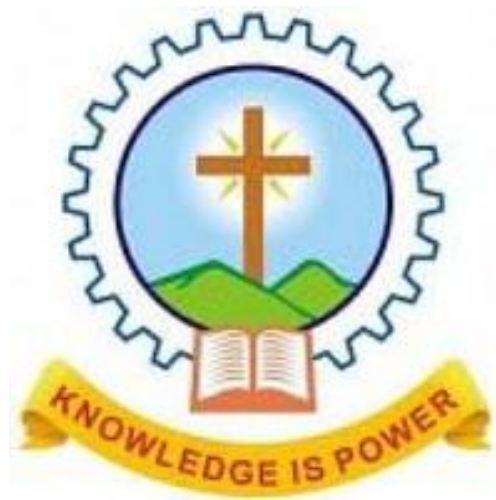# MAR ATHANASIUS COLLEGE OF ENGINEERING

(Government Aided Autonomous Institution)

Kothamangalam 686 666

Affiliated to APJ Abdul Kalam Technological University
Thiruvananthapuram

Academic Regulations 2024

BACHELOR OF TECHNOLOGY (B.Tech)

Preamble

Developing Engineering Professionals with a global perspective and a strong sense of societal responsibility is a complex undertaking. The key to unlock their potential lies in providing them with top-notch technical education that equips them with the necessary knowledge and skills. Furthermore, in this era of rapid technological progress, it is essential for these professionals to possess the ability to work in diverse fields and have a solid grasp of digital tools. This will enable them to navigate the dynamic landscape of technology and make meaningful contributions to their chosen fields.

The Curriculum developed by Mar Athanasius College of Engineering (Autonomous) plays a crucial role in nurturing future professionals with the aforementioned competencies. The curriculum is designed to provide flexibility allowing diverse groups of learners with varying learning capabilities and assimilation levels to engage with the material according to their individual needs. This approach ensures that all students can benefit from the curriculum and acquire the necessary skills and knowledge to become successful professionals in their respective fields.

The carefully crafted framework of 'Regulations' serves as a crucial tool for the effective implementation of the Undergraduate Engineering Education Curriculum. These regulations are designed in a purposeful manner and align with the AICTE Model Curriculum. By adhering to these regulations, the College is empowered to incorporate the key features of the Model Curriculum such as providing hands-on experience for students, preparing them for industry requirements, fostering an entrepreneurial ecosystem, and promoting project-base learning. This ensures that the curriculum is not only comprehensive but also relevant to the needs of the industry, equipping students with the necessary skills and knowledge to thrive in their professional careers.

Mar Athanasius College of Engineering (Autonomous) is committed to implement a student-centered Outcome Based Education (OBE) model. The Academic Regulations have been designed to introduce pedagogical innovations that support the college in effectively implementing OBE practices in tune with National Education Policy (NEP). These regulations emphasize the use of quality-driven instructional methodologies to ensure that students receive a holistic education that aligns with the desired learning outcomes. By adopting this approach, the college aims to enhance the overall learning experience and equip students to meet the demands of the professional world.

Vision and Mission of the College

Vision

Excellence in education through resource integration

Mission

The institution is committed to transform itself into a Center of Excellence in Technical Education upholding the motto "Knowledge is Power". This is to be achieved by imparting quality education to mould technically competent professionals with moral integrity, ethical values, and social commitment and by promoting innovative activities in the thrust areas emerging from time to time.

Definitions and Nomenclatures

SI. No	Name	Definition
1	Academic Council	The Academic Council of Mar Athanasius College of Engineering (Autonomous) is the academic body overseeing the academic policies.
2	Board of Studies	Board of Studies of a Department/Programme is responsible for framing and updating course syllabi and evaluation schemes.
3	College	Mar Athanasius College of Engineering, which offers undergraduate and/or postgraduate and/or Ph.D. Programme for obtaining any Degree from the Parent University and which in accordance with the rules and regulations of the University, is recognized as competent to provide for such Programmes/Courses of study and present students undergoing such courses of study for the examination for the award of such Degree.
4	Controller of Examinations (CoE)	An authority delegated by the Principal of the College, responsible for all activities related to the Examinations, publication of results, award of grade sheets etc.
5	Course	Usually referred to as 'subject' is a component of a Programme. All courses need not carry the same weightage. The courses should define learning objectives and learning outcomes. A course may be designed to comprise lectures/tutorials/laboratory work/field work/outreach activities /project work /vocational training/viva-voce/seminars/term papers/ assignments/presentations/self-study etc. or a combination of few of these.
6	Credit	A unit by which the course work is assessed. It determines the number of hours of instructions required per week along with its relevance on that programme.

7	Cumulative Grade Point Average (CGPA)	A measure of overall performance of a student determined by considering all course credits needed for awarding the Degree and their respective grade point
8	Curriculum	Various components/courses studied in each Programme that provide appropriate outcomes in the chosen branch of study
9	Disciplinary Action Committee (DAC)	A college-level body that looks into maintaining discipline and decorous behavior among the students including examination malpractices
10	Dean (Under Graduate Studies)	An authority delegated by principal of the College responsible for all college level UG academic activities
11	Department Advisory Board (DAB)	Department level committee including HoD, an Academician outside the college, Employer, Programme coordinator, NBA and NAAC coordinators and Stream coordinators. The objective of this committee is to analyze the feedback given by the stakeholders, Program Assessment Committee and give proper guidance for the improvement of the various activities that take place in the department.
12	Grade-Letter Grade	An index of the performance of students in a said course. Grades are denoted by letters
13	Grade Point	A numerical weightage allotted to each letter grade on a 10-point scale
14	Head of the Department (HOD)	The authority responsible for Department level academic and non-academic activities
15	Parent University	University to which the College is affiliated - APJ Abdul Kalam Technological University (APJAKTU) Thiruvananthapuram
16	Principal	The Head of the College
17	Programme Assessment Committee (PAC)	Department level committee including HOD, Programme Coordinator, Senior faculty members of department and stream coordinators. The objective of this committee is to monitor and assess the concerned Academic Programme of the department.
18	Programme	An educational Programme leading to award of Degree Certificate
19	Semester Grade Point Average (SGPA)	A measure of academic performance of student/s in a semester

ACADEMIC REGULATIONS FOR B. TECH DEGREE PROGRAMMES - 2024

The regulations are effective from the academic year 2024 - 2025 and applicable to students admitted to Mar Athanasius College of Engineering, Kothamangalam, an Autonomous Institution affiliated to APJ Abdul Kalam Technological University, Thiruvananthapuram, Kerala. The regulations are subjected to amendments as have these been made by the Academic Council of Mar Athanasius College of Engineering (Autonomous) from time to time. Any or all such amendments will be effective from such date to such batches of students as per/ according to the decision of the Academic Council. All the rules and regulations specified here after shall be read as a whole for the purpose of interpretation and incase of any ambiguity, the interpretation of the Academic Council of the college is final.

Mar Athanasius College of Engineering (Autonomous) offers the following four year B.Tech Degree programmes under the parent university APJ Abdul Kalam Technological University, Thiruvananthapuram.

List of B.Tech Programmes Offered	
SI. No	Programme
1	Civil Engineering
2	Mechanical Engineering
3	Electrical and Electronics Engineering
4	Electronics and Communication Engineering
5	Computer Science and Engineering
6	Computer Science and Engineering (Data Science)
7	Artificial Intelligence and Machine Learning

1. Preamble	
R1.1	Academic Council has the right to modify the regulations from time to time.
R1.2	In all matters related to the regulations, the decision of the College and its interpretation given by the Academic Council shall be final.
2. Admission	
R2.1	Admission policy, eligibility for the admission and admission procedure are to be conformed with the directions of the Government of Kerala and parent University – APJ Abdul Kalam Technological University, Thiruvanthapuram.

R2.2	At any time after admission, if it is found that a candidate has not fulfilled any of the requirements stipulated by the College/University or the competent authority concerned, the Principal shall revoke the admission of the candidate and report the matter to the parent university.
R2.3	No student will be permitted to change the branch/stream to which the student is admitted and the admission process is completed by the competent authority for admission.
R2.4	A student admitted to the college must complete all the mandatory requirements of the programme for the successful award of the degree by the parent University.
R2.5	A student admitted to the college will continue to study in the college till the student is permitted for a Twinning Programme(R20.1), Joint Degree Programme(R20.2) or Dual Degree Programme(R20.3) subject to the provisions of the parent University.

3. Structure of B.Tech. Programme.

R3.1	The duration of the B.Tech Program shall be 4 academic years (8 semesters)
R3.2	The maximum duration shall be six academic years spanning 12 semesters.
R3.3	Every academic year shall have two semesters:-Odd semester and Even semester. Each semester shall have minimum of 72 working days. The vacation of the faculty and staff shall be as per the Government orders from time to time.
R3.4	Every branch of the B.Tech Programme shall have a curriculum and syllabi for the courses approved by the Academic Council. Syllabus for any course will be normally modified/updated once in four years. However, the Academic Council has the right to revise/modify the curriculum and syllabus as and when needed depending on the industry requirement. Innovative elective courses can be included as and when required, on the recommendations of the respective Board of Studies and subject to the approval of the Academic Council. All revisions shall be based only on the recommendations of the Board of Studies concerned.

R3.5	The academic programs of the University follow the credit system. BoS can fix credit of particular course based on its relevance and content of the course.The general pattern is as below.	
	1 Hr. Lecture (L) per week	1 Credit
	1 Hr. Tutorial (T) per week	1 Credit
	1 to 2 Hours Practical(P) per week	1 Credit
	3 to 4 Hours Practical(P) per week	2 Credit

R3.6	The curriculum of any branch of the B.Tech. Programme shall have a total of 180 academic credits courses and 6 additional Pass/Fail non-credit courses.

	Every course of B. Tech. Programme shall be placed in one of the nine categories as listed in the table below along with mandatory student activities and internship			
R3.7	S.No.	Category	Course Code	Breakup of Credits
	1	Humanities, Social Sciences and Management	HSMC	9
	2	Basic Science Courses	BSC	28
	3	Engineering Science Courses including workshop, drawing, basics of electrical/mechanical/computer etc.	ESC	5
	4	Professional Core Courses	PCC	80
	5	Program Specific Courses (either offered by the parent department or from another department which are related to the specific program)	PSC	19
	6	Program Elective Courses relevant to chosen specialization/branch	PEC	18
	7	Open Elective Courses – Electives offered by other departments of study and/or thrust areas as specified in the curriculum concerned.	OEC	09
	8	Project work, Seminar, Viva voce and Project internship in Industry/Research labs etc.	PROJ	12
	9	Mandatory Courses [Courses on Environmental Sciences, Constitution of India, Essence of Indian Traditional values and Knowledge etc.] (Pass/Fail)	MC	Non-credit
	10	Mandatory Student Activities	SA	2
	11	Mandatory Internship (2 weeks)	INT	3
			Total Credits	185

R3.8	No semester shall have more than six lecture-based credit courses and two laboratory and/or drawing/seminar/project credit courses in the curriculum. Credit per semester shall not be less than 15 credits or greater than 26 credits and cumulative credits shall not be less than 185 credits.
R3.9	The medium of instruction shall be English. All examinations, project/seminar reports and presentations shall be in English.

	4. Academic Monitoring and Student Support
R4.1	Advisory System: There shall be one Faculty Advisor for a class and a Mentor each for 20 to 25 students in the class. The Principal shall assign a faculty member with minimum three years of experience as the Faculty Advisor in consultation with the Head of the Department concerned.
R4.2	The documents regarding all academic and non-academic matters of students under an advisory group shall be kept under the custody of the Faculty Advisor/Mentor.
R4.3	All the requests/applications from a student or parent to higher officials are to be forwarded/recommended by the student's Faculty Advisor. Students and parents shall first approach their Faculty Advisor for all kinds of advices, clarifications and permissions on academic matters.It is the official responsibility of the institution to provide the required guidance, clarifications and advices to the students and parents strictly based on the prevailing academic regulations.
R4.4	The Faculty Advisor shall arrange separate or combined meetings with Mentors, faculty engaging the courses, parents and students as and when required and discuss the academic progress of the students under their advisory group. The Faculty Advisor shall also offer guidance and help to solve the issues on academic and non-academic matters of the students in their advisory group. Advisory meetings shall preferably be convened; i. Immediately after the commencement of the semester. ii. Immediately after announcing the marks of first internal evaluation test. iii. Before the publication of internal marks The internal marks, activity points earned during the semester and eligibility of attendance will be uploaded in the ERP software of the college only after displaying the same in the department notice board at least for two working days. This is for the information and feedback of the students. Any concerns raised by the students regarding attendance and internal marks and activity points shall be looked into in the combined meetings of the Faculty Advisor, faculty engaging the courses and the students concerned. The Principal/Dean/HOD will ensure the proper redressal of the concerns raised by the students of regarding internal assessment and attendance. The Faculty Advisor shall be the custodian of the minutes and action taken reports of the advisory meetings.
R4.5	The Faculty Advisor shall get approval of the minutes and action taken reports of advisory meetings from the Head of the Department. It shall be the duty of the HOD to produce it before the Academic council as and when required.
R4.6	The Faculty Advisor shall maintain a hard copy of the consolidated statement of attendance, activity points and internal marks of the students in their advisory group. It shall be kept with the HOD without fail for all sort of inspections.
R4.7	Regular communication with the parents regarding the progress in academic matters and other general issues shall be the responsibility of the Faculty Advisor.

R4.8	The Principal shall inform/forward all regulations, guidelines, communications, announcements etc. issued by the regulatory bodies regarding student academic and other matters to the Dean/ HODs/ Faculty Advisor for information and timely action.

5. Academic Auditing

R5.1	There shall be academic auditing at stipulated intervals. The academic auditing shall be conducted jointly by an Internal Quality Assurance Cell (IQAC) and external academic auditors appointed by the Principal. The IQAC shall oversee and monitor all the academic activities including internal evaluations and examinations. IQAC shall prepare academic audit statements in the prescribed formats for each semester at regular intervals. These reports shall be presented to the external academic auditors, who shall use it as reference for independent auditing.
	Academic auditing shall cover: -
	1. Course delivery and adherence to the course plan, syllabus coverage, quality of question papers used for internal examinations, internal evaluation, maintenance of laboratory experimental setups and equipments, practical assignments, mini projects and conduct of practical classes and their evaluation
	2. Co-curricular and Extra-curricular activities available for students, the monitoring mechanism of activity points earned by the students
	3. Academic functioning of the college encompassing students, faculty and college administration covering punctuality, attendance, discipline, academic, environment, learning ecosystem, academic accountability, academic achievements and benchmarking
	4. The audit shall also cover the quality criteria prescribed by NBA/NAAC.

6. Assessment

R6.1	There shall be End Semester Examinations (ESE) in every semester for all courses as prescribed under the respective curriculum, except the Engineering Physics lab, Engineering Chemistry lab and Workshops courses for 1st and 2nd semesters. The End Semester Examinations shall be conducted by the College. Semester classes shall be completed at least ten days before the commencement of the End Semester Examinations.
R6.2	The End Semester Examinations (ESE) shall be held immediately after the completion of odd and even semester classes. Those who failed in ESE can undergo supplementary examinations conducted by the college as per the Examination Manual.

R6.3	Candidates in each semester shall be evaluated both by Continuous Internal Evaluation (CIE) and End Semester Examinations (ESE). The ratio of Continuous Internal Evaluation (CIE) to End Semester Examinations (ESE) shall be as below unless otherwise specified i. Theory Courses : 1:2 ii. Laboratory Courses : 1:2 iii. Pass/ Fail subjects : 1:1 iv. Project : as given in R 6.4 v. Seminar and Project Phase 1 : CIE only

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

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

R6.4

There shall be minimum two internal evaluation tests, each of 1.5 hours duration. First test shall cover module 1 and 2 of the syllabus, second test shall cover module 3 and 4 of the syllabus and each test shall be for 40 marks. Module 5 shall be assessed by assignment/tutorial/quiz. Retest shall be permitted to the students who could not appear for the internal tests due to genuine grounds. Students who have missed either the first or second internal test due to i) Medical Leave ii) Leave approved in advance by HOD, for a retest which shall be conducted soon after the completion of the second test and before the end semester examination. For a student who missed either of the test, the retest will cover both first and second test portions with a maximum of 40 marks for a duration of 1.5 hours. For a student who missed both the tests, the retest will cover the full portion as per the syllabus with maximum 100 marks for a duration of three hours. Three working days shall be utilized for conducting the internal evaluation test.

	Project work	a. Work assessed by the project guide – 30%
		b. Three-member Continuous Internal Evaluation Committee – 40% (Guide shall be one member in the CIE committee)
		c. Final Evaluation by a three-member Committee comprising the Department Project coordinator, Guide and an External expert. The external expert shall be an academician or from industry. The industry expert is preferred: 30%
		d. One third of the project credit shall be completed in VII semester and two third in VIII semester.
		e. Students who undertake projects during their internship may allowed to count these projects as their final year project.
		f. A committee has to be constituted to evaluate the internship. g. students will be permitted to go for internship as per the direction given by the IQAC.
	Seminar	The report and the presentation shall be evaluated by a team of internal members comprising three faculty members based on the style of presentation, technical content, adequacy of reference, depth of knowledge and overall quality of the report. a) Attendance : 10% b) Guide : 20% c) Technical content : 30% d) Presentation : 40%
	The CIE marks for the attendance (20%) for each theory, practical and drawing shall be awarded in full, only if the candidate has secured 90% attendance or above in the subject. If a student has attendance for a subject below 90%, marks shall be awarded proportionally. The CIE marks obtained by the student for all subjects in a semester are to be published at least 5 days before the commencement of the End Semester Examinations. Duty leave shall be accounted for awarding the internal marks for attendance	
R6.5	Students, who have completed a course but could not write the end semester examination, shall be awarded "AB' Grade, provided they meet other eligibility criteria (R6.6). They shall register (exam registration) and appear for the End Semester Examination at the next opportunity and earn the credits without having to register (course registration) for the course again	
R6.6	The main eligibility criteria for registering to the End Semester Examination are attendance in the course and no pending disciplinary action. The minimum attendance for appearing for the End Semester Examination is 75% in each course. Students who do not meet these eligibility criteria are awarded FE grade.	

R6.7	The students with FE grade shall register for the courses during the normal semesters in which the courses are offered. However, for the seventh and eighth semester FE grade students can register for the courses in the next immediate chance, if offered.
R6.8	A student who does not register for all the courses listed in the curriculum for a semester shall not be eligible to enroll for the next higher semester.
R6.9	The maximum number of credits a student can register (course registration) for, in a semester is limited to 9 credits in excess of the total mandatory credits allotted in the curriculum for that semester.
R6.10	A student will be eligible for the award of B. Tech. Degree by the parent University on satisfying the following requirements: 1. Fulfilled all the curriculum requirements within the stipulated duration of the Programme 2. Earned the required minimum credits as specified in the curriculum for the branch of study (R3.6 and R3.7) 3. No pending disciplinary action
R6.11	Students registered for a course have to attend the course regularly and undergo the Continuous Internal Evaluation (CIE) and appear for the End Semester Examinations (ESE). Credits for the course are deemed to be earned only on getting at least a pass grade 'P' or better in the composite evaluation.
R6.12	Pass minimum for a course shall be 40% for the End Semester Examination and 50% of CIE and ESE put together. Letter grade 'F' will be awarded to the student for a course if either his/her/transgender mark for the End Semester Examination (ESE) is below 40 % or the overall mark [Continuous Internal Evaluation (CIE) + End Semester Examination (ESE)] is below 50 %.
R6.13	Students who receive an F grade in the End Semester Examination must retake the examination during the next scheduled opportunity to earn the credits. They will not be permitted to enroll in the course again.
R6.14	Grading is based on the overall % marks obtained by the student in a course, as given in R6.15. The grade card shall only give the grades against the courses the student has registered. Semester grade card will contain the grade for each registered course, Semester Grade Point Average (SGPA) for the semester as well as Cumulative Grade Point Average (CGPA).

R6.15	**Grade and Grade Points**		
	Grades	Grade Point (GP)	% of Total Marks obtained in the course
	S	10	90% and above
	A+	9.0	85% and above but less than 90%
	A	8.5	80% and above but less than 85%
	B+	8.0	75% and above but less than 80%
	B	7.5	70% and above but less than 75%
	C +	7.0	65% and above but less than 70%
	C	6.5	60% and above but less than 65%
	D	6.0	55% and above but less than 60%
	P (Pass)	5.5	50% and above but less than 55%
	F (Fail)	0	Below 50% (CIE + ESE) or Below 40 % for ESE
	FE	0	Failed due to lack of eligibility criteria (R6.6)
	I	0	Completed eligibility criteria but could not register for the examination.
	AB	0	Could not appear for the end semester examination but fulfills the eligibility criteria.
	Classification of B. Tech Degree.	First Class with Distinction	CGPA 8.0 and above
		First Class	CGPA 6.5 and above
	Equivalent percentage mark shall be = 10 * CGPA		

R6.16	**Minimum Cumulative Credit Requirements for Registering to Higher Semesters**				
	Year	Allotted Credits	Cumulative Credits	Minimum Cumulative Credits required for B. Tech	Minimum Cumulative Credits required for B. Tech Lateral Entry.
	First	43	43	Not Applicable	Not Applicable
	Second	47	90	Not Insisted	Not Insisted
	Third	52	142	31 Credits from S1 & S2	Not Insisted
	Fourth	38	180	70 Credits from S1 to S4	31 Credits from S3 to S4

R6.17	There is no provision for improving the grade. However, the student is permitted to check the answer books of the End Semester Examination after the results are declared, on payment of the prescribed fee. Any discrepancy in evaluation could be brought to the notice of the Controller of Examination, who shall initiate appropriate action as per the College Examination Manual.
R.6.18	Revaluation is permitted by remitting the fee prescribed by the competent authority. The student can view the valued answer scripts by applying for a scanned copy of answer script by remitting the requisite fee. The final mark is taken as the average of the mark from the two evaluations, if there is more than one examiner. Any decimal in this case shall be rounded off to the next higher integer. If the difference in marks exceeds 15 % of the maximum marks of the examination, a third valuation will be conducted. If the difference in marks of the first valuation and second valuation exceeds 25% of the number of answer books during the second evaluation, the entire set of answer sheets for the corresponding course should undergo a third valuation. In such cases average of the two closest marks shall be considered. However, if the difference is same, the average of the two highest marks shall be awarded and there will not be further evaluation. The student can challenge the evaluation through the challenge procedure as per the College Examination Manual.
R6.19	Grade cards will be made available in the student login for the registered courses, in every semester. On earning the required credits for the award of degree, the college will issue the final consolidated grade card with CGPA for the B. Tech programme.

R6.20	**Calculation of SGPA/CGPA**
	Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are calculated as follows. $$SGPA = \Sigma(Ci * GPi)/\Sigma Ci$$ where 'Ci' is the credit assigned for a course and 'GPi' is the grade point for that course. Summation is done for all courses specified in the curriculum of that semester. The failed and incomplete courses shall also be considered in the calculation. $$CGPA = \Sigma(Ci * GPi)/\Sigma Ci$$ where 'Ci' is the credit assigned for a course and 'GPi' is the grade point for that course. Summation is done for all courses specified in the curriculum up to that semester for which the 'CGPA' is needed. Here the failed courses shall also be accounted. CGPA for the B. Tech programme is arrived at by considering all course credits that are needed for the degree and their respective grade points. For students admitted under lateral entry scheme, credits for the first and second semester courses shall not be accounted for the calculation of CGPA. Equivalent percentage mark shall be = 10 * CGPA
R6.21	The Principal shall decide the course of action on the issue related to malpractice in examination based on the recommendation of the Disciplinary Action Committee (DAC) as per the prescribed norms in the College Examination Manual. The result of the examination of a student will be withheld on account any one or more of the following conditions a) Case of indiscipline in the examination hall b) Involvement of malpractice in the exam
R6.22	A student should earn 2 credits by actively involving in co-curricular and extra-curricular activities as per the guidelines issued by the Academic Council from time to time. On acquiring minimum 100 activity points, the student earns the two credits which will not be counted for the calculation of CGPA but mandatory for the award of the Degree. The Faculty Advisor is required to keep a file containing verified documentary proofs of activities done by the students. For the students admitted under lateral entry scheme the 2 credits shall be considered to be earned on acquiring 90 activity points.
R6.23	A student has to earn 3 credits by participating in a mandatory two-week internship program. This internship can be completed during any semester break after second semester and before seventh semester.
R6.24	Students have the opportunity to appear for their End Semester Examination (ESE) immediately after the conclusion of the semester. Students receiving F grade are eligible to participate in the SAVE THE YEAR (SAY) examination, which is conducted immediately after the declaration of End Semester Examination results. Students appearing for the SAY examination will be having their grade card reflecting the SAY chance.
R6.25	Supplementary examinations will exclusively take place during the corresponding odd or even semesters. Students who are writing supplementary examinations will not be eligible to participate in the SAY examination.

R6.26	Seventh semester's supplementary examination will be held with the regular examination of the eighth semester. The eighth semester's supplementary examination may be scheduled during the odd semester.
R6.27	Student(s) can use their innovative idea and skill from their second semester to develop a working model or can successfully transfer the idea into an innovative product. The respective project coordinator can recommend this work, scrutinized by Internal Quality Assurance Cell (IQAC) of the college and further approved by the respective HOD or respective HODs if the project is interdisciplinary . The student can use this work to attain the credits for project of the curriculum in seventh and eighth semester.

7. Break of Study

R7.1	A student is permitted to avail break of study: i) In case of accident or serious illness needing prolonged hospitalization and rest ii) In case the student has a bright idea and would like to initiate a start-up venture or develop a product iii) In case of any personal reasons that need a break in study iv) For internship leading to employment For break of study due to illness, student shall submit all necessary medical reports together with the recommendation of the doctor treating him giving definite reasons for break of study and its duration. Before joining back, the student should submit the fitness certificate from the doctor who treated him. Students who want to initiate a start-up venture or a product development, have to submit a project report, clearly indicating the purpose, action plan, technical details, funding details and future plans to the college Principal. The Principal shall evaluate the proposal by constituting an expert team consisting of a technocrat and a bank executive and take an appropriate decision based on the team's recommendation. The break of study for the startup shall be permitted only after the 4th semester for a maximum duration of two semesters. This is however permitted only on successfully completing the courses listed out in the first two semesters. Students who require a break in study due to personal reasons shall convince the Principal on the genuine need for it by giving authentic evidence for the same. Students who require break in study for 'internship leading to employment' shall produce the offer letter obtained from the employer concerned. The principal shall verify the authenticity of the offer and submit the recommendation to the Academic Council sufficiently in advance for approval. Only campus placed students with an annual compensation more than 6 lakhs are eligible to avail this facility. In the semester system followed by the college, break of study for an academic year is the preferred option than break of study for a semester. Students shall have to rejoin on the first working day of the same semester on which the student had started availing the break of study.

	8.Attendance
R8.1	Students are expected to attain 100% attendance for all courses. However, under unavoidable circumstances they are permitted to avail leave. Total leave of absence shall not exceed 25% of the academic contact hours for a course and 75% attendance is mandatory for registering to the end semester examination. On medical ground the 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. This provision is applicable only to any two semesters during the entire program period. In case of prolonged illness, break of study is permitted as per R7.1.
R8.2	The Principal is authorized to grant attendance relaxation in lieu of duty leave to the students in officially sponsored national level competitions/championships/ tournaments when called upon to do so, up to a maximum of 6 days for a semester. Such students should produce the participation certificate and a copy there of signed and forwarded by Faculty Advisor and counter signed by Head of the Department within 10 days of the event. The participation certificate thus produced will be returned to the students after approval of the duty leave by the Head of the Department. Under any circumstances, the Head of the Department shall not consider the certificate if the overall attendance of the student is less than 65% of the total academic contact hours for a course. Late applications received shall not be considered on any account.
R8.3	Principal is authorized to grant attendance relaxation (duty leave) to the students for organizing internal programs /extra or co-curricular activities, up to a maximum of 3 days for a semester. Such students should produce appropriate evidence which is signed and forwarded by the faculty advisor for approval by the Head of the Department concerned. Under any circumstances, the Head of the Department shall not consider the documents, if the overall attendance of the candidate is less than 65% of the total academic contact hours for a course. Late applications received shall not be considered on any account.
	9. Minor in Engineering
R9.1	All B. Tech students are eligible to register for Minor in Engineering.
R9.2	The registration for Minor in Engineering will be along with the registration of the 3rd semester.
R9.3	If a student fails in any course of the minor, the student will not be eligible to continue the B.Tech Minor. However, the additional credits and grades thus earned by the student will be included in the grade card but will not be considered in calculating the CGPA.
R9.4	The student shall earn additional 20 credits to be eligible for the award of B. Tech Degree with Minor.

R9.5	A minimum of 20 credit is required for a candidate (registered for Minor degree) to be eligible for a Minor degree .The credit should be acquired by 2 classroom courses (8 credit), 6 credit for the project (students can complete their project either in seventh or eighth semester) and the additional credits can be acquired either through classroom courses/ MOOC courses(8 week-2 credits, 12 week-3 credits)/ Add on course offered by the department(30 hrs-2 credits) with a maximum credit limited to 30. Add on courses recommended by the Industry Institute Partnership Cell (IIPC) of the college, scrutinized by Internal Quality Assurance Cell (IQAC) of the college and approved by the respective BoS can also be offered as a course with mandatory credit by that department.
R9.6	Curriculum and the syllabus for the courses meant for Minor degree have to be approved by the Board of Studies and the Academic Council.
R9.7	The assessment of the courses other than MOOCs and earning of credits shall be as per R6.1 to R6.23. The assessment and certification of the MOOCs will be as per the prescribed norms of the MOOCs. The candidate shall produce the certification issued by the MOOCs conducting agency in proof of credit attainment.
R9.8	Students are not permitted to switch from one "Minor Basket of Courses" to another basket.
R9.9	Based on the recommendations of the Academic Council of the college, B.Tech degree with a Minor will be awarded by the parent university to the students who fulfill all the academic eligibility requirement for the B.Tech programme and Minor in Engineering

10. B. Tech (Honours)

R10.1	All B.Tech students are eligible to register for B.Tech (Honours). However, the mandatory CGPA at the end of eighth semester shall be 8.5 or higher to be eligible for the award of B. Tech (Honours).
R10.2	The B.Tech (Honours) registration will be along with the registration of the 4th semester.
R10.3	If a student fails in any course including the course chosen for B.Tech (Honours), the student will not be eligible to continue the B.Tech (Honours). However, the additional credits thus earned by the student will be included in the grade card but will not be considered in calculating the CGPA.
R10.4	The student shall earn additional 20 credits to be eligible for the award of B. Tech (Honours) Degree.
R10.5	A minimum of 20 credit will be required for a candidate (registered for Honour degree) to get an Honours degree. The credit should be acquired by 2 classroom courses (8 credit with minimum grade C), 6 credit for the project (students can complete their project either in seventh or eighth semester) and the additional credits can be acquired either through classroom courses/MOOC courses(8 week-2 credits,12 week-3 credits) with a maximum credit limited to 30.

R10.6	The assessment and certification of the MOOCs shall be as per the prescribed norms of the MOOCs. The candidate shall produce the certificate issued by the MOOCs conducting agency in proof of credit attainment.
R10.7	Students are not permitted to switch from one "Honours Basket of Courses" to another basket.
R10.8	There is no additional fee for registration to B.Tech Honours programme.
R10.9	B. Tech (Honours) Degree shall be issued by the parent University to the students who fulfill all the academic eligibility requirements for the B. Tech and B. Tech (Honours) programmes, as per the recommendations of the Academic Council of the college.

11. Grace Marks for Sports /Arts Competitions

R11.1	Only bona-fide, regular candidates are eligible for the award of Grace Marks.
R11.2	The criterion for the award of Grace Marks is representing the parent University in officially sponsored national level competitions/championships/ tournaments when called upon to do so. The student shall get official prior permission from the University for representing the University.
R11.3	The maximum grace marks that can be awarded to a candidate in a particular semester for all activities put together shall be 5% of the aggregate maximum End Semester Examination marks of all theory courses.
R11.4	The maximum grace marks that can be awarded to a student for a theory course in a particular semester for all activities put together shall not exceed 10% of the maximum aggregate marks of End Semester Examination of the course.
R11.5	The Grace Marks shall not be awarded to a student for Practical/ Lab/ Viva Voce/ internal assessment/ Seminar etc even though he/she/transgender fails for the same.
R11.6	Eligible Grace Marks shall be distributed equally on all theory papers/courses of an examination. However, redistribution of Grace Marks shall be allowed only in the case of those courses of an examination for which the candidate has passed. Redistribution is possible from passed courses to failed courses only. Redistribution of Grace Marks is not permissible from failed courses to other courses for a pass.
R11.7	The Grace Marks shall be awarded for all theory papers/courses/subjects in a semester.
R11.8	Redistribution shall be done only for enabling a candidate to obtain the minimum marks required for a pass.
R11.9	Grace Marks shall not be redistributed from one semester to another semester.
R11.10	If the candidate does not secure the minimum marks required for a pass even after effecting redistribution, eligible moderation fixed by the respective board if any, shall be awarded to that candidate in addition to the Grace Marks for a pass.
R11.11	Eligible Grace Marks shall be awarded for the regular examination of the performing semester only. Grace Marks shall not be awarded for supplementary examinations.

R11.12	Grace Marks shall be awarded on the basis of performance in the respective semester.
R11.13	The request for Grace Marks shall be submitted to the principal along with all relevant documents, within the prescribed time limit. The request for Grace Marks received after the time limit shall not be entertained on any account.
R11.14	Only a single highest achievement during the period of a semester shall be considered for awarding the grace marks.
12.Grace Marks for Persons with Disability (PWD)	
R12.1	A person with disability means a person suffering from not less than 40% of any disability as certified by the District Medical Board. To be eligible for the grace marks, the certificate of disability specifying the percentage of disability shall be produced before the Principal at the time of admission.
R12.2	The Grace Marks that can be awarded for PWD candidates shall be 25% of the marks scored by the candidate in each course at the time of finalization of the results.
R12.3	Transfer of marks from one paper to another shall not be permitted. Fractions of marks if any, while computing the Grace Marks shall be rounded off to the next higher integer.
R12.4	PWD candidates who are eligible for Grace Marks shall be awarded Grace Marks for regular and supplementary chances until they pass the whole examination.
R12.5	Grace Marks shall be awarded only for the marks of the End Semester Examinations conducted by the college.
R12.6	The request for Grace Marks shall be submitted to the principal along with all relevant documents, within the prescribed time limit. The request for Grace Marks received after the time limit shall not be entertained on any account.
13. Discipline in Campus	
13.1	The college has a unique mechanism to inculcate discipline among the student. Every student is required to maintain discipline and decorum both inside and out side of the college campus. They shall follow all the rules and regulations and shall not indulge in any activity which can tarnish the reputation of the college/ parent university.
13.2	Ragging of any nature is a criminal and non-bailable offence. Involvement in ragging shall be 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 college along with his parent is required to give an undertaking in this regard and the same is to be submitted at the time of the admission.
13.3	Possession, consumption or distribution of alcoholic drinks or any kind of narcotic or hallucinogenic drugs is prohibited. Violation of this clause will lead to stringent punishment.

14. Redressal of Grievance	
R14.1	The Student Grievance Redressal Committee (SGRC) functions for the redressal of problems reported by the stakeholders of the college in offline/online with the following objectives a) To promote cordial relationship between all stakeholders b) To encourage the students to express their grievance freely and honestly, without any fear of being victimized. c) To advice students of the college to respect the right and dignity of everyone and to stay away from any violence or unlawful behavior against other students, teachers, college administration and not resorting in to any activities that damage the college property. d) To advice all staff members to be affectionate and kind to the students The college Student Grievance Redressal Committee (SGRC) scrutinizes the merit of the complaint or grievance received and will act accordingly as per the college policy in this regard. Student Grievance Redressal Committee (SGRC) shall submit quarterly report to the Principal about the cases attended to and the number of pending cases if any. Any student with a genuine grievance may approach the mentor in person or contact the officer in charge of the Student Grievance Redressal Committee (SGRC) or drop the complaint through online portal. The grievance related to the examination can be represented as per the relevant clauses given in the College Examination Manual.
15. Award of Degree	
R15.1	A student shall be declared to be eligible for the award of the B.Tech degree provided i) The student has pursued the programme of study for not less than four academic years and not more than six academic years ii) The student has earned all 185 (180+5) credits. Grade points obtained in all courses will be considered for the 'award of the class' based on aggregate of grades. The students shall earn 2 credits by earning 100 activity points during the course of study and 3 credits through internship of not less than 14 days. Also, the students should appear and pass all mandatory courses prescribed in the curriculum. iii) Students who have registered for Honours/ Minor Programme have to earn additional 20 credits each, for fulfilling the requirements. iv) The students who have passed all the prescribed examinations in all the 8 semesters within the maximum period of 6 years from the commencement of the first semester to which the candidate was admitted.
R15.2	The degree will be conferred and awarded by the parent university – APJ Abdul Kalam Technological University, Thiruvananthapuram, on recommendation of the Academic Council of the college.

16. Transitory provision	
R16.1	Notwithstanding anything contained in these regulations, the Principal shall, for a period of two years from the date of coming into force of these regulations, has the power to provide by order that these regulations shall be applied with such modifications as may be necessary.
R16.2	Notwithstanding all that has been stated above, the Academic Council of the college has the right to modify any of these regulations, scheme of studies, examinations and assessment system and syllabi from time to time.
17. Amendments to Regulations	
R17.1	The Academic Council of the College may formulate revisions, amendments or change in regulations/ policies based on the industry/societal needs and special cases from time to time.
18. Scope	
R18.1	This Academic Regulations for UG Programme (B.Tech.) should be read as a whole, for the purpose of any interpretation. In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Academic Council will be final.
R18.2	Throughout this document, all gender-specific terms are to be considered to refer to the feminine, the masculine and the trasgender form — except when referring to a particular person.
19. Electives	
R19.1	To offer an elective course, a minimum of 25% of the sanctioned intake of students must select that course. However, the maximum number of students allowed to enroll in the elective is restricted to 75% of the intake, limited to 60 intake.
20. Provisions of Collaboration	
R20.1	**Twinning Programme:** Students enrolled with the college may undertake their programme of study partly in the college and partly in the Foreign Institution, complying with the relevant UGC regulations, subject to the provisions of the parent university.
R20.2	**Joint Degree Programme:** Curriculum shall be designed jointly by the college and and the Foreign Institution, complying with the relevant UGC regulations and subject to the provisions of the parent university.
R20.3	**Dual Degree Programme:** Programme jointly designed and offered by the college and the Foreign Institutions in the same disciplines/subject areas and in the same level, complying with the relevant UGC regulations and subject to the provisions of the parent university.

	Annexure Al — Mandatory Student Activity Guidelines
R A1.1	According to the activity point system, student has to attain a minimum of 100 points during the academic period (from first semester to seventh semester) by participating in various activities. The activities assigned for fetching activity points belong to co-curricular and extra-curricular activity segments. On attaining 100 activity points, 2 credits will be awarded to the student which is mandatory for the award of B.Tech degree. The 2 credits are in addition to the mandatory credit requirement of 180 credits that the student should earn by successfully completing all the courses prescribed in the Curriculum.
R A1.2	The 2 credits are awarded without a grade and will not be accounted for the calculation of Cumulative Grade Point Average (CGPA). However, the consolidated grade card will contain the number activity points earned by the student during the stipulated period of study in his B. Tech Programme.
R A1.3	The major activity segments which a student can participate in are as listed below. (i) National Initiatives (ii) Sports and Games (iii) Cultural Activities (iv) Professional Self Initiatives (v) Entrepreneurship and Innovation (vi) Leadership and Management (vii) Paper publication in Conference proceedings/ Peer reviewed journals The list of activities under each of the above segments for which the students are entitled for the activity points are given in the Hand Book of Rules for assigning Activity points. The level of achievement expected, corresponding activity points, evidence/documentary proof need to be produced to award the points and the minimum duration required for certain activities are also shown in the Hand Book.