# PONDICHERRY UNIVERSITY


**BACHELOR OF TECHNOLOGY PROGRAMMES**
**(For Affiliated Colleges)**

**REGULATIONS 2023-24**

## 1. Conditions for Admission

**a) Candidates for admission to the first semester of the 8 semester B.Tech. degree programme should be required to have passed :**

The Higher Secondary Examination of the (10+2) curriculum (Academic Stream) prescribed by the different State Boards/ Central Boards or any other examination equivalent there to with minimum of 45% marks (40% marks in case of candidates belonging to reserved category) in aggregate of subjects – Mathematics, Physics and any one of the following optional subjects: Chemistry / Biotechnology/ Computer Science / IT and equivalent/ Electronics/ Biology (Botany & Zoology) or Passed D.Voc Stream in the same or allied sector or an Examination of any University or Authority recognized by the Executive Council of the Pondicherry University as equivalent thereto.

**b) Candidates for admission through Lateral entry into second year (third semester) of the 8 semester B.Tech. degree programme should be required to have passed :**

Passed Minimum THREE years / TWO years (Lateral Entry) Diploma examination with at least 45% marks (40% marks in case of candidates belonging to reserved category) in ANY branch of Engineering and Technology.

OR

Passed B.Sc. Degree from a recognized University as defined by UGC, with at least 45% marks (40% marks in case of candidates belonging to reserved category) and passed 10+2 examination with Mathematics as a subject.

OR

Passed D.Voc. Stream in the same or allied sector.

(The Universities/colleges will offer suitable bridge courses such as Mathematics, Physics, Engineering drawing, etc., for the students coming from diverse backgrounds to achieve desired learning outcomes of the programme)

## 2. Age Limit

**As per applicable AICTE norms.**

## 3. Duration of Programme

The Bachelor of Technology degree programme shall extend over a period of 8 semesters spread over 4 academic years – two semesters constituting one academic year. The duration of each semester shall normally be 15 weeks excluding examinations.

## 4. Program Structure

The medium of instruction is English.

A student admitted to the B.Tech. programme in a particular branch of engineering will earn the degree in that branch by fulfilling all the requirements prescribed in the regulations during the course of study.

The student is also permitted to opt for earning an **Honors degree in the same discipline of Engineering or a Minor degree** in another discipline of engineering in addition to the degree in his own discipline of engineering. The student will be allowed to exercise this option at the end of first year based on his academic performance in the first year. The students admitted through lateral entry can exercise this option at the end of third semester, based on the GPA scored in the third semester examination.

The student opting for B.Tech. degree with **Honors or B.Tech. degree with Minor** is required to earn additional 20 credits starting from the third semester. The students admitted in the second year through lateral entry and opting for Honors / Minor degree will earn the additional 20 credits starting from the fourth semester.

## 5. Eligibility for the award of B.Tech. Degree

No candidate shall be eligible for the award of the degree of Bachelor of Technology, unless he/she has undergone the course for a period of 8 semesters (4 academic years) / 6 semesters (3 academic years for Lateral Entry candidates) in the Faculty of Engineering and has passed the prescribed examinations in all the semesters. Details regarding the possible exit for a B.Tech. student – in line with one of the goals of the National Education Policy (NEP) 2020 are provided in section 13.

## 6. Branches of Study:

Branch I - Civil Engineering

Branch II – Mechanical Engineering

Branch III - Electronics & Communication Engineering

Branch IV - Computer Science & Engineering

Branch V – Electrical & Electronics Engineering

Branch VI – Chemical Engineering

Branch VII - Electronics & Instrumentation Engineering

Branch VIII – Information Technology

Branch IX - Instrumentation & Control Engineering

Branch X – Biomedical Engineering

Branch XI - Robotics and Automation

Branch XII – Food Technology

Branch XIII- CSE (Internet of Things & Cyber security including Block chain Technology)

Branch XIV – Artificial Intelligence and Machine Learning

Branch XV - Artificial Intelligence and Data Science

or any other branch of study as and when offered. The branch allocation shall be ordinarily done at the time of admission of the candidate to the first semester.

## 7. Course Structure and Subjects of Study:

**Definition of Credit**

| | |
|---|---|
| 1 Hour Lecture (L) per week | 1 Credit |
| 1 Hour Tutorial (T) per week | 1 Credit |
| 2 Hours Practical (P) per week | 1 Credit |

**Range of Credits:** The total credits of all the branches for the four-year B. Tech. degree Programme shall be in the range of 160 to 172 ( Minor variation is allowed as per AICTE guidelines). ″Minor Degree or Honors will cumulatively require additional 20 credits in the specified area in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline".

| **Type of Degree** | **B.Tech (XXX)** | **B.Tech (XXX) (Hons.)** | **B.Tech (XXX) with Minor (YYY)** |
|---|---|---|---|
| **Credits Requirements **** | 160-172 | 160-172<br>+ (16-20) | 160-172<br>+ (16-20) |

** Minimum credit requirements specified in the AICTE regulations are discipline specific permitting minor deviations from the norms.

The subjects of study shall include theory, practical courses and project work/internships as given in the curriculum and shall be in accordance with the prescribed syllabus.

The curriculum of every programme will have courses that are categorized as follows

| Sl. No | Category | Minimum credits # |
|---|---|---|
| 1. | Humanities, Social Sciences and Management Courses (HSM) | 12-15 |
| 2. | Basic Science Courses (BSC) | 16-24 |
| 3. | Engineering Science Courses (ESC) | 16-30 |
| 4. | Professional Core Courses (PCC) | 54-72<br>2/3 Theory & 1/3 Practical |
| 5. | Professional Elective Courses (PEC) | 9-16 |
| 6. | Open Elective Courses (OEC) | 9-16 |
| 7. | Professional Activity Courses (PAC)<br>(Includes project work, seminar, internships) | 12-16 |
| 8. | Mandatory non-Credit Courses (MCC) | 9-12 credits equivalent |

# The minimum credit requirement in each category is only normative and the actual credit distribution for various disciplines as specified by AICTE is given in annexure-1.

Each course will have either one or more of three components namely Lecture (L), Tutorial (T) and Practice (P). Each course is assigned credits as detailed below:

(i) Theory courses will carry either 3 or 4 credits - 3 credits for courses with 3 lecture periods per week and 4 credits for courses with 3 lecture periods and 1 tutorial period per week.

(ii) All Elective courses including online courses will carry maximum 3 credits. The student can earn the credits towards the Open Elective Courses (OEC) by completing the online courses offered in NPTEL anytime between third and seventh semester on prior approval of the courses by the Academic Courses Committee of the Institute. Credits earned through the NPTEL courses will be confined to 2 or 3 credits and subject to a maximum of 9

credits during the entire programme of study.

(iii) Practical courses will normally carry either 1 or 1.5 credits – 1.5 credits for courses with 3 practice periods per week and 1 credit for courses with 2 practice periods per week.

(iv) Out of total credits required for successful completion of the degree, 14 to 22 credits can be assigned for Project work and/or Internship.

(v) Mandatory non-credit courses carry zero credit.

## 8. Examinations

The theory and practical examinations shall comprise continuous internal assessment throughout the semester in all subjects as well as university examinations conducted by Pondicherry University at the end of the semester (November / December or April / May).

### 8.1. Evaluation Scheme

All Credit courses are evaluated for 100 marks comprising of Internal assessment and end-semester exam.

For Theory Course, the weightage of internal assessment is 40% and end semester examination is 60%

For Practical course, the weightage of internal assessment is 60% and end semester examination is 40%

For Project, the weightage of internal assessment is 60% and end semester examination is 40%

### 8.2. Internal Assessment (Theory)

Total Internal Assessment mark for a theory course is 40 marks. The breakup is as follows:

| Criteria | Maximum Marks |
|---|---|
| a) Internal Assessment Tests | 30 |
| b) Percentage of Attendance | 5 |
| c) Assignment(s) | 5 |
| **Total** | **40** |

Marks for Attendance is as follows:

| | |
|---|---|
| Below 75% | 0 |
| 75% - 80% | 1 |
| 81% - 85% | 2 |
| 86% - 90% | 3 |
| 91% - 95% | 4 |
| 96% - 100% | 5 |

The Principal of the College/Institute schedules the Internal Assessment tests for all courses. All faculty members are expected to conduct this Internal Assessment tests for 1.30 hours duration and evaluate and required to upload the marks to the Controller of Examinations of University. Colleges are also requested to preserve the answer sheets of Internal Assessment tests until declaration of results by the University.

**8.3. Internal Assessment (Practicals)**

Faculty in-charge of Lab courses shall evaluate the practical course for 60 marks. The break up is as follows:

| **Criteria** | **Maximum Marks** |
|---|---|
| a) Laboratory exercises and Record | 30 |
| c) Mid Semester exam (Average of 2 exams) | 15 |
| c) Internal Viva voce | 5 |
| d) Percentage of Attendance | 10 |
| **Total** | **60** |

Marks for Attendance is as follows:

| | |
|---|---|
| Below 75% | 0 |
| 75% - 80% | 2 |

| | |
|---|---|
| 81% - 85% | 4 |
| 86% - 90% | 6 |
| 91% - 95% | 8 |
| 96% - 100% | 10 |

### 8.4. Internal Assessment (Project)

The Project work carried out in the eighth semester shall be assessed as follows:

| Criteria | Marks |
|---|---|
| a) Continuous assessment (Guide) | 25 |
| b) Project Evaluation Committee | 35 |
| **Total** | **60** |

### 8.5 Requirement for appearing for University Examination

The Controller of Examinations (COE) of Pondicherry University schedules the End-Semester exams for all theory and practical courses based on the University academic calendar. A detailed Exam Time Table shall be circulated to all Colleges at least 15 days before the start of exams. Question Papers shall be set externally based on BOS approved syllabus.

A candidate shall be permitted to appear for university examinations at the end of any semester only if:

i) He / She secures not less than 75% overall attendance arrived at by taking into account the total number of periods in all subjects put together offered by the institution for the semester under consideration.
(*Candidates who secure overall attendance greater than 60% and less than 75% have to pay a condonation fee as prescribed by University along with a medical certificate obtained from a medical officer not below the rank of Assistant Director*)

ii) He / She earns a progress certificate from the Head of the institution for having satisfactorily completed the course of study in all the subjects pertaining to that semester

iii) His / Her conduct is found to be satisfactory as certified by the Head of the institution.

A candidate who has satisfied the requirement (i) to (iii) shall be deemed to have

satisfied the course requirements for the semester.

### 8.6 End Semester Exam Evaluation Pattern

| **Course** | **Maximum marks** |
|---|---|
| a) Theory course<br>(Sec A, Sec B and Sec C)<br>Questions from all units of syllabus | 60 marks |
| b) Practical course<br>(Based on Lab exercises/Record/ Practicals /Viva) | 40 marks |
| c) Internship /Project Work<br>(Based on Seminar/Project Work/Project report/Presentation and viva voce) | 40 marks |

### 8.7 Consolidation of Marks and Passing Minimum

The Controller of Examinations of the University consolidates the Internal Assessment marks uploaded by the Colleges and marks secured by students in the end-semester examination.

A student shall be declared to have passed the examination in a subject of study only if he/she secures not less than **40% marks individually both in internal assessment and end-semester examination .**

A candidate who has been declared "Fail" in a particular subject may reappear for that subject during the subsequent semesters and secure pass marks. However, there is a provision for revaluation of failed or passed subjects provided he/she fulfills the following norms for revaluation.

a) Applications for revaluation should be filed within 15 days from the date of declaration of results or 7 days from the date of receipt of grade sheet whichever is earlier.
b) The candidate should have attended all the internal assessments conducted by the college as well as all the end semester examinations conducted by the University.
c) If a candidate has failed in more than two papers in the end semester examinations, his/her representation for revaluation will not be considered.
d) The request for revaluation must be made in the prescribed format duly recommended by the Head of the Institution along with the revaluation fee prescribed by the University.

### 8.8. Arrear Exams

A student who failed to secure 40% marks in aggregate is declared as "Fail" and he is eligible to take up a supplementary examination by registering to the said course in the following semester. All other candidates who failed due to shortage of attendance and those seeking to improve the grade shall repeat the course.

A student shall be declared to have passed the **arrear examination** in a subject of study only **if he/she secures not less than 40% marks in the end-semester examination and secures an overall aggregate of 40%.**

### 8.9. Letter Grades and Calculation of CGPA

Total Marks Secured by a student in each course shall be converted into a letter grade. The following Table shows the seven letter grades and corresponding meaning and the grade points for the calculation of Cumulative Grade Point Average (CGPA).

Each course (Theory/Practical) is to be assigned 100 marks, irrespective of the number of credits, and the mapping of marks to grades may be done as per the following table:

| **Range of Marks** | **Assigned Grade** | Grade Points |
|---|---|---|
| 91-100 | $A^+$ | 10 |
| 81-90 | A | 9 |
| 71-80 | $B^+$ | 8 |
| 61-70 | B | 7 |
| 51-60 | $C^+$ | 6 |
| 46-50 | C | 5 |
| 40-45 | D | 4 |
| <40 | F | 0 |
| **Not Applicable** | $F^R$ (Fail due to shortage of attendance and therefore, to repeat the course) | 0 |

Note: -F- denotes failure in the course; - $F^R$ - denotes absent / detained as per AICTE norms.

After the results are declared, grade sheets will be issued to the students. The grade sheets will contain the following details:

a) The college in which the candidate has studied.

b) The list of courses enrolled during the semester and the grades scored.

c) The Grade Point Average (GPA) for the semester and the Cumulative Grade Point Average (CGPA) of all enrolled subjects from first semester onwards.

d) GPA is the ratio of sum of the products of the number of credits ( C ) of courses registeredand the corresponding Grades Points ( GP ) scored in those courses, taken for all the courses andsum of the number of credits of all the courses.

$$\mathbf{GPA = \sum(C \times GP) / \sum C}$$

CGPA will be calculated in a similar manner, considering all the courses enrolled from first semester. $F^R$ grades are to be excluded for calculating GPA and CGPA.

e) The conversion of CGPA into percentage marks is as follows

$$\% \text{ Mark} = (\text{CGPA} - 0.5) \times 10$$

## 9. Procedure for completing the B.Tech. course

A candidate can join/rejoin the course of study of any semester only at the time of its normal commencement and only if he/she has satisfied the course requirements for the previous semester and further has registered for the university examinations of the previous semester in all the subjects as well as all arrear subjects if any.

However, the entire B.Tech. course should be completed within 7 years (14 semesters) and six years (12 semesters) for students admitted under lateral entry.

## 10. Award of Class and Rank in B.Tech. degree

i) A candidate who satisfies the course requirements for all semesters and who passes all the examinations prescribed for all the eight semesters (six semesters for lateral entry candidates) within a maximum period of 7 years (6 years for lateral entry candidates) reckoned from the commencement of the first semester to which the candidate was admitted shall be declared to have qualified for the award of B.Tech. degree.

ii) A candidate who qualifies for the award of the B.Tech. degree passing in all subjects pertaining to the semesters 3 to 8 in his/her first appearance within 6 consecutive semesters (3 academic years ) and in addition secures a CGPA of 8.50 and above for the semesters 3 to 8 shall be declared to have passed the examination in **FIRST CLASS** with **DISTINCTION**.

iii) A candidate who qualifies for the award of the B.Tech. degree by passing in all subjects relating to semesters 3 to 8 within a maximum period of eight semesters after his/her commencement of study in the third semester and in addition secures CGPA not less than 6.5 shall declared to have passed the examination in **FIRST CLASS**.

iv) All other candidates who qualify for the award of B.Tech. degree shall be declared to have passed the examination in **SECOND CLASS**.

v) For the Award of University ranks and Gold Medal for each branch of study, the CGPA secured from the 1st to 8th semester alone should be considered and it is mandatory that the candidate should have passed all the subjects from the1st to 8th semester in the first attempt. Rank certificates would be issued to the first ten candidates in each branch of study.

## 11. Provisions for Honors/Minor degree along with B.Tech. degree

### 1. B.Tech. with Honors Degree in the same Engineering discipline

a. The student shall be given an option to earn a Honors degree in the same discipline of engineering at the end of first year based on his academic performance in the first year.

b. A student is eligible to exercise this option if he has passed all the subjects offered in the first year in the first attempt itself and has earned a CGPA of not less than 7.5.

c. Honors degree in a particular discipline of engineering shall be offered for a batch of students if and only if a minimum of 5 eligible students opt for it.

d. The student is required to earn an additional 20 credits (over and above the prescribed maximum credits in the curriculum) starting from the third semester onwards to become eligible for the award of Honors degree. 20 credits shall be earned by the student by completing 5 additional courses of 4 credits each, one in each of the 5 semesters starting from the third to seventh semester. The syllabus of these 5 courses are framed so as to cover advanced topics in that discipline of engineering.

e. The students admitted in the second year through Lateral Entry Scheme will also be given a chance to opt for Honors degree. Eligibility to avail this option is CGPA of 7.5 and above with no arrears in the third Semester. The student will join the existing batch of students in the fourth semester and earn 16 credits by registering the prescribed courses offered up to the seventh semester. The respective BoS will decide on a suitable course in lieu of the course offered in the third semester to facilitate the student to earn the remaining 4 credits.

f. A student is eligible to get the Honors degree only on completing the programme in 'First Class with Distinction' class.

g. A student can exercise the option to withdraw from the Honors degree at any time after

entry.

h. Details about the courses completed and credits earned for Honors degree will appear only in the 'Eighth Semester Grade Sheet' and 'Consolidated Grade Sheet'. These details will be listed under the heading 'Credits Earned for Honors degree'. In the case of students who have either withdrawn from Honors degree or become ineligible for Honors degree by not securing 'First Class with Distinction', the credits earned for the courses registered and successfully completed for Honors degree will be listed under the heading 'Additional Credits Earned'.

i. The CGPA will be calculated for all the courses credited by the students inclusive of major and honors courses

j. Nomenclature of Honors Degree is 'B.Tech.(Honors) in XXX ', where XXX is Discipline in which the student has enrolled.

## 2. B.Tech. with Minor degree in another Engineering discipline

a) The student shall be given an option to earn a minor degree in another discipline of engineering of his choice at the end of first year based on his academic performance in the first year.

b) A student is eligible to exercise this option if he has passed all the subjects offered in the first year in the first attempt itself and has earned a CGPA of not less than 7.5.

c) Minor degree in a particular discipline of engineering shall be offered for a batch of students if and only if a minimum of 5 eligible students opt for it.

d) The student is required to earn an additional 20 credits (over and above the prescribed maximum credits in the curriculum) starting from the third semester onwards to become eligible for the award of minor degree. 20 credits shall be earned by the student by completing 5 additional courses of 4 credits each, one in each of the 5 semesters starting from the third to seventh semester. The curricular content of these 5 courses are framed in such a way that that these courses will essentially cover the core minimum knowledge required to be fulfilled for award of degree in the discipline of engineering in which the student chooses to earn the minor degree.

e) The students admitted in the second year through Lateral Entry Scheme will also be given a chance to opt for Minor degree. Students with a CGPA of 7.5 and with no arrears in the third semester are eligible to avail this option. The student will join the existing batch of students in the fourth semester and earn 16 credits by registering for prescribed courses offered up to seventh semester. The respective

BoS will decide on a suitable course in lieu of the course offered in the third semester to facilitate the student to earn the remaining 4 credits.

f) A student can exercise the option to withdraw from the Minor degree at any time after entry.

g) Details about the courses completed and credits earned for Minor degree will appear only in the 'Eighth Semester Grade Sheet' and 'Consolidated Grade Sheet'. These details will be listed under the heading 'Credits Earned for Minor degree'. In the case of students who have withdrawn from Minor degree, the credits earned for the courses registered and successfully completed for Minor degree will be listed under the heading 'Additional Credits Earned'.

h) Nomenclature of Minor Degree is 'B.Tech. in XXX with Minor in YYY', where XXX is Discipline in which the student is enrolled and YYY is Discipline which the student has opted as Minor.

i) The CGPA will be calculated for all the courses credited by the students inclusive of major and minor courses.

## 12. Provision for withdrawal

Based on the recommendation of the Head of the Institution, a candidate with valid reasons may be granted permission by the University to withdraw from writing the entire semester examination as one Unit. The withdrawal application shall be valid only if it is made earlier than the commencement of the last theory examination pertaining to that semester. Withdrawal shall be permitted only once during the entire course. A candidate who has withdrawn is also eligible to be awarded DISTINCTION provided he/she satisfies the other necessary conditions. But, they are not eligible to be awarded a rank.

## 13. Provisions for exit in B.Tech. course

**(For courses where AICTE specifies exit in the model curriculum)**

The curriculum and the syllabus for all B.Tech programmes have been planned in compliance with the NEP guidelines proposed by AICTE. Accordingly, students joining B.Tech programmes shall have all benefits NEP offers in terms of exercising exit option during the course of study. Every B.Tech programme governed under this school board shall adopt the NEP guidelines, as and when proposed/amended by AICTE, and the following scheme will be applied for all such B.Tech programmes specified by AICTE.

NEP 2020 suggests that a student can exercise exits at multiple stages of the course of study. As per AICTE norms, a student can have two possible exits before the completion of the Full Engineering degree and may get a UG Diploma /Certificate or B.Sc. (Engg.) degree in the relevant discipline if he/she fulfils the following conditions: (Subject to change as per AICTE guidelines)

**1. UG Diploma/Certificate in the relevant branch of study**

A student should be able to get a UG Diploma if he/she completes:

**a.** 50% of the credits for B.Tech. (80-85 credits)

**b.** 50% of the program core courses

**c.** Students exiting the program after earning 50% credit requirements will be awarded a UG Diploma provided they secure an additional 6 credits through summer internships/apprenticeship of 2 months duration.

**d.** Students admitted through lateral entry cannot exercise the exit option as he will not be able to meet out the 50% Credits for B.Tech. degree.

**2. B.Sc. (Engg.) in the relevant branch of study**

A student should be able to get a B.Sc. degree if he/she completes:

(i) 75% of the credits for B.Tech. (minimum 120 credits) and at least 3 years in the program.

(ii) 100% of the core program courses.

(iii) Students exiting the program after earning 75% credit requirements will be awarded a B.Sc. (Engg.) provided they secure an additional 6 credits through 2 summer internships/apprenticeship for 2 months each.

(iv) With B.Sc. (Engg.) degree, the student is eligible for entry into programs which take B.Sc. (Engg.) degree as eligibility criteria.

**3. Award of Class in B.Sc. (Engg.) degree**

A candidate who satisfies the course requirements for all semesters and who passes all the examinations within a maximum period of 6 years (5 years for lateral entry candidates) reckoned from the commencement of the first semester to which the candidate was admitted shall be declared to have qualified for the award of B.Sc. (Engg.) degree in the relevant discipline.

i) A candidate who qualifies for the award of the B.Sc. (Engg.) degree passing in all subjects pertaining to semesters 3 to 6 in his/her first appearance within 4 consecutive semesters (2 academic years ) and in addition secures a CGPA of 8.50 and above for the semesters 3 to 6 shall be declared to have passed the examination

in **FIRST CLASS** with **DISTINCTION**.

ii) A candidate who qualifies for the award of the B.Sc. (Engg.) degree by passing in all subjects relating to semesters 3 to 6 within a maximum period of six semesters after his/her commencement of study in the third semester and in addition secures CGPA not less than 6.5 shall declared to have passed the examination in **FIRST CLASS.**

iii) All other candidates who qualify for the award of B.Sc. (Engg.) degree shall be declared to have passed the examination in **SECOND CLASS**.

**4. Re-entry to complete the program**

A student exiting with UG Diploma/Certificate should be entitled to re-enrol in the program of the same Engineering discipline at the fifth semester. A student exiting with B.Sc. (Engg.) should be entitled to re-enrol in the programme of the same Engineering discipline at the seventh semester. Only students admitted to the B.Tech. programme and exercised an exit option are eligible for readmission to the B.Tech. programme under the same discipline. It is suggested that all credits will be transferred, if the student enrols back within a limited period (3 years) of exiting. In case a student enrols after that, then the decision on the transfer of credits should be based on the changes in the curriculum the student studied. A candidate after exit may rejoin the course only at the commencement of the semester at which he/she discontinued, provided he/she pays the prescribed fees to the University. The total period of completion of the B.Tech. course reckoned from the commencement of the first semester to which the candidate was admitted shall not in any case exceed 7 years, including of the period of discontinuance.

**5. Completion Possibility in other Institutions**

A student can earn UG Diploma/Certificate or B.Sc. (Engg.) in one institution (Engineering) and complete the degree program in another institution (same Engineering discipline only).

*(Note: If these exit options are accepted for multiple B.Tech. programs, it is suggested that AICTE actively communicate these to the industry and other bodies, so they recognize these and accept them as bona-fide credentials for the purposes of recruitment and/or eligibility for admission to programs, appearing in competitive examinations, etc*.)

## 14. Revision of Regulations and Curriculum

The University may from time-to-time revise, amend or change the regulations of curriculum and syllabus as and when found necessary.

## ANNEXURE-I (AICTE GUIDELINES FOR BREAKUP OF CREDITS)



### GENERAL COURSE STRUCTURE & THEME

**A. Definition of Credit**:

| | |
|---|---|
| 1 Hr. Lecture (L) per week | 1 Credit |
| 1 Hr. Tutorial (T) per week | 1 Credit |
| 1 Hr. Practical (P) per week | 0.5 Credit |
| 2 Hours Practical (P) per week | 1 Credit |

**B. Range of Credits:** In the light of the fact that a typical Model Four-year Under Graduate degree program in Engineering has about 163 credits, the total number of credits proposed for the four-year B. Tech/B.E. in Computer Science and Engineering (Engineering & Technology) is kept as 163.

**C. Structure of UG Program in CSE:** The structure of UG program in Computer Science and Engineering shall have essentially the following categories of courses with the breakup of credits as given:

| S. No. | Category | Credit Breakup for CSE students |
|---|---|---|
| 1 | Humanities and Social Sciences including Management courses | 16 |
| 2 | Basic Science courses | 23 |
| 3 | Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc. | 29 |
| 4 | Professional core courses | 59 |
| 5 | Professional Elective courses relevant to chosen specialization/branch | 12 |
| 6 | Open subjects – Electives from other technical and /or emerging subjects | 9 |
| 7 | Project work, seminar and internship in industry or elsewhere | 15 |
| 8 | Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Knowledge Tradition] | (non-credit) |
| | **Total** | **163*** |

**Minor variation is allowed as per need of the respective disciplines.*

## GENERAL COURSE STRUCTURE & THEME

**A. Definition of Credit**:

| | |
|---|---|
| 1 Hr. Lecture (L) per week | 1 Credit |
| 1 Hr. Tutorial (T) per week | 1 Credit |
| 1 Hr. Practical (P) per week | 0.5 Credit |
| 2 Hours Practical (P) per week | 1 Credit |

**B. Range of Credits:** In the light of the fact that a typical Model Four-year Under Graduate degree program in Engineering has about 160 credits, the total number of credits proposed for the four-year B. Tech/B.E. in Electronics and Communication Engineering (ECE) is kept as 160.

**C. Structure of UG Program in Electronics and Communication Engineering (ECE):** The structure of UG program in Electronics and Communication Engineering (ECE) shall have essentially the following categories of courses with the breakup of credits as given:

| S.No. | Category | Credit Breakup for ECE |
|---|---|---|
| 1 | Humanities and Social Sciences including Management courses | 15 |
| 2 | Basic Science courses | 23 |
| 3 | Engineering Science courses including workshop, drawing, basics of electronics/electrical/mechanical/computer etc. | 17 |
| 4 | Professional core courses | 61 |
| 5 | Professional Elective courses relevant to chosen specialization/branch | 12 |
| 6 | Open subjects – Electives from other technical and /or emerging subjects | 12 |
| 7 | Project work, seminar and internship in industry or elsewhere | 20 |
| 8 | Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Knowledge Tradition] | (non-credit) |
| | **Total** | **160*** |

**Minor variation is allowed as per need of the respective disciplines.*

# GENERAL COURSE STRUCTURE & THEME

**A. Definition of Credit**:

| | |
|---|---|
| 1 Hr. Lecture (L) per week | 1 Credit |
| 1 Hr. Tutorial (T) per week | 1 Credit |
| 1 Hr. Practical (P) per week | 0.5 Credit |
| 2 Hours Practical (P) per week | 1 Credit |

**B. Range of Credits:** In the light of the fact that a typical Model Four-year Under Graduate degree program in Engineering has about 163 credits, the total number of credits proposed for the four-year B. Tech/B.E. in Computer Science and Engineering (Artificial Intelligence and Data Science (AIDS)) is kept as 163.

**C. Structure of UG Program in AIDS:** The structure of UG program in Artificial Intelligence and Data Science shall have essentially the following categories of courses with the breakup of credits as given:

| S. No. | Category | Breakup of Credits |
|---|---|---|
| 1. | Humanities & Social Science Courses | 15 |
| 2. | Basic Science Courses | 23 |
| 3. | Engineering Science Courses | 22 |
| 4. | Program Core Courses (Branch specific) | 54 |
| 5. | Professional Elective Courses (Branch specific) | 18 |
| 6. | Open Elective Courses (Cross Discipline Subjects) | 15 |
| 7. | Project work, Seminar and Internship in Industry or elsewhere | 16 |
| 8. | Audit Courses<br>[Environmental Sciences, Indian Constitution] | 0 |
| | **TOTAL** | **163*** |

**Minor variation is allowed as per need of the respective disciplines.*

## GENERAL COURSE STRUCTURE & THEME

**A. Definition of Credit:**

| | |
|---|---|
| 1 Hr. Lecture (L) per week | 1 Credit |
| 1 Hr. Tutorial (T) per week | 1 Credit |
| 1 Hr. Practical (P) per week | 0.5 Credit |
| 2 Hours Practical (P) per week | 1 Credit |

**B. Range of Credits:**

In the light of the fact that a typical Model Four-year Under Graduate degree program in Engineering has about 163 credits, the total number of credits proposed for the four-year B. Tech/B.E. in Computer Science and Engineering Artificial Intelligence and Machine Learning (AIML) is kept as 163.

**C. Structure of UG Program in AIML:**

The structure of UG program in Artificial Intelligence and Machine Learning shall have essentially the following categories of courses with the breakup of credits as given:

| S. No. | Category | Breakup of Credits |
|---|---|---|
| 1. | Humanities & Social Science Courses | 10* |
| 2. | Basic Science Courses | 16* |
| 3. | Engineering Science Courses | 08* |
| 4. | Program Core Courses (Branch specific) | 71* |
| 5. | Professional Elective Courses (Branch specific) | 16* |
| 6. | Open Elective Courses (from Humanities, Technical Emerging or other Subjects) | 06* |
| 7. | Project work, Seminar and Internship in Industry or elsewhere | 38* |
| 8. | Audit Courses<br>[Environmental Sciences, Indian Constitution] | (non-credit) |
| | **TOTAL** | **165*** |

**Minor variation is allowed as per need of the respective disciplines.*

# GENERAL COURSE STRUCTURE & THEME

**A. Definition of Credit**:

| | |
|---|---|
| 1 Hr. Lecture (L) per week | 1 Credit |
| 1 Hr. Tutorial (T) per week | 1 Credit |
| 1 Hr. Practical (P) per week | 0.5 Credit |
| 2 Hours Practical (P) per week | 1 Credit |

**B. Range of Credits:** In the light of the fact that a typical Model Four-year Under Graduate degree program in Engineering has about 160 credits, the total number of credits proposed for the four-year B. Tech/B.E. in Mechanical Engineering (Engineering & Technology) is kept as 160.

**C. Structure of UG Program in ME:** The structure of UG program in Mechanical Engineering shall have essentially the following categories of courses with the breakup of credits as given:

| S.No. | Category | Suggested Breakup of Credits (Total 160) |
|---|---|---|
| 1 | Humanities and Social Sciences including Management courses | 12* |
| 2 | Basic Science courses | 29* |
| 3 | Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc. | 27* |
| 4 | Professional core courses | 58* |
| 5 | Professional Elective courses relevant to chosen specialization/branch | 9* |
| 6 | Open subjects – Electives from other technical and /or emerging subjects | 9* |
| 7 | Project work, seminar and internship in industry or elsewhere | 16* |
| 8 | Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Knowledge Tradition] | (non-credit) |
| | **Total** | **160*** |

**Minor variation is allowed as per need of the respective disciplines.*