



**VARDHAMAN**  
COLLEGE OF ENGINEERING

**Academic Regulations (R25)**  
for  
**B.Tech. Minor Degree Program**

With  
**B. Tech. - Regular Degree Program**  
(For batches admitted from the academic year 2025 - 2026)

&

**B. Tech. - Lateral Entry Scheme**  
(For batches admitted from the academic year 2026 - 2027)

Under  
**Choice Based Credit System (CBCS)**

**August 2025**



**VARDHAMAN COLLEGE OF ENGINEERING**  
(Autonomous)

Affiliated to JNTUH, Approved by AICTE, Accredited by NAAC with A++ Grade  
Kacharam, Shamshabad, Hyderabad- 501 218, Telangana, India  
[www.vardhaman.org](http://www.vardhaman.org), [info@vardhaman.org](mailto:info@vardhaman.org)



## Academic Regulations of B.Tech. with Minors Program (with effect from Academic Year 2025–2026)

### 1.0 Introduction

The Bachelor of Technology (B. Tech.) with Minor program focuses on the fundamental principles of multiple engineering disciplines, critical & analytical thinking and the ability to develop a distinctive approach to the interdisciplinary problems. Minor program must be completed simultaneously with a major degree program and it refers to a supplemental secondary declared academic discipline or field of study. The students obtaining minor degree along with regular degree is awarded with **B.Tech. in branch name with Minor in secondary discipline.**

### 2.0 Objectives

The key objectives of offering B.Tech. with Minor program are:

- To enhance interdisciplinary knowledge and skills
- To provide specialization in emerging technologies and thrust areas of engineering
- To improve the employability and career prospects of undergraduate students
- To promote academic flexibility and holistic academic development

### 3.0 Minor Courses and the offering departments

The Minor Degree Programs offered by the departments, the eligible branches of students, and the format of award of the degree are presented in below Table.

Table1: Minor Degree Programs Offered by the Departments with Eligible Branches and Award of Degree.

S.No.	Minor Program	Eligible Branch of Students	Offering Department	Award of Degree
1	Artificial Intelligence and Machine Learning	B.Tech. in CSE, INF, CSE(DS), ECE, EEE, ME and CE	CSE (AI&ML)	“B.Tech. in <Branch Name> with Minors in Artificial Intelligence & Machine Learning.”
2	Data Science	B.Tech. in CSE, INF, CSE(AI&ML), ECE, EEE, ME and CE	CSE(DS)	“B.Tech. in <Branch Name> with Minors in Data Science”
3	Cyber Security	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	INF	“B. Tech. in <Branch Name> with Minors in Cyber Security”
4	Internet of Things (IoT)	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	ECE	“B. Tech. in <Branch Name> with Minors in Internet of Things (IoT)”
5	Innovation and Entrepreneurship	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	MBA	“B. Tech. in <Branch Name> with Minors in Innovation and Entrepreneurship”
6	Banking, Financial Services and Insurance (BFSI)	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	MBA	“B. Tech. in <Branch Name> with Minors in Banking, Financial Services and Insurance (BFSI)”



S.No.	Minor Program	Eligible Branch of Students	Offering Department	Award of Degree
7	Augmented Reality and Virtual Reality (AR&VR)	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	MBA	“B. Tech. in <Branch Name> with Minors in Augmented Reality and Virtual Reality (AR&VR)”
8	Quantum Technologies	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	ECE	“B. Tech. in <Branch Name> with Minors in Quantum Technologies”
9	Robotics	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	MEC	“B. Tech. in <Branch Name> with Minors in Robotics”
10	Electric Vehicles	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	EEE	“B. Tech. in <Branch Name> with Minors in Electric Vehicles”
11	Quantum Computing	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	CSE	“B. Tech. in <Branch Name> with Minors in Quantum Computing”
12	Autonomous Vehicles	B.Tech. in CSE, INF, CSE(AI&ML), CSE(DS), ECE, EEE, ME, and CE	MEC	“B. Tech. in <Branch Name> with Minors in Autonomous Vehicles”

#### 4.0 Academic Regulations for B. Tech. Degree with Minor programs

- For B. Tech. with Minor, a student needs to earn additional 18 credits (over and above the required 160 credits for B. Tech degree). All these 18 credits need to be completed in II year, III year and IV year only.
- After registering for the Minor program, if a student is unable to earn all the required 18 credits in a specified duration (twice the duration of the course), he/she shall not be awarded Minor degree. However, if the student earns all the required 160 credits of B.Tech., he/she will be awarded only B. Tech degree in the concerned branch.
- These 18 credits shall be obtained through additional courses offered by the host department within the college and/or through approved MOOCs platforms.
- For the course selected under MOOCs platform following guidelines may be followed:
  - Prior to registration of MOOCs courses, formal approval of the courses, by the concerned standing committee of the institute is essential. The committee before the issue of approval considers the parameters like the institute / agency which is offering the course, syllabus, credits, duration of the programme and mode of evaluation etc.
  - Minimum credits for a MOOCs course must be equal to or more than the credits specified in the Minors course structure provided in Table 2.
  - Only Pass-grade/marks or above shall be considered for inclusion of grades in the Minors grade memo.
  - Any expenses incurred for the MOOCs courses are to be met by the students only.
- After registering for the Minor programme, if a student is unable to earn all the required 18 credits but secured the required 160 credits of B.Tech. and the student opts for getting the provisional degree

certificate, he/she will be awarded only B.Tech. degree in the concerned branch. In such cases, the student has to forego his/her minor degree.

6. However, if the student wants his minor degree also, he/she should not claim his provisional degree certificate and appear for backlog minor courses. As and when he/she secures all the 18 credits, he/she will be awarded both B.Tech. degree and Minor degree.
7. The student can withdraw from the Minor program at any time.
8. If the student withdraws or unable to complete the Minor degree program, the grade memos for the courses completed in the Minor program shall be issued but not the Minor Degree.
9. There is no transfer of credits from Minor program courses to regular B. Tech. degree course & vice versa.
10. The student can choose only one Minor program along with his/her basic engineering degree. A student who chooses an Honours program is not eligible to choose a Minor program and vice-versa.
11. A student can graduate with a Minor if he/she fulfils the requirements for his/her regular B. Tech. program as well as fulfils the requirements for Minor program.
12. The weekly instruction hours, internal & external evaluation and award of grades are on par with regular 4-Years B. Tech. program.
13. The department shall prepare the time-tables for each Minor course offered without any overlap/clash with other courses of study in the respective semesters.

#### **5.0 Eligibility conditions for the student to register for Minor course**

1. A student shall be eligible to opt for the B.Tech. Degree with a Minor program only if he/she is promoted from I Year II Semester to II Year I Semester in the first attempt.
2. If more than 50% of the students in a branch fulfil the eligibility criteria (as stated above), the number of students given eligibility should be limited to 50%.

#### **6.0 Registration for the courses in Minor Program**

1. The choice to opt/take a Minor program is purely on the choice of the students.
2. The students can register for the Minor program in II year II semester if they fulfil the eligibility criteria.
3. Prior approval of mentor and Head of the Department for the enrollment into Minor program, before commencement of II year II Semester (IV Semester), is mandatory.
4. Students shall register for the courses pertaining to the current semester for the Minor program at the end of the previous semester. (Ex. Registration for Minor degree courses in III Year I Semester should be done at the end of II Year II Semester).
5. The students should choose a course from the list against each semester (from Minors course structure) other than the courses they have studied/registered for regular B.Tech. program. No course should be identical to that of the regular B.Tech. course. The students should take the advice of faculty mentors while registering for a course at the beginning of the semester.
6. The maximum number of courses for the Minor is limited to two (three in case of inclusion of laboratory) in a semester in addition to regular semester courses.
7. The registration fee shall be Rs. 1,000 per credit.
8. The registration fee is to be paid by the students during the submission of application form for admission to Minor degree program subject to satisfying the eligibility conditions.
9. A fee for late registration may be imposed as per the norms.

#### **6.0 Course Structure and Syllabi**

1. The students can register for Minor courses as per the course structure shown in Table 2 below.

2. The list of courses of each Minor program, their respective credits and semester-wise break-up of the courses are provided separately by the offering departments in the form of Curriculum for Minor programs.

Table 2: Minor Specialization Course Structure and Credit Distribution

<b>S. No.</b>	<b>Year/Semester</b>	<b>Course to be chosen</b>	<b>Number of Credits</b>
1	II B.Tech. II Semester	Theory Course - 1	3
2	II B.Tech. II Semester	Theory Course - 2	3
3	III B.Tech. I Semester	Elective Course - 1	3
4	III B.Tech. I Semester	Elective Course - 2	3
5	III B.Tech. II Semester	Elective Course - 3	3
6	III B.Tech. II Semester	Practical Course	1
7	IV B.Tech. I Semester	Mini Project on Minor Specialization	2
<b>Total Credits</b>			<b>18</b>



## Vision

To be a pioneer institute and leader in engineering education to address societal needs through education and practice.

## Mission

- To adopt innovative student centric learning methods.
- To enhance professional and entrepreneurial skills through industry institute interaction.
- To train the students to meet dynamic needs of the society.
- To promote research and continuing education.

## Quality Policy

We at Vardhaman College of Engineering, endeavor to uphold excellence in all spheres by adopting the best practices in effort and effect.



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