

# **REGULATIONS**

**for the**

**B. Tech. Degree Programmes (except Marine Engineering)  
offered under Faculty of Engineering**

**(With effect from 2019 Admissions)**

**COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY  
COCHIN – 682 022**

## **REGULATIONS FOR B. Tech. DEGREE PROGRAMMES UNDER FACULTY OF ENGINEERING**

The following regulations are made applicable to all the B Tech. programmes offered by the University under Faculty of Engineering except Marine Engineering with effect from the academic year 2019-20.

### **1. B Tech. Programme**

The duration of the B Tech. programme shall be eight semesters spanning over four academic years. Each semester shall consist of 15 weeks.

#### **1.1 Branch**

- a) Civil Engineering
- b) Computer Science and Engineering
- c) Electrical and Electronics Engineering
- d) Electronics and Communication Engineering
- e) Information Technology
- f) Mechanical Engineering
- g) Safety and Fire Engineering

#### **1.2 Structure of the B Tech. Programme**

1.2.1 The programme of instruction will consist of the following:

- a) General (common) core courses comprising basic sciences, mathematics, and basic engineering;
- b) Engineering core courses introducing the student to the foundations of engineering in the respective branch;
- c) Elective courses enabling the student to opt and undergo a set of courses of interest to him/her;
- d) Professional practice including project, seminar, and industrial training; and
- e) Humanities courses on soft skills.

1.2.2. Every branch of the B Tech. programme will have a curriculum and syllabus for the courses approved by the Academic Council.

1.2.3. The B Tech. programmes offered by the University Departments/Schools/Cochin University College of Engineering, Kuttanad shall follow the credit system.

1.2.4. The curriculum of any branch of the B Tech. programme shall have a total of 160 credits as minimum.

### 1.3 Course Registration

It is mandatory for the students to register for the courses in each semester.

Before registration, the students should

- a) Clear all dues including any fees to be paid and should not have any disciplinary issues pending.
- b) Meet the requirements regarding the minimum number of credits for promotion stipulated in clause 1.10.

The dates for registration will be announced by the School/College in their academic calendar. Late registration will be allowed up to 7 working days from the commencement of the semester with late registration fee.

### 1.4 Mode of Evaluation

1.4.1. The performance of the students in theory courses will be evaluated based on continuous assessment and semester end examination. In the case of laboratory courses, the evaluation will be based on continuous assessment and semester end assessment which will be carried out internally.

1.4.2. For theory courses, there will be 40% weightage for internal assessment and 60% weightage for semester end examination. For practical courses, continuous assessment and semester end assessment will carry 50% weightage each.

1.4.3. For theory courses, the assessment pattern will be as follows:

#### Continuous Assessment:

- |                           |                       |
|---------------------------|-----------------------|
| a) First Periodical Test  | - Maximum marks: 12.5 |
| b) Second Periodical Test | - Maximum marks: 12.5 |
| c) Assignments            | - Maximum marks: 10   |
| d) Attendance             | - Maximum marks: 5    |

#### Semester End Examination

- a) Exam shall be shall be of 3 hours duration.
- b) Maximum marks: 60

1.4.4. For laboratory courses, the assessment pattern will be as follows:

**Continuous Assessment:**

The marks may be awarded on the basis of the performance of the student in the laboratory sessions. The break-up of marks for continuous assessment of laboratory courses shall be:

- |                              |                     |
|------------------------------|---------------------|
| a) Practical records/Outputs | - Maximum marks: 10 |
| b) Lab work                  | - Maximum marks: 10 |
| c) Attendance                | - Maximum marks: 5  |

**Semester End Assessment:**

The semester end assessment will consist of an examination and a viva voce.

Maximum marks for semester end examination: **25**

1.4.5. At the end of the semester, semester examination will be conducted in all the theory courses offered in the semester and they will be of three hours duration unless otherwise specified. The Controller of Examinations will make necessary arrangements for setting the question papers and valuation of answer books for the semester end examination of theory courses.

1.4.6. The semester end assessment for the laboratory courses shall be conducted internally by the respective department / division with at least two faculty members as examiners. One of the examiners for conducting the semester end laboratory examination shall be at the level of Associate Professor or above in the regular cadre.

1.4.7. In the case of project work, the project guide concerned shall make the continuous assessment. A committee consisting of the Project Coordinator (nominated by the Head of the Department / Division), project guide, and at least one senior faculty member at the level of Associate Professor or above will carry out the final review.

The weightages for the assessment of project work shall be as follows:

Continuous assessment	: 40 percent
Project Report	: 20 percent
Final review	: 40 percent

1.4.8. The Viva-voce examination at the end of VIII semester will be conducted by a panel of three examiners consisting of the Head of the Department/Division or his/her nominee and one senior faculty at the level of Associate Professor or above of the Department/Division and preferably, one external expert.

1.4.9. A candidate shall not be allowed to improve the continuous assessment marks in theory/laboratory courses. A candidate who desires to improve his/her marks in the semester end examination in theory courses shall be permitted to do so in the next available chance. This facility will be available only once for a theory course.

### **1.5 Course Completion and Earning of Credits.**

Students registered for a course have to attend the course regularly and meet the attendance rules of the University and appear for all the internal evaluation procedures for the completion of the course. However, credits can be earned only on completion of the semester end examination and on getting a pass grade. Students, who have completed a course, but could not write the semester end examination for valid reasons, are permitted to write the examination at the next available chance and earn the credits without undergoing the course again.

### **1.6 Eligibility to Appear for the Semester End Examination**

1.6.1 A candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for the completion of a semester.

A student shall secure not less than 75% of overall attendance in a semester taking into account the total number of periods in all courses attended by the candidate as against the total number of periods in all courses offered during that particular semester.

1.6.2 The Principal/Head of the School/College shall have the power to condone shortage of attendance up to 5% (between less than 75% and 70%) in a particular semester due to medical reasons (hospitalization/accident/specific illness) duly verified and recommended by the Head of the Division/Department and on production of medical certificate from a registered medical practitioner endorsed by the University Medical Officer and on payment of the required fee. However, such condonation for shortage of attendance shall be given only twice during the entire duration of the B Tech. programme.

1.6.3 The Vice Chancellor shall have the power to condone shortage of attendance up to additional 5% (between less than 70% and 65%) in a particular semester due to medical reasons (hospitalization/accident/specific illness) duly verified and recommended by the Principal/Head of the School/College and on production of Medical certificate from a registered medical practitioner endorsed by the University Medical Officer and on payment of the required fee. However, such condonation for shortage of attendance shall be given only twice during the entire duration of the B Tech. programme.

1.6.4 Candidates who secure overall attendance of less than 65% (subject to clauses 1.6.2 and 1.6.3 above) will not be permitted to write the semester end examinations and will not be permitted to go to next/subsequent semester. They are required to repeat the incomplete semester in the next academic year.

### **1.7 Eligibility to Write the Supplementary Examination**

Failed candidates and those who could not write the semester end examination due to health reasons or other contingencies that are approved by the Head of the School/College can register for the supplementary examination. Those who wish to improve their performance in the semester end examinations can also register for the same, subject to the provisions of clause 1.4.9. Grades awarded in the supplementary examination will be taken as semester grades in these subjects and will be based on the semester examination grading pattern in that subject. In the case of candidates appearing for improvement of marks, the higher mark obtained will be considered for the purpose of grading.

A candidate who fails to obtain a pass in courses having only continuous assessment will be permitted to repeat the course along with the junior batches.

### **1.8. Revaluation**

A candidate can apply for revaluation of his/her semester end examination answer paper in a theory course, within 2 weeks from the declaration of results, on payment of a prescribed fee along with prescribed application to the Controller of Examinations through the Head of Department/School/College. The Controller of Examination will arrange for the revaluation and the results will be intimated to the candidate concerned through the Head of the Department/School/College. Revaluation is not permitted for laboratory courses, courses having only continuous assessment, seminar and project work.

### **1.9. Pass Requirements**

A candidate has to obtain a minimum of 50% marks for continuous assessment and semester end examination put together with a minimum of 40% marks in the semester end examination for a pass in theory and laboratory courses.

In the case of theory/laboratory courses having only continuous assessment, a candidate has to obtain a minimum of 50% marks in continuous assessment for a pass.

### **1.10 Promotion to Higher Semesters**

A student will be given at least one regular chance and one supplementary chance for the semester end examination of a particular semester in both theory and practical courses to obtain a pass grade before he/she is assessed for promotion to higher semesters.

Promotion to III, V and VII semesters shall be subject to the following conditions:

<b>Promotion to</b>	<b>Minimum number of credits to be earned</b>
III Semester	10 out of 20 credits of Semester I
V Semester	30 out of 60 credits of Semesters I, II, &III

VII Semester	50 out of 100 credits of Semesters I to V
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## 1.11 Grading

1.11.1. Grades shall be awarded to the students in each course based on the total marks obtained in continuous assessment and at the end semester examination and as per the provisions of clause 1.4.1.

The grading pattern shall be as follows:

Marks obtained ( Percentage)	Grade	Grade points
90 to 100	S	10
80 - 90	A	9
70 - 80	B	8
60 - 70	C	7
50 - 60	D	6
< 50	F	0

Note: Where X – Y range denotes ‘X’ inclusive and ‘Y’ exclusive

1.11.2. A student is considered to have credited a course or earned credits in respect of a course if he/she secures a grade other than F for that course.

1.11.3. Grade Point Average.

The academic performance of a student in a semester is indicated by the Grade Point Average (GPA).

$$\text{GPA} = \frac{G_1C_1 + G_2C_2 + G_3C_3 + \dots + G_nC_n}{C_1 + C_2 + C_3 + \dots + C_n}$$

Where ‘G’ refers to the grade point and ‘C’ refers to the credit value of the corresponding course undergone by the student.

The Grade Point Average (GPA) for each semester will be calculated only for those students who have passed all the registered courses of that semester. Similarly, Cumulative Grade Point Average (CGPA) up to any semester will be calculated only for those students who have passed all the courses up to that semester.

1.11.4. Grade Card

The Grade Card issued at the end of the semester to each student by the Controller of Examinations, will contain the following:

- a) The code, title, number of credits of each course registered in the semester,
- b) The letter grade obtained,
- c) The total number of credits earned by the student upto the end of that semester and
- d) GPA & CGPA.

#### 1.11.5. Classification

On successful completion of the programme, CGPA will be calculated as follows:

$$\text{CGPA} = \frac{C_1 \text{GP}_1 + C_2 \text{GP}_2 + C_3 \text{GP}_3 + \dots + C_n \text{GP}_n}{C_1 + C_2 + C_3 + \dots + C_n}$$

Where 'GP' refers to the grade point average (GPA) and 'C' refers to the total number of credits obtained by a student in a particular semester.

The classification based on CGPA is as follows:

CGPA 8 and above : First Class with distinction  
 CGPA 6.5 and above, but less than 8 : First Class  
 CGPA 6 and above, but less than 6.5 : Second Class.

#### 1.11.6. Conversion of GPA/CGPA to Percentage marks

The following formula shall be used to convert the SGPA/CGPA obtained by a student to percentage marks.

$$\text{Percentage marks} = (\text{GPA/CGPA} - 0.5) 10$$

### 1.12 Electives

The curriculum for each programme consists of four Professional Electives and two Open Electives. The students shall select one Open Elective from among the courses offered in that particular semester by a Division/Department other than his/her Division/Department.

### 1.13 Faculty Advisor

To help the students in planning their courses of study and for general advice on the academic programme, the Head of the Department will attach a certain number of students to a teacher of the Department who shall function as Faculty Advisor for these students throughout their period of study. Such Faculty Advisor shall advise the students and monitor the courses taken by the students, check the attendance and progress of the students attached to him/her and counsel them periodically. If necessary, the Faculty Advisor may also discuss with or inform the parents about the progress/performance of the students concerned.



### 1.14 Class Committee

A class committee consists of teachers of the class concerned, student representatives and a chairperson who does not handle any subject for the class. It is like the 'Quality Circle' (more commonly used in industries), with the overall goal of improving the teaching-learning process. The functions of the class committee include:

- a. Solving problems experienced by students in the classroom and in the laboratories in consultation with Head of the Division/Principal/Director.
- b. Clarifying the regulations of the degree programme and the details of rules therein.
- c. Informing the student representatives, the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
- d. Informing the student representatives, the details of regulations regarding weightage used for each assessment.
- e. Discussing in the class committee meeting the breakup of marks for each experiment/exercise/module of work, in case of practical course (laboratory/drawing/project work/seminar etc.) and informing the students.
- f. Analysing the performance of the students of the class after each test and finding ways and means of improving the performance of the students.
- g. Identifying the students who are low achievers or weak in their subjects if any, and requesting the teachers concerned to provide some additional help or guidance or coaching to such students.

The class committee is normally constituted by the Head of the Division. However, if the students of different branches are mixed in each class the class committee is to be constituted by the Principal/Director. The class committee shall be constituted within a week from the date of commencement of a semester. At least 4 student representatives from the respective class (usually 2 boys and 2 girls) shall be included in the class committee. The student representatives shall be nominated on the basis of their academic performance since the first semester of the B Tech. programme. In the case of first and second semesters, the rank obtained in the Common Admission Test (CAT) shall be the criterion for nominating the student representatives. The Chairperson of the class committee may invite the Faculty Advisor(s) and the Head of the Division to the meeting of the class committee. The Chairperson of the class committee is required to prepare the minutes of every meeting, submit the same to the Head of the Division within two days of the meeting and arrange to circulate the same among students concerned and teachers. If there are some points in the minutes requiring action by the University, the same shall be brought to the attention of the Principal/Director and the Registrar.

The first meeting of the class committee shall be held within fifteen days from the date of commencement of the semester. The nature and weightage of internal assessments shall be decided in the first meeting, within the framework of the regulations and the same shall be communicated to the students. Two or three subsequent meetings in a semester may be held at suitable intervals. During these meetings the student members

representing the entire class, shall meaningfully interact and express their opinions and suggestions of the class to improve the effectiveness of the teaching-learning process.

### **1.15. Course Committee for Common Courses**

Each common theory course offered to more than one discipline or group of disciplines shall have a “Common Course Committee” comprising all the teachers teaching the common course with one of them nominated as Common Course Coordinator. The nomination of the Course Coordinator shall be made by the Principal/Director in consultation with Heads of Divisions from among the teachers teaching the common courses. The “Common Course Committee” shall meet as often as possible and ensure uniform evaluation of internal assessments after arriving at a common scheme of evaluation for the tests. Wherever feasible, the common course committee shall prepare a common questionpaper for the test(s).

### **1.16 Discipline**

Every student is required to observe discipline and decorous behavior both inside and outside the campus and refrain from any activity which may tarnish the image of the University as per the provisions of the Cochin University Students’ (Conduct and Disciplinary) Code - 2005. Any act of indiscipline, misbehavior including unfair practice in examinations will be referred to the authorities of the University that will make a detailed enquiry on the matter and decide on the course of action to be taken.

### **1.17 Amendment to Regulations**

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