | Onam Vacation ends | | Tue | 15 | | 50 |
| Tue | 16 | | | Fri | 16 | | 18 | Mon | 16 | Classes reopens | 32 | Wed | 16 | | 51 |
| Wed | 17 | | | Sat | 17 | | | Tue | 17 | Exam Registration begins | 33 | Thu | 17 | | 52 |
| Thu | 18 | | | Sun | 18 | | | Wed | 18 | | 34 | Fri | 18 | | 53 |
| Fri | 19 | | | Mon | 19 | | 19 | Thu | 19 | | 35 | Sat | 19 | | |
| Sat | 20 | | | Tue | 20 | | 20 | Fri | 20 | | 36 | Sun | 20 | | |
| Sun | 21 | | | Wed | 21 | | 21 | Sat | 21 | Sree Narayana Guru Samadhi Day | | Mon | 21 | | 54 |
| Mon | 22 | Commencement of Classess S1 B.Tech/B.Arch | 1 | Thu | 22 | Course-Sel, Reg & Mapping ends | 22 | Sun | 22 | | | Tue | 22 | | 55 |
| Tue | 23 | | 2 | Fri | 23 | Sreekrishna Jayanthi | | Mon | 23 | Test 1 to be Completed | 37 | Wed | 23 | | 56 |
| Wed | 24 | | 3 | Sat | 24 | | | Tue | 24 | | 38 | Thu | 24 | | 57 |
| Thu | 25 | | 4 | Sun | 25 | | | Wed | 25 | | 39 | Fri | 25 | | 58 |
| Fri | 26 | | 5 | Mon | 26 | | 23 | Thu | 26 | | 40 | Sat | 26 | | |
| Sat | 27 | | | Tue | 27 | | 24 | Fri | 27 | | 41 | Sun | 27 | Deepavali | |
| Sun | 28 | | | Wed | 28 | Birthday of Ayyankali | | Sat | 28 | Sports Meet (Coll. level) to complete | | Mon | 28 | Sports Meet (Zon. level) to complete | 59 |
| Mon | 29 | | 6 | Thu | 29 | | 25 | Sun | 29 | | | Tue | 29 | | 60 |
| Tue | 30 | | 7 | Fri | 30 | | 26 | Mon | 30 | | 42 | Wed | 30 | | 61 |
| Wed | 31 | Karkadaka Vavu | | Sat | 31 | | | | | | | Thu | 31 | | 62 |

# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

## Academic Calendar - Jul 2019 to Jan 2020

(B.Tech, B.Arch, BHMCT, B.DeS, M.Tech, M.Arch, M.Planning, MCA and Evening B.Tech & M.Tech)

**Please see separate Academic Calendar for MBA**

(Bold Numbers in Class indicates Instructional days)

| Nov-19 Days | Date | Description | Class | Dec-19 Days | Date | Description | Class | Jan-20 Days | Date | Description | Class | Feb-20 Days | Date | Description | Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fri | 1 | | 63 | Sun | 1 | | | Wed | 1 | S7 B.Arch: Jury for training | | Sat | 1 | | |
| Sat | 2 | | | Mon | 2 | Last date for Forwarding IA Marks & Attendance to Uty of all Programs | | Thu | 2 | Mannam Jayanthi | | Sun | 2 | | |
| Sun | 3 | | | Tue | 3 | | | Fri | 3 | | | Mon | 3 | | |
| Mon | 4 | | 64 | Wed | 4 | Exam S7B.Tech, S7B.Arch, MCA5 and S3 PG Begins | | Sat | 4 | | | Tue | 4 | | |
| Tue | 5 | | 65 | Thu | 5 | Exam S3 B.Tech, S3B.Arch, S3BHMCT, MCA3, MCA 7and S1 PG Begins | | Sun | 5 | | | Wed | 5 | | |
| Wed | 6 | Test 2 to be Completed | 66 | Fri | 6 | Exam S5 B.Tech, S5B.Arch, S1 BHMCT S1 B.DeS and MCA1 Begins | | Mon | 6 | Commencement of classess for all other programs | | Thu | 6 | | |
| Thu | 7 | | 67 | Sat | 7 | | | Tue | 7 | | | Fri | 7 | | |
| Fri | 8 | | 68 | Sun | 8 | | | Wed | 8 | | | Sat | 8 | | |
| Sat | 9 | | | Mon | 9 | | | Thu | 9 | | | Sun | 9 | | |
| Sun | 10 | | | Tue | 10 | | | Fri | 10 | | | Mon | 10 | | |
| Mon | 11 | | 69 | Wed | 11 | | | Sat | 11 | | | Tue | 11 | | |
| Tue | 12 | | 70 | Thu | 12 | | | Sun | 12 | | | Wed | 12 | | |
| Wed | 13 | | 71 | Fri | 13 | | | Mon | 13 | | | Thu | 13 | | |
| Thu | 14 | | 72 | Sat | 14 | | | Tue | 14 | | | Fri | 14 | | |
| Fri | 15 | Class ends for S1 B.Tech/B.Arch, Publish attendance | 73 | Sun | 15 | | | Wed | 15 | | | Sat | 15 | | |
| Sat | 16 | | | Mon | 16 | Commencement of classess S2 B.Tech/B.Arch | | Thu | 16 | | | Sun | 16 | | |
| Sun | 17 | | | Tue | 17 | | | Fri | 17 | | | Mon | 17 | | |
| Mon | 18 | Publish IA Marks for all programs | 74 | Wed | 18 | | | Sat | 18 | | | Tue | 18 | | |
| Tue | 19 | Start date for Forwarding IA marks & Attendance to Uty of S1 B.Tech/B.Arch | 75 | Thu | 19 | | | Sun | 19 | | | Wed | 19 | | |
| Wed | 20 | | 76 | Fri | 20 | | | Mon | 20 | | | Thu | 20 | | |
| Thu | 21 | Last date for evaluation of Jury(B.Arch) | 77 | Sat | 21 | Christmas Vacation begins | | Tue | 21 | | | Fri | 21 | Maha Shivarathri | |
| Fri | 22 | Last date for Forwarding IA marks & Attendance to Uty of S1 B.Tech/B.Arch | 78 | Sun | 22 | | | Wed | 22 | | | Sat | 22 | | |
| Sat | 23 | | | Mon | 23 | | | Thu | 23 | | | Sun | 23 | | |
| Sun | 24 | | | Tue | 24 | | | Fri | 24 | | | Mon | 24 | | |
| Mon | 25 | Class ends for all other programs, publish attendance | 79 | Wed | 25 | Christmas | | Sat | 25 | | | Tue | 25 | | |
| Tue | 26 | Start date for Forwarding IA Marks & Attendance to Uty of all other Programs | | Thu | 26 | | | Sun | 26 | Republic Day | | Wed | 26 | | |
| Wed | 27 | Exam S1/S8 B.Tech, S1 B.Arch Begins | | Fri | 27 | | | Mon | 27 | | | Thu | 27 | | |
| Thu | 28 | Last date for uploading Jury Marks (B.Arch) | | Sat | 28 | | | Tue | 28 | | | Fri | 28 | | |
| Fri | 29 | | | Sun | 29 | | | Wed | 29 | | | | | | |
| Sat | 30 | | | Mon | 30 | Classes reopens, Reporting S7 B.Arch to College after training | | Thu | 30 | | | | | | |
| | | | | Tue | 31 | | | Fri | 31 | | | | | | |

# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
## Academic Calendar: July 2019 to Jan 2020
(B.Tech, B.Arch, BHMCT, B.DeS, M.Tech, M.Arch, M.Planning, MCA and Evening B.Tech & M.Tech)

Please see separate Academic Calendar for MBA

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| Sl. No. | Events | Important Dates |
|---|---|---|
| | **ODD SEMESTER (2019-2020)** | |
| 1(a) | Commencement of ODD Semester Classes S1 B.Tech, S1 B.Arch | July 22, 2019 |
| (b) | Induction Program for S1 B.Tech | July 22 to Aug 9, 2019 |
| (c) | Commencement of ODD Semester for all other programs | Aug 1, 2019 |
| (d) | Commencement of S1 B.Tech regular class | Aug 12, 2019 |
| 2 | Course Committee/Class Committee Meeting | Aug 14 - 19, 2019 |
| 3 | Course selection, Course Registration, Course Mapping | Aug 12 -22, 2019 |
| 4 | Exam Registration | Sept 17 - Oct 1, 2019 |
| 5 | Test 1 to be completed | Sept 23, 2019 |
| 6 | College Level Sports to be completed | Sept 28, 2019 |
| 7 | Zonal level Sports Fest To be completed | Oct 28, 2019 |
| 8 | Test 2 to be completed | Nov 6, 2019 |
| 9 | Course Committee/Class Committee Meeting | Nov 4 -8, 2019 |
| 10 | Classes Ends for S1 B.Tech/B.Arch and Publish Attendance | Nov 15, 2019 |
| 11 | Publication of IA Marks of all programs | Nov 18, 2019 |
| 12 | Submission of IA marks & Attendance by Colleges to University of S1 B.Tech/B.Arch | Nov 19 - 22, 2019 |
| 13 | Last date for evaluation of Jury(B.Arch) | Nov 21, 2019 |
| 14 | Classes (EVEN Semester)Ends for all other programs and Publication of Attendance | Nov 25, 2019 |
| 15 | End Semester Examination S1 B.Tech/B.Arch, S8 B.Tech ( Time Table will be published later) | Nov 27, 2019 |
| 16 | Submission of IA Marks & Attendance by Colleges to University of all other programs | Nov 26 - Dec 2, 2019 |
| 17 | Last date for uploading of marks of Jury (B.Arch) | Nov 28, 2019 |
| 18 | Exam S7B.Tech, S7B.Arch, MCA5 and S3 PG Begins ( Time Table will be published later) | Dec 4, 2019 |
| 19 | Exam S3 B.Tech, S3B.Arch, S3BHMCT, MCA3, MCA 7 and S1 PG Begins ( Time Table will be published later) | Dec 5, 2019 |
| 20 | Exam S5 B.Tech, S5B.Arch, S1 BHMCT S1 B.DeS and MCA1 Begins ( Time Table will be published later) | Dec 6, 2019 |
| 21 | Commencement of classess S2 B.Tech/B.Arch | Dec 16, 2019 |
| 22 | Reporting the college after training by S7 B.Arch students | Dec 30, 2019 |
| 23 | Jury for the Training: S7 B.Arch | Jan 1-3, 2020 |
| 24 | Registration by S7 B.Arch students to S8 B.Arch | Jan 6, 2020 |
| 25 | Commencement of classess for all other programs | Jan 6, 2020 |

## 6. CURRICULUM AND SCHEME OF EXAMINATION
**B.Tech Degree Course (2019 Scheme)**

**SEMESTER I**

| SLOT | COURSE NO. | COURSES | L-T-P | HOURS | CREDIT |
|------|-----------|---------|-------|-------|--------|
| A | MAT 101 | LINEAR ALGEBRA AND CALCULUS | 3-1-0 | 4 | 4 |
| B 1/2 | PHT 110 | ENGINEERING PHYSICS B | 3-1-0 | 4 | 4 |
| | CYT 100 | ENGINEERING CHEMISTRY | 3-1-0 | 4 | 4 |
| C 1/2 | EST 100 | ENGINEERING MECHANICS | 2-1-0 | 3 | 3 |
| | EST 110 | ENGINEERING GRAPHICS | 2-0-2 | 4 | 3 |
| D 1/2 | EST 120 | BASICS OF CIVIL & MECHANICAL ENGINEERING | 4-0-0 | 4 | 4 |
| | EST 130 | BASICS OF ELECTRICAL & ELECTRONICS ENGINEERING | 4-0-0 | 4 | 4 |
| E | HUT 101 | LIFE SKILLS | 2-0-2 | 4 | -- |
| S 1/2 | PHL 120 | ENGINEERING PHYSICS LAB | 0-0-2 | 2 | 1 |
| | CYL 120 | ENGINEERING CHEMISTRY LAB | 0-0-2 | 2 | 1 |
| T 1/2 | ESL 120 | CIVIL & MECHANICAL WORKSHOP | 0-0-2 | 2 | 1 |
| | ESL 130 | ELECTRICAL & ELECTRONICS WORKSHOP | 0-0-2 | 2 | 1 |
| | | **TOTAL** | | **23/24 \*** | **17** |

*Department of Mechanical Engineering | Government Engineering College, Palakkad*

## SEMESTER II

| SLOT | COURSE NO. | COURSES | L-T-P | HOURS | CREDIT |
|------|-----------|---------|-------|-------|--------|
| A | MAT 102 | VECTOR CALCULUS, DIFFERENTIAL EQUATIONS AND TRANSFORMS | 3-1-0 | 4 | 4 |
| B 1/2 | PHT 110 | ENGINEERING PHYSICS B | 3-1-0 | 4 | 4 |
| | CYT 100 | ENGINEERING CHEMISTRY | 3-1-0 | 4 | 4 |
| C 1/2 | EST 100 | ENGINEERING MECHANICS | 2-1-0 | 3 | 3 |
| | EST 110 | ENGINEERING GRAPHICS | 2-0-2 | 4 | 3 |
| D 1/2 | EST 120 | BASICS OF CIVIL & MECHANICAL ENGINEERING | 4-0-0 | 4 | 4 |
| | EST 130 | BASICS OF ELECTRICAL & ELECTRONICS ENGINEERING | 4-0-0 | 4 | 4 |
| E | HUT 102 | PROFESSIONAL COMMUNICATION | 2-0-2 | 4 | -- |
| F | EST 102 | PROGRAMMING IN C | 2-1-2 | 5 | 4 |
| S 1/2 | PHL 120 | ENGINEERING PHYSICS LAB | 0-0-2 | 2 | 1 |
| | CYL 120 | ENGINEERING CHEMISTRY LAB | 0-0-2 | 2 | 1 |
| T 1/2 | ESL 120 | CIVIL & MECHANICAL WORKSHOP | 0-0-2 | 2 | 1 |
| | ESL 130 | ELECTRICAL & ELECTRONICS WORKSHOP | 0-0-2 | 2 | 1 |
| | | **TOTAL** | | **28/29** | **21** |

**B.Tech Degree Course (Mechanical Engineering) (2016 Scheme)**

**SEMESTER III:**

| Course code | Course name | L-T-P | Credits | Exam slot |
|---|---|---|---|---|
| MA201 | Linear Algebra and Complex Analysis | 3-1-0 | 4 | A |
| ME201 | Mechanics of Solids | 3-1-0 | 4 | C |
| ME203 | Mechanics of Fluids | 3-1-0 | 4 | C |
| ME205 | Thermodynamics | 3-1-0 | 4 | D |
| ME210 | Metallurgy and Materials Engineering | 3-0-0 | 3 | E |
| HS200/HS210 | Business Economics/Life Skills | 3-0-0/2-0-2 | 3 | F |
| ME231 | Computer Aided Machine Drawing Lab | 0-0-3 | 1 | S |
| CE230 | Material Testing Lab | 0-0-3 | 1 | T |

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

**SEMESTER IV:**

| Course Code | Course Name | L-T-P | Credits | Exam Slot |
|---|---|---|---|---|
| MA202 | Probability Distributions, Transforms and Numerical Methods | 3-1-0 | 4 | A |
| ME202 | Advanced Mechanics of Solids | 3-1-0 | 4 | B |
| ME204 | Thermal Engineering | 3-1-0 | 4 | C |
| ME206 | Fluid Machinery | 2-1-0 | 3 | D |
| ME220 | Manufacturing Technology | 3-0-0 | 3 | E |
| HS210/HS200 | Life Skills/Business Economics | 2-0-2/3-0-0 | 3 | F |
| ME232 | Thermal Engineering Lab | 0-0-3 | 1 | S |
| ME230 | Fluid Mechanics and Machines Lab | 0-0-3 | 1 | T |

Total Credits = 23
Hours 27/28
Cumulative Credits= 94
130

**SEMESTER V:**

| Course Code | Course Name | L-T-P | Credits | Exam Slot |
|---|---|---|---|---|
| ME301 | Mechanics of Machinery | 3-1-0 | 4 | A |
| ME303 | Machine Tools and Digital Manufacturing | 3-0-0 | 3 | B |
| ME305 | Computer Programming and Numerical Methods | 2-1-0 | 3 | C |
| EE311 | Electrical Drives and Control for Automation | 3-0-0 | 3 | D |
| HS300 | Principles of Management | 3-0-0 | 3 | E |
| ME3xx | Elective 1 | 3-0-0 | 3 | F |
| ME341 | Design Project | 0-1-2 | 2 | S |
| EE335 | Electrical and Electronics Lab | 0-0-3 | 1 | T |
| ME331 | Manufacturing Technology Lab 1 | 0-0-3 | 1 | U |

Total Credits = 23
Hours: 28
Cumulative Credits= 117

**Elective 1**
1. ME361 Advanced Fluid Mechanics
2. ME363 Composite Materials and Mechanics
3. ME365 Advanced Metal Casting
4. ME367 Non-Destructive Testing
5. ME369 Tribology
6. ME371 Nuclear Engineering
7. ME373 Human Relations Management

**SEMESTER VI:**

| Course Code | Course Name | L-T-P | Credits | Exam Slot |
|---|---|---|---|---|
| ME302 | Heat and Mass Transfer | 3-1-0 | 4 | A |
| ME304 | Dynamics of Machinery | 2-1-0 | 3 | B |
| ME306 | Advanced Manufacturing Technology | 3-0-0 | 3 | C |
| ME308 | Computer Aided Design and Analysis | 3-0-0 | 3 | D |
| ME312 | Metrology and Instrumentation | 3-0-0 | 3 | E |
| ME3xx | Elective 2 | 3-0-0 | 3 | F |
| ME332 | Computer Aided Design and | 0-0-3 | 1 | S |

| Course Code | Course Name | L-T-P | Credits | Exam Slot |
|---|---|---|---|---|
| | Analysis Lab | | | |
| ME334 | Manufacturing Technology Lab II | 0-0-3 | 1 | T |
| ME352 | Comprehensive Exam | 0-1-1 | 2 | U |

Total Credits = 23
Hours: 27
Cumulative Credits= 140

**Elective 2**

1. ME362 Control System Engineering
2. ME364 Turbo Machinery
3. ME366 Advanced Metal Joining Technology
4. ME368 Marketing Management
5. ME372 Operations Research
6. ME374 Theory of Vibration
7. ME376 Maintenance Engineering

**SEMESTER VII:**

| Course Code | Course Name | L-T-P | Credits | Exam Slot |
|---|---|---|---|---|
| ME401 | Design of Machine Elements 1 | 3-1-0 | 4 | A |
| ME403 | Advanced Energy Engineering | 3-0-0 | 3 | B |
| ME405 | Refrigeration and Air Conditioning | 2-1-0 | 3 | C |
| ME407 | Mechatronics | 3-0-0 | 3 | D |
| ME409 | Compressible Fluid Flow | 2-1-0 | 3 | E |
| ME4xx | Elective 3 | 3-0-0 | 3 | F |
| ME451 | Seminar and Project Preliminary | 0-1-4 | 2 | S |
| ME431 | Mechanical Engineering Lab | 0-0-3 | 1 | T |

Total Credits = 22
Hours: 27
Cumulative Credits= 162

**Elective 3**

1. ME461 Aerospace Engineering
2. ME463 Automobile Engineering
3. ME465 Industrial Hydraulics

4. IE306 Supply Chain and Logistics Management
5. ME467 Cryogenic Engineering
6. ME469 Finite Element Analysis
7. ME471 Optimization Techniques


**SEMESTER VIII:**

| Course Code | Course Name | L-T-P | Credits | Exam Slot |
|---|---|---|---|---|
| ME402 | Design of Machine Elements 11 | 3-0-0 | 3 | A |
| ME404 | Industrial Engineering | 3-0-0 | 3 | B |
| ME4xx | Elective 4 | 3-0-0 | 3 | C |
| | Elective 5(Non Departmental | 3-0-0 | 3 | D |
| ME492 | Project | | 6 | |

Total Credits = 18
Hours: 30
Cumulative Credits= 180

**Elective 4**
1. ME462 Propulsion Engineering
2. ME464 Robotics and Automation
3. ME466 Computational Fluid Dynamics
4. ME468 Nanotechnology
5. ME472 Failure Analysis and Design
6. ME474 Micro and Nano Manufacturing
7. ME476 Material Handling and Facilities Planning

## 7. STAFF DIRECTORY

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