



AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

(Autonomous)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU-GV, Vizianagaram)

NAAC Accredited with A+ grade

Tamaram (V), Makavarapalem, Narsipatnam (RD), Anakapalle Dist, Pin-531113.

<https://avanthienggcollege.ac.in/>, E-mail: principal@avanthienggcollege.ac.in

Guidelines for B.Tech Minors in Engineering Regulations-R24

(Effective for the students admitted into I year from the Academic Year
2024-2025 onwards)

1) Introduction

Looking to global scenario and as per NEP-2020, Engineering students should have knowledge of subjects from other branches and some advanced subjects of their respective branch in which they are perusing the degree. To complement the same, Institute has decided to take an initiative from Academic Year 2024-2025 (R24 Regulations) by introducing Minors to the students enrolled in B.Tech Program. This gives a provision to the students to pursue Minors other than the discipline in which student got admitted. An aspiring student can choose the courses and laboratories in any other discipline and can get a Minor Degree in the chosen specialization in addition to regular B.Tech Degree. This way undergraduate are not restricted to learn about courses only in the discipline they get admitted to, but can choose courses of their interest to later on take up a career path of their liking. The students taking up a minor course will get additional credits. A student has to acquire **18 more credits, in addition to 160 credits** required, for the award of the minor by fulfilling at least three credits must be earned from NPTEL / SWAYAM MOOC Course and the remaining 15 **credits by doing FIVE Theory** / Integrated courses of 03 credits each (or) **Four Theory courses of 03 credits each along with 2 Laboratory Courses of each 1.5 Credits** either through MOOCS / Regular. The department concerned will determine the required courses for award of minor. The subjects in minor programme would be a combination of mostly core and some electives.

2) Objectives

The objectives of initiating the B.Tech (Minors) degree certification are:

- To diversify the knowledge of the undergraduates.
- To make the undergraduates more employable.
- To have more educational and professional skills after the completion of his UG courses.
- To give a scope to specialize students in other streams of engineering in addition to the ones they are currently pursuing.



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3) Applicability and Enrolment

- a) To all B.Tech (Regular and Lateral Entry) students admitted in Engineering & Technology
- b) There shall be no limit on the number of programs offered under Minor. The minor programs in emerging technologies are based on expertise in the respective departments and may also be offered in collaboration with the relevant industries/ agencies.
- c) If a minimum enrolments criterion is not met, then the students may be permitted to register for the equivalent MOOC courses as approved by the concerned HoD in consultation with BoS.
- d) For applicability of minor, both regular B.Tech and minor courses shall be successfully completed.
- e) Transfer of credits from a particular minor to regular B.Tech or another major degree and vice-versa shall not be permitted

4) Entry level

- a) The B.Tech students (both Regular and Lateral Entry) pursuing a major degree programme can register for minor at their choice in any other department offering minor from IV semester onwards.
- b) Students registering for minor shall select the subjects from other branches. For example, if a student pursuing major degree in Electrical & Electronics Engineering shall select the subjects specified for minor in Computer Science and Engineering and he/she will get major degree of Electrical & Electronics Engineering with minor of Computer Science and Engineering.
- c) Student pursuing major degree in any engineering branch is eligible to register for minor in any other engineering branch. However, students pursuing major degree in a particular Engineering are not allowed to register for minor in the same engineering branch.
- d) Separate CGPA shall be shown on semester and final transcripts of regular B.Tech and minor.
- e) Students shall be permitted to select a maximum of two subjects per semester from the list of subjects specified for minor.
- f) Minor shall not be awarded at any circumstances without completing the regular major
- g) B.Tech programme in which a student got admitted
- h) If a student is detained due to lack of attendance, he/ she shall not be permitted to register the courses of minor
- i) Students completed their degree shall not be permitted to register for minor.



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5) Structure of Minor in B. Tech

- a) The student shall earn additional 18 Credits for award of minor from other branch/department / discipline registered for major degree.
- b) Students can complete minor courses either in the college or in online from platforms like NPTEL/SWAYAM etc.
- c) The overall attendance in each semester of regular B. Tech courses and minor courses shall be computed separately
- d) Student having less than 65% attendance in minor courses shall not be permitted for appearing "Minor course(s) end semester examinations".
- e) A student detained due to lack of attendance in a regular B. Tech programme shall not be permitted to continue minor programme.
- f) The teaching, examinations (internal and external) and evaluation procedure of minor courses offered in offline is similar to regular B. Tech courses
- g) The students may choose theory or practical courses to fulfill the minimum credit requirement.
- h) The students may be allowed to take maximum of two subjects per semester pertaining to their minor
- i) Students shall not be permitted to register for minor degree after completion of VI semester.
- j) The students are permitted to opt for only a single minor course in his/her entire tenure of B. Tech (Engineering)
- k) The students registered for B. Tech (Honors) shall not be permitted to register for minor
- l) The student is not permitted to take the electives courses from the parent department to fulfill the minimum

6) Credits requirement

- a) A Student will be eligible to get minor along with major degree engineering, if he/she completes an additional 18 credits. These may be acquired either in offline or online like NPTEL/SWAYAM etc.,
- b) Additional credits shall also be acquired through NPTEL Courses, which shall be domain specific, with a minimum duration of 8 / 12 / 16 weeks (2/3/4 credits) as recommended by the Board of studies.
- c) Students shall produce a certificate issued by the NPTEL/SWAYAM etc., conducting agency as a proof of credit attainment



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- d) The colleges offering minor courses shall be ready to teach the courses in offline at their college in the concerned departments. Curriculum and the syllabus of the courses shall be approved by the Board of Studies
- e) After successful completion of all major and minor courses with specified CGPA the University will award both major and minors

7) Procedure to Apply for Minors degree

- a) The department offering the minor will announce specialization and courses before the start of the session.
- b) The interested students shall apply through the HoD of his/her parent department.
- c) The concerned department will announce the list of the selected students for the minor.
- d) The whole process should be completed within one week before the start of every session.
- e) Selected students shall be permitted to register the courses for minor.

8) To Join in Minors Program

- a) Each department offering the minor will submit the final list of selected students to the principal.
- b) The selected students shall submit a joining letter to the principal through the concerned HoD offering the minor. The student shall inform same to the HoD of his/her parent department.
- c) Both parent department and department offering minor shall maintain the record of student pursuing the minor
- d) With the approval of Principal and suggestion of advisor, students can choose courses from the approved list and shall register the courses within a week as per the conditions laid down in the structure for the minor.
- e) Each department shall communicate the minor courses registered by the students to the time table drafting committee and accordingly time table will be drafting. Time table drafting committee shall see that no clash in time tables.

9) Procedure for Monitoring the Progress of the Scheme

The students enrolled in the minor courses will be monitored continuously at par with the prevailing practices and examination standards. An advisor/mentor from parent department shall be assigned to a group of students to monitor the progress.



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10) Allocation of seats for Minors degree

- a) The university /institute/ colleges will notify the number of the seats for minor in the concerned department well in advance before the start of the semester
- b) Total number of seats offered for a minor programme shall be a maximum of 60 (based on merit).
- c) The list of the electives for minor will be offered from the list of running majors in the concerned subjects.
- d) There is no fee for registration of subjects for minor degree programme offered in off line at the respective colleges.

11) Examinations

- a) The examination for the minor courses offered in offline shall be conducted along with regular B. Tech programme.
- b) The examinations (internal and external) and evaluation procedure of minor courses offered in offline is similar to regular B. Tech courses.
- c) A separate transcript shall be issued for the minor subjects passed in each semester
- d) It may be noted that both major and minor courses (from IV Semester to VII Semester) are to be completed in 4 Years for Regular students and 3 Years for lateral entry admitted students.
- e) Examination Fees: Examination Fees will be as per the institute norms
- f) For awarding the class, CGPA obtained in Minor Degree only will be considered.
- g) For awarding the Minor, obtained credits only will be considered.