# B.Tech curriculum

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## General instructions to all B.Tech students

- Students can register elective courses with level of $n$-2 to $n$+2 and $n$ being their year of study
- EM3020 is not a mandatory course. It can be replaced with another FE
- Maximum CA credits allowed: 40% of LA/CA
- Maximum mini project credits allowed - 6
- The maximum credits that can be earned from a semester internship are 6. Permission from the FA and DUGC is necessary to claim these credits.
- Mini projects can be done in semesters 5,6,7 or 8. The course code for odd semester is CH4015 and for even semester its CH4025. The credit for one mini project is 3.
- BT1010, LA1760 and ID4006 are mandatory courses for all B.Tech students.

## Curriculum for 2025 batch onwards

### Semester-I (Total credits=16)

*Basic Sciences*

- EP1108: Modern Physics (2)
- CY1010/CY1018: Environmental Chemistry (2)
- MA1110: Calculus-I (1)
- MA1220: Calculus-II (1)
- CH1120: Applied Chemistry (2)
- BT1010: Introduction to Life Sciences (1)

*Basic Engineering*

- ID1063: Introduction to Programming (3)
- CH1110: Introduction to Chemical Engineering (2)

*Liberal Arts*

- LA1760: Communication Skills (2)

### Semester-II (Total credits=15)

*Basic Sciences*

- CY1031: Chemistry Lab (2)
- MA1140: Elementary Linear Algebra (1)
- MA1150: Differential Equations (1)
- CH1131: Applied Chemistry Lab (1)

*Basic Engineering*

- ID1054: Digital Fabrication (2)
- CH1140: Thermodynamic Laws & Phase Transitions (3)

*Core*

- CH1130: Chemical Process Calculations (2)

*Liberal Arts*

- LAxxxx: LA/CA (3)

### Semester-III (Total credits=17)

*Core*

- CH2110: Biological Engineering (3)
- CH2120: Numerical Methods (3)
- CH2130: Transport Phenomena (3)
- CH2140: Chemical Engineering Thermodynamics (3)
- CH2150: Applied Mathematics in Chemical Engineering (3)

*Liberal Arts*

- LAxxxx: LA/CA (2)

### Semester-IV (Total credits=19)

*Basic Sciences*

- EP1031: Physics Lab (2)

*Basic Engineering*

- ID1050: Artificial Intelligence (1)
- EE1102: Basic Electrical Engineering (3)
- CH2160: Materials Science for Chemical Engineers (2)

*Core*

- CH2170: Chemical Reaction Engineering-I (3)
- CH2180: Heat Transfer (3)
- CH2190: Fluid Mechanics (3)

*Liberal Arts*

- LAxxxx: LA/CA (2)

### Semester-V (Total credits=19)

*Core*

- CH3110: Mass Transfer – I (3)
- CH3120: Mechanical Operations (3)
- CH3130: Chemical Technology (2)
- CH3140: Chemical Reaction Engineering-II (3)
- CH3121: HT & FM Lab (2)

*Departmental Elective*

- CHxxxx: Dept. Electives (6)

### Semester-VI (Total credits=17)

*Core*

- CH3150: Mass Transfer – II (2)
- CH3160: Process Control (3)
- CH3131: MUO and CRE Lab (2)

*Departmental Elective*

- CHxxxx: Dept. Elective (6)

*Free Elective*

- Free Electives-I (4)

### Semester-VII (Total credits=13)

*Core*

- CH4112: Process Design and Economics (3)
- CH4111: Process Simulation Lab (2)
- CH4121: MT and Control Lab (2)

*Departmental Elective*

- CHxxxx: Dept. Electives (3)

*Free Elective*

- Free Elective-II (3)

### Semester-VIII (Total credits=11)

*Core*

- CH4140: Process Intensification (1)

*Liberal Arts*

- ID4006: Ethics and Values (1)

*Departmental Elective*

- CHxxxx: Dept. Electives (3)

*Free Elective*

- Free Electives-III (6)

## Credit distribution, Total =127

- Core: 54
- Basic Engineering: 16
- Basic Sciences: 16
- Liberal Arts: 10
- Departmental Elective: 18
- Free Elective: 13