



UG Curriculum Revision

First Implementation Committee Meeting



B.TECH DEGREE REQUIREMENT

Departmental Credits

(Core + Elective): **65–80**
(with at least 10 credits as electives)

Outside Department

(BS,EAS, HuSS): **55-70**

Open Category credits: **10**

Non-graded Core

Requirement: **15**

Total **145-155 credits +**
15 non-graded core

The outside Departmental credits

Institute Core Requirement:

- Basic Sciences :** **22 credits**
- Engineering Arts and Science :** **18 credits**
- Humanities & Social Sciences :** **15 credits**

TOTAL : **55 credits**

Programme Requirement

linked Basic Sciences/EA/ES : 15 credits
(maximum)

Basic Science: Suggested Model

Mathematics : **8 credits**

(distributed over two courses of 4 credits each)

Physics: **5 credits**

(a course of 5 credits with a laboratory component of 2 credits)

Chemistry: **5 credits**

(a course of 5 credits with a laboratory component of 2 credits)

Biology: **4 credits**

(a course of 4 credits with laboratory component of 1 credit)

Engineering Arts and Sciences

1. Electrical Engineering Fundamentals: 4 credits
(a lab component of at least 1 credit)
2. Computer Science Fundamentals: 4 credits
(a lab component of at least 1 credit)
3. Fundamentals of Engineering Mechanics: 4 credits
4. Engineering Drawing / Engineering Communication: 2 credits
5. Product Realization/ Manufacturing: 2 credits
6. Environmental Studies 2 credits

HM

- 15 credits based on student's choice

Course offering must enable students to do well balanced mix of courses based upon their choice and pre-requisites so that he/she gets a comprehensive exposure to different aspects of Humanities and Social Sciences as an essential component of Engineering Education.

Programme Linked Credits

- CRC recommends that a **course on Materials** should be an integral component of the B.Tech/Dual Degree curriculum.
 - However, this course must be tailored differently for meeting requirements of different programmes.
- Depending on the departmental curricular requirement, students can also be given the option of doing one or two electives in Basic Sciences and Engineering Arts and Science categories to meet the requirement of programme specific 15 credits.

Non-graded Core

- Introduction to the Engineering & Programme: 02
- Language and Writing Skill: 02
- NCC/NSO/NSS: 02
- Professional ethics & Social Responsibilities: 02
- Communication skill/seminar: 02
- Design/Practical experience: 05
- **Total:** 15

Departmental Specialisation
Minor Area Specialisation



CAPABILITY LINKED OPPORTUNITY

Capability

- Students demonstrating superior academic performance and better capability must be encouraged to take additional credits in a disciplined fashion so that they can add more value to their B.Tech degree.

Add-on

- Students can make use of these additional credits in two blocks of 20 credits to opt for Minor/Interdisciplinary Area Specialisation Departmental Specialisation/Honours
- A student based on his/her performance and interest can choose **either one or both**. Successful completion of minor area credits and/or departmental specialisation will be indicated on the degree.
- A student can utilise 10 credits OC for these purposes

Departmental Specialisation

- Advance Electives
- A project of 6 to 8 credits

For interested students in particular

To create mechanisms to attract our UGs to join and complete post-graduate programmes in fast-track mode consuming less time



SEAMLESS INTEGRATION WITH POST-GRADUATE PROGRAMME

Dual Degree

- Integrated M.Tech to be discontinued
- Dual-Degrees in principle approved
- Details of these schemes in terms of credit requirements, etc. will be considered later, in conjunction with the revision of PG curriculum.
- Dual-Degree credits to be built upon departmental specialisation/minor/inter-disciplinary area credits.

Approved Dual Degree Modes

- (i) B.Tech and M.Tech in the same department
 - Entry At JEE entry – departmental option
- (ii) B.Tech and M.Tech in any relevant programme
 - Entry after 3rd year
- (iii) B.Tech + M.S (research)
 - Entry After 3rd Year
- (iv) B.Tech + Ph.D
 - Special Case of (iii)



ACTION POINTS

Dual Degree

- Departmental Option of running dual degree programme for JEE entry students
- Restructuring of Integrated M.Tech programme
- Detailed Credit Requirements for Dual Degree in sync with 2 year PG programme

Institute Core

- Finalisation of Credit Distribution and formulation of Courses
- Identifying bouquet of Courses and their structure for programme linked BS and EAS courses
- Identifying bouquet of Courses and their structure for HM

Departmental Component

- Specification of Departmental Programme
 - Courses and Credit Structure
- Formulation of the Departmental Specialisation programme
- Offering of Minor Areas and Interdisciplinary areas

Non-graded Core

- Detailed management and delivery process specification for each of Non-graded core component

Scheduling of Courses

- Distribution of credits per semester
- Semester wise scheduling of courses
- Slotting Pattern

Course Content Design

- Fresh Look at courses
 - Overlap issues
- Issues about tutorials and help sessions
- Restructuring the template
 - Design Experience & Communication Skill component

Rules & Regulations

- Per semester minimum credit requirement
- Rules for permissible additional credits for students
 - Re-examine senate approved rule (part of concept paper)
- Identification of Students under probation and termination
- Continuation and entry to Dual Degree

Miscellaneous Issues

- Graduation Requirement
 - DGPA
- Grading Scheme – to have a fresh look?
- Incentives for innovation in course and laboratory courses
- TA utilization scheme



THANK YOU