

REGULATIONS

for the

**B.Tech Degree Programmes offered under
Faculty of Engineering**

(With effect from 2015 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 2015-16.

1. B.Tech Programme

The duration of the B.Tech course shall be eight semesters spanning over four academic years. The teaching programme for 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:

- i) General (common) core courses comprising basic sciences, mathematics, and basic engineering
- ii) Engineering core courses introducing the student to the foundations of engineering in the respective branch;
- iii) Elective courses enabling the student to opt and undergo a set of courses of interest to him/ her;
- iv) Professional practice including project, seminar, and industrial training and
- v) Humanities courses on Communication Skills, Environmental Studies, and Professional Ethics.

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 minimum total of 176 credits.

1.3 Course Registration

It is mandatory for the students to register for the courses in each semester before the commencement of the classes.

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 end semester examination. In the case of practical courses, the evaluation will be based on continuous assessment and end semester 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 end semester examination. For practical courses, continuous assessment and end semester assessment will carry 50% weightage each.

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

Continuous assessment:

1. I Periodical Test – Maximum marks: 12.5
2. II Periodical Test – Maximum marks: 12.5
3. Assignments - Maximum marks: 10
4. Attendance – Maximum marks: 5

The End Semester Examination will be of 3 hours duration.

1.4.4. For each practical course, the assessment pattern will be as follows:

1. Continuous assessment : 25 marks

For 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: 10 marks
- b) Regular Labwork: 10

b) Test: 5 marks

2. End semester assessment: 25 marks

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

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 end semester examination of theory courses.

1.4.6. The end - semester 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 end semester laboratory examination shall be at the level of Assistant 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 will carry out the final review.

The weightages for the reviews shall be as follows:

Continuous assessment: 30 percent

Project Report : 20 percent

Final review: 50 percent

1.4.8. The Viva-voce examination at the end of VIII Semester will be conducted by a panel of examiners consisting of the Head of the Department / Division or his/her nominee and one senior faculty of the Department/Division and 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 end semester 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, earning of credits is only on completion of the semester examination and on getting a pass grade. Students, who have completed a course, but could not write the semester examination for valid reasons, are permitted to write the semester examination at the next opportunity and earn the credits without undergoing the course again. Such students should get the permission from the Controller of Examinations on recommendations from HOD/Principal

1.6 Eligibility to appear for the End Semester Examination

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

Ideally every student is expected to attend all classes and earn 100% attendance. However, in order to allow provision for certain unavoidable reasons such as medical / personal grounds, the student is expected to earn a minimum of 75% attendance. Therefore, he/she shall secure not less than 75% of overall attendance in that 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 percent (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 10 percent (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 The students participating in co-curricular/sports activities representing Department/Division/School/University should produce the participation certificate countersigned by Director Youth welfare/Assistant Director Physical Education within ten days of the event to the respective HOD. Under any circumstances, the certificate will not be considered if the overall attendance of the candidate is less than 65%.

1.6.5 Candidates who secure **less than 65%** overall attendance will not be permitted to write the End-Semester Examinations and are not 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

Supplementary examinations for a particular semester will be conducted along with the regular examination of the next semester.

Failed candidates and those who could not write the semester examination due to health reasons or other contingencies that are approved by the Head of the College/School can register for the supplementary examination. Those who wish to improve their performance in the end semester 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.

1.8. Revaluation

A candidate can apply for revaluation of his/her end semester 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 practical courses, seminar and for project work.

1.9. Pass requirements

A candidate has to obtain a minimum of 50 percent marks for continuous assessment and end semester examination put together with a minimum of 45 percent marks in the end semester examination for a pass in theory and laboratory courses.

1.10 Promotion to Higher Semesters

Promotion from one semester to the next semester shall be subject to the following conditions:

| Promotion to | Minimum number of credits to be earned |
|---------------------|--|
| III Semester | 15 out of 22 credits of Semester I |
| IV Semester | 30 out of 44 credits of Semesters I & II |
| V Semester | 50 out of 66 credits of Semesters I, II, & III |
| VI Semester | 65 out of 88 credits of Semesters I to IV |
| VII Semester | 85 out of 110 credits of Semesters I to V |
| VIII Semester | 100 out of 132 credits of Semesters I to VI. |

1.11 Grading

1.12.1. Grades shall be awarded to the students in each course based on the total marks obtained in continuous assessment and 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- 100 | S | 10 |
| 85-89 | A+ | 9.5 |
| 80-84 | A | 9 |
| 75-79 | B+ | 8.5 |
| 70-74 | B | 8 |
| 65-69 | C+ | 7.5 |
| 60-64 | C | 7 |
| 55-59 | D+ | 6.5 |
| 50-54 | D | 6.0 |
| < 50 | F | 0 |
| Failure due to shortage of attendance | FA | 0 |
| Course incomplete | I | 0 |

1.12.2. 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.

1.12.3. Grade Point Average.

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

$$SGPA = \frac{G1C1 + G2C2 + G3C3 + \dots + GnCn}{C1 + C2 + C3 + \dots + Cn}$$

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

1.12.4. Grade Card

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

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

1.12.5. Classification

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.

1.13 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 of the student will attach a certain number of students to a teacher of the Department who shall function as Faculty Advisor for those 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:

- Solving problems experienced by students in the classroom and in the laboratories in consultation with Head of the Division / principal / Director.
- Clarifying the Regulations of the degree programme and the details of rules therein.
- Informing the student representatives the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
- Informing the student representatives the details of Regulations regarding weightage used for each assessment.
- 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.
- Analyzing the performance of the students of the class after each test and finding ways and means of improving the performance of the students.
- 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 students 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 question paper 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. 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.