



# **Anantha Lakshmi**

**INSTITUTE OF TECHNOLOGY & SCIENCES  
(Autonomous)**

**Affiliated to  
Jawaharlal Nehru Technological University  
Anantapur**

**Academic Regulations (R24) for B. Tech (Regular-Full time)**  
(Effective for the students admitted into I year from the  
Academic Year **2024-2025** onwards)

and

**Academic Regulations (R24) for B.Tech (Lateral Entry Scheme)**  
(Effective for the students getting admitted into II year through Lateral  
Entry Scheme from the Academic Year **2025-2026** onwards)

**ACADEMIC REGULATIONS (R24) FOR B.TECH***(Effective for the students getting admitted in to 1 year from the Academic Year 2024-2025 onwards)***1. Award of the Degree****a) Award of the B.Tech. Degree / B.Tech Degree with Minor**

A student will be declared eligible for the award of the B.Tech. Degree / B.Tech. Degree with a Minor if he/she fulfils the following:

- i) Pursues a course of study for not less than four academic years and not more than eight academic years. However, for the students availing Gap year facility this period shall be extended by two years at the most and these two years would in addition to the maximum period permitted for graduation (Eight years).
- ii) Registers for 160 credits and secures all 160 credits.

**b) Award of B.Tech. degree with Honors**

A student will be declared eligible for the award of the B.Tech. with Honors if he/she fulfils the following:

- (i) Student secures additional 15 credits fulfilling all the requisites of a B.Tech. program i.e., 160 credits.
- (ii) Registering for Honors is optional.
- (iii) Honors is to be completed simultaneously with B.Tech. Programme.

2. Students, who fail to fulfil all the academic requirements for the award of the degree within eight academic years from the year of their admission, shall forfeit their seat in B.Tech. course and their admission stands cancelled. This clause shall be read along with clause 1 a) i).

**3. Programs offered by the college**

With the approval from AICTE & JNTUA, the following B.Tech. Degree Programmes are offered at present

S. No.	Name of the Program	Program Code
1	Civil Engineering	01
2	Electrical and Electronics Engineering	02
3	Mechanical Engineering	03
4	Electronics and Communication Engineering	04
5	Computer Science and Engineering	05
6	Computer Science and Engineering (Data Science)	32
7	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	33

**4. Admissions:**

As per the norms of A.P. State Council of Higher Education (APSCHE), Government of Andhra Pradesh, admissions are made to the first year of Four-year B.Tech. Degree Programme as given below:

**5. Program related terms:**

- a) **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (Lecture / Tutorial) or two hours of practical work/field work per week.

**Credit definition**

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 Hrs. Practical (Lab) per week	1 credit

- b) **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
- c) **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses.
- d) **Course Code:** The Unique code for all the courses is assigned as per the below table:

1 <sup>st</sup> & 2 <sup>nd</sup> Characters	3 <sup>rd</sup> & 4 <sup>th</sup> Characters	5 <sup>th</sup> & 6 <sup>th</sup> Characters	7 <sup>th</sup> & 8 <sup>th</sup> Characters	9 <sup>th</sup> Character	10 <sup>th</sup> & 11 <sup>th</sup> Characters	12 <sup>th</sup> Character
Year of Regulations <b>24</b>	College Code <b>AL</b>	Type of Degree B.Tech- <b>BT</b> M.Tech- <b>MT</b> MBA- <b>MB</b> MCA- <b>MC</b>	Department Humanities & Sciences- <b>HS</b> Civil Engineering- <b>CE</b> Mechanical Engineering- <b>ME</b> EEE- <b>EE</b> ECE- <b>EC</b> CSE- <b>CS</b> CSE (AI&ML)- <b>AM</b> CSE(DS)- <b>DS</b> MBA- <b>00</b> MCA- <b>00</b> SE- <b>SE</b> EPS- <b>PS</b> VLSI- <b>VL</b> CSE- <b>CS</b>	I- Semester- <b>1</b> II- Semester- <b>2</b> III- Semester- <b>3</b> and so, on	Course sequence First Course – <b>01</b> Second Course – <b>02</b> Third Course – <b>03</b> <b>04, 05, 06</b> and so on	Theory /Practical  Theory- <b>T</b> Practical's- <b>P</b>
<b>Course Code Example: 24ALBTEC101T</b>						

**6. Semester/Credits:**

- i) A semester comprises 90 working days and an academic year is divided into two semesters.
- ii) The summer term is for eight weeks during summer vacation. Internship / apprenticeship / work-based vocational education and training can be carried out during the summer term, especially by students who wish to exit after two semesters or four semesters of study.
- iii) Regular courses may also be offered during the summer on a fast-track mode to enable students to do additional courses or complete backlogs in coursework.
- iv) The Universities/HEIs can decide on the courses to be offered in the summer term depending on the availability of faculty and the number of students.

**7. Structure of the Undergraduate Programme**

All courses offered for the undergraduate program (B. Tech.) are broadly classified as follows:

S. No	Category	Break of Credits (Total 160)	Percentage of total credits	AICTE Recommended %
1	Humanities and Social Science including Management (HM)	13	8%	8-9%
2	Basic Sciences (BS)	20	13%	12-16%
3	Engineering Sciences (ES)	23.5	14%	10-18%
4	Professional Core (PC)	54.5	34%	32-36%
5	Electives Professional Electives (PE) Open Elective (OE) Domain Specific Skill Enhancement Courses (SEC)	33	21%	19-23%
6	Internships & Project work (PR)	16	10%	8-11%
7	Mandatory Courses (MC)	Non-credit	Non-credit	-

S. No	Category	Code	Break up of Credits								Total
			I Year		II Year		III Year		IV Year		
			I Sem	II Sem	I Sem	II Sem	I Sem	II Sem	I Sem	II Sem	
1	Basic Sciences, Humanities and Social Science Including Management	BS & H	10.5	7.5	6	4	1		2		31
2	Engineering Sciences	ES	9	8.5	3	3					23.5
3	Professional Core	PC		4.5	9	13	9	11	8		54.5
4	Professional Elective	PE					2	5	6		13
5	Open Electives	OE					6	3	3		12
6	Domain Specific Skill Enhancement Courses	SEC			2	2	2	2	2		10
7	Internships & Project	PR					2		2	12	16
8	Audit Courses	AC									0
<b>Total</b>			<b>19.5</b>	<b>20.5</b>	<b>20</b>	<b>22</b>	<b>22</b>	<b>21</b>	<b>23</b>	<b>12</b>	<b>160</b>

### 8. Course Classification:

All subjects / courses offered for the undergraduate programme in Engineering & Technology (B.Tech. degree programs) are broadly classified as follows:

S. No	Broad Course Classification	Course Category	Description
1	Foundation Core Courses	Foundation courses	Includes Mathematics, Physics and Chemistry; fundamental engineering courses; humanities, social sciences and management courses
2	Core Courses	Professional Core Courses (PC)	Includes subjects related to the parent discipline / department / branch of Engineering
3	Elective Courses	Professional Elective Courses (PE)	Includes elective subjects related to the parent discipline / department/ branch of Engineering
		Open Elective Courses (OE)	Elective subjects which include interdisciplinary subjects or subjects in an area outside the parent discipline/department / branch of Engineering
		Domain specific skill enhancement courses (SEC)	interdisciplinary/job-oriented/domain courses which are relevant to the industry
4	Project & Internships	Project	B.Tech. Project or Major Project
		Internships	Summer Internships – Community based and Industry Internships; Industry oriented Full Semester Internship
5	Audit Courses	Mandatory non – credit Course	Covering subjects of developing desired attitude among the learners

## 9. Programme Pattern

- i) Total duration of the of B. Tech (Regular) Programme is four academic years.
- ii) Each academic year of study is divided into two semesters.
- iii) Minimum number of instruction days in each semester is 90 days.
- iv) There shall be mandatory student induction program for freshers, with a three-week duration before the commencement of first semester. Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations etc., are included as per the guidelines issued by AICTE.
- v) Health/wellness/yoga/sports and NSS /NCC /Scouts & Guides / Community service activities are made mandatory as credit courses for all the undergraduate students.
- vi) Courses like Environmental Sciences, Indian Constitution, Technical Paper Writing & IPR are offered as non-credit mandatory courses for all the undergraduate students.
- vii) Design Thinking for Innovation & Tinkering Labs are made mandatory as credit courses for all the undergraduate students.
- viii) Increased flexibility for students through an increase in the elective component of the curriculum, with 05 Professional Elective courses and 04 Open Elective courses.
- ix) Professional Elective Courses, include the elective courses relevant to the chosen specialization/branch. Proper choice of professional elective courses can lead to students specializing in emerging areas within the chosen field of study.
- x) A total of 04 Open Electives are offered in the curriculum. A student can complete the requirement for B.Tech. Degree with a Minor within the 160 credits by opting for the courses offered through various verticals/tracks under Open Electives.
- xi) While choosing the electives, students shall ensure that they do not opt for the courses with syllabus contents similar to courses already pursued.
- xii) A pool of interdisciplinary/job-oriented/domain skill courses which are relevant to the industry are integrated into the curriculum of all disciplines. There shall be 05 skill oriented courses offered during III to VII semesters. Among the five skill courses, four courses shall focus on the basic and advanced skills related to the domain/interdisciplinary courses and the other shall be a soft skills course.
- xiii) Students shall undergo mandatory summer internships, for a minimum of eight weeks duration at the end of second and third year of the programme. The internship at the end of second year shall be community oriented and industry internship at the end of third year.
- xiv) There shall also be mandatory full internship in the final semester of the programme along with the project work.
- xv) Undergraduate degree with Honors is introduced by the college for the students having good academic record.
- xvi) Each college shall take measures to implement Virtual Labs (<https://www.vlab.co.in>) which provide remote access to labs in various disciplines of Engineering and will help student in learning basic and advanced concept through remote experimentation. Student shall be made to work on virtual lab experiments during the regular labs.

- xvii) Each college shall assign a faculty advisor/mentor after admission to a group of students from same department to provide guidance in courses registration / career growth / placements / opportunities for higher studies / GATE / other competitive exams etc.
- xviii) Preferably 25% of course work for the theory courses in every semester shall be conducted in the blended mode of learning.

### 10. Evaluation Process

The performance of a student in each semester shall be evaluated subject wise with a maximum of 100 marks for theory and 100 marks for practical subject. Summer Internships shall be evaluated for 50 marks, Full Internship & Project work in final semester shall be evaluated for 200 marks, mandatory courses with no credits shall be evaluated for 30 mid semester marks.

A student has to secure not less than 35% of marks in the end examination and a minimum of 40% of marks in the sum total of the mid semester and end examination marks taken together for the theory, practical, design, drawing subject or project etc. In case of a mandatory course, he/she should secure 40% of the total marks.

### THEORY COURSES

Assessment Method	Marks
Continuous Internal Assessment	30
Semester End Examination	70
Total	100

- i) For theory subject, the distribution shall be 30 marks for Internal Evaluation and 70 marks for the End-Examination.
- ii) For practical subject, the distribution shall be 30 marks for Internal Evaluation and 70 marks for the End- Examination.
- iii) If any course contains two different branch subjects, the syllabus shall be written in two parts with 3 units each (Part-A and Part-B) and external examination question paper shall be set with two parts each for 35 marks.
- iv) If any subject is having both theory and practical components, they will be evaluated separately as theory subject and practical subject. However, they will be given same subject code with an extension of ‘T’ for theory subject and ‘P’ for practical subject.

#### a) Continuous Internal Evaluation

- i). The total internal weightage for theory courses is 30 marks with the following distribution.
  - a. 25 marks for Mid-term tests.
  - b. 5 marks for Assignments.

For all theory courses including mandatory / Audit courses there shall be two mid-term tests in each semester. Each midterm examination shall be evaluated for 25 marks of which 10 marks

for short answer questions (part A – 5 X 2 marks = 10 marks) and 15 marks for subjective paper (Part B – 3 X 10 Marks = 30 Marks, Scaled down to 15 Marks). The total duration of the mid-term test is 1 hour 50 minutes.

Subjective paper shall contain 3 either or type questions (totally six questions) of which student has to answer one from each either-or type of questions. Each question carries 10 marks. The marks obtained in the subjective paper are condensed to 15 marks.

First mid-term test shall be conducted for I, II units of syllabus and second mid-term shall be conducted for III, IV & V units. Final Mid-term marks shall be arrived by considering 80% weightage for the best mid-term test and 20% weightage for the other.

ii) If the student is absent for the mid semester examination, no re-exam shall be conducted and mid semester marks for that examination shall be considered as zero.

For Example:

Marks obtained in first mid: 25

Marks obtained in second mid: 20

Final mid semester Marks:  $(25 \times 0.8) + (20 \times 0.2) = 24$

If the student is absent for any one midterm examination, the final mid semester marks shall be arrived at by considering 80% weightage to the marks secured by the student in the appeared examination and zero to the other.

**For Example:**

Marks obtained in first mid: Absent

Marks obtained in second mid: 25

Final mid semester Marks:  $(25 \times 0.8) + (0 \times 0.2) = 20$

iii). A total of two assignments are to be submitted in a semester. First assignment is to be submitted from the unit I & II, whereas the second assignment is to be submitted from the units III, IV & V. The first assignment is to be submitted before I mid-term test and the second assignment is to be submitted before II mid-term test.

**Note:**

- Any fraction in the final mid marks shall be rounded off to the next higher mark.
- Assignments shall be in the form of problems, mini projects, design problems, slip tests, quizzes etc., depending on the course content. It should be continuous assessment throughout the semester and the average marks shall be considered.

**b) End Examination Evaluation:**

End examination of theory subjects shall have the following pattern:

- i. There shall be 6 questions and all questions are compulsory.
- ii. Question I shall contain 10 compulsory short answer questions for a total of 20 marks such that each question carries 2 marks.
- iii. There shall be 2 short answer questions from each unit. In each of the questions from 2 to 6, there shall be either/or type questions of 10 marks each. Student shall answer any one of them.
- iv. The questions from 2 to 6 shall be set by covering one unit of the syllabus for each question.

End examination of theory subjects consisting of two parts of different subjects, for Example: Basic Electrical & Electronics Engineering shall have the following pattern:

- i. Question paper shall be in two parts viz., Part A and Part B with equal weightage of 35marks each.
- ii. In each part, question 1 shall contain 5 compulsory short answer questions for a total of 5 marks such that each question carries 1mark.
- iii. In each part, questions from 2 to 4, there shall be either/or type questions of 10 marks each. Student shall answer any one of them.
- iv. The questions from 2 to 4 shall be set by covering one unit of the syllabus for each question.

**PRACTICAL COURSES**

Assessment Method	Marks
Continuous Internal Assessment	30
Semester End Examination	70
Total	100

- a) For practical courses, there shall be a continuous evaluation during the semester for 30 sessional marks and end examination shall be for 70 marks.
- b) Day-to-day work in the laboratory shall be evaluated for 30 marks by the concerned laboratory teacher based on the regularity/ record/ viva.
- c) The end examination shall be evaluated for 70 marks, conducted by the concerned laboratory teacher and a senior expert in the subject from the same department.
  - Procedure: 30 marks
  - Experimental work & Results: 30 marks
  - Viva voce: 10 marks.

In a practical subject consisting of two parts (Eg: Basic Electrical & Electronics Engineering Lab), the end examination shall be conducted as single Laboratory in three hours for 70 marks.

For the subject having design and/or drawing, such as Engineering Drawing, the distribution of marks shall be 30 for mid semester evaluation and 70 for end examination.

Assessment Method	Marks
Continuous Internal Assessment	30
Semester End Examination	70
Total	100

Day-to-day work shall be evaluated for 15 marks by the concerned subject teacher based on the reports/submissions prepared in the class. And there shall be two midterm examinations in a semester for duration of 2 hours each for 15 marks with weightage of 80% to better mid marks and 20% for the other. The subjective paper shall contain 3 either or type questions of equal weightage of 5 marks. There shall be no objective paper in mid semester examination. The sum of day-to-day evaluation and the mid semester marks will be the final sessional marks for the subject.

The end examination pattern for Engineering Graphics, shall consists of 5 questions, either/or type, of 14 marks each. There shall be no objective type questions in the end examination. However, the end examination pattern for other subjects related to design/drawing, multiple branches, etc is mentioned along with the syllabus.

There shall be no external examination for mandatory courses with zero credits. However, attendance shall be considered while calculating aggregate attendance and student shall be declared to have passed the mandatory course only when he/she secures 40% or more in the internal examinations. In case, the student fails, a re-examination shall be conducted for failed candidates for 30 marks satisfying the conditions mentioned in item 1 & 2 of the regulations.

The laboratory records and mid semester test papers shall be preserved for a minimum of 3 years as per the University norms and shall be produced to the Committees of the University as and when the same are asked for.

### 11. Skill oriented Courses

- i) There shall be five skill-oriented courses offered during III to VII semesters.
- ii) Out of the five skill courses two shall be skill-oriented courses from the same domain. Of the remaining three skill courses, one shall be a soft skill course and the remaining two shall be skill-advanced courses from the same domain/Interdisciplinary/Job oriented. The course shall carry 100 marks and shall be evaluated through continuous assessments during the semester for 30 sessional marks and end examination shall be for 70 marks. Day-to-day work in the class / laboratory shall be evaluated for 30 marks by the concerned teacher based on the

regularity/assignments/viva/mid semester test. The end examination similar to practical examination pattern shall be conducted by the concerned teacher and an expert in the subject nominated by the principal.

- iii) The Head of the Department shall identify a faculty member as coordinator for the course. A committee consisting of the Head of the Department, coordinator and a senior Faculty member nominated by the Head of the Department shall monitor the evaluation process. The marks/grades shall be assigned to the students by the above committee based on their performance.
- iv) The student shall be given an option to choose either the skill courses being offered by the college or to choose a certificate course being offered by industries/Professional bodies or any other accredited bodies. If a student chooses to take a Certificate Course offered by external agencies, the credits shall be awarded to the student upon producing the Course Completion Certificate from the agency. A committee shall be formed at the level of the college to evaluate the grades/marks given for a course by external agencies and convert to the equivalent marks / grades.
- v) The recommended courses offered by external agencies, conversions and appropriate grades/marks are to be approved by the Head of the Department / BOS / College Level Committee at the beginning of the semester.
- vi) If a student prefers to take a certificate course offered by external agency, the department shall mark attendance of the student for the remaining courses in that semester excluding the skill course in all the calculations of mandatory attendance requirements upon producing a valid certificate.

## **12. MOOCs through SWAYAM Platform:**

A Student has to pursue and complete one course compulsorily through MOOCs approved by the College Level Committee. A student can pursue courses other than core through MOOCs and it is mandatory to complete one course successfully through MOOCs for awarding the degree. A student is not permitted to register and pursue core courses through MOOCs.

The respective departments shall give a list of standard MOOCs providers including SWAYAM whose credentials are endorsed by the HoD.

A student shall register for the course (Minimum of either 8 weeks or 12 weeks) offered through MOOCs with the approval of Head of the Department. The Head of the Department shall appoint one mentor to monitor the student's progression. The student needs to earn a certificate by passing the exam. The student shall be awarded the credits assigned in the curriculum only by submission of the certificate. Examination fee, if any, will be borne by the student.

Students who have qualified in the proctored examinations conducted through MOOCs platform can apply for credit transfer as specified and are exempted from appearing internal as well as external examination (for the specified equivalent credit course only) conducted by the College. Necessary amendments in rules and regulations regarding adoption of MOOC courses would be proposed from time to time.

### 13. Credit Transfer Policy

Adoption of MOOCs is mandatory, to enable Blended model of teaching-learning as also envisaged in the NEP 2020. As per University Grants Commission (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016, the institution shall allow up to a maximum of 20% of the total courses being offered in a particular programme i.e., maximum of 32 credits through MOOCs platform.

- i. The Institution shall offer credit mobility for MOOCs and give the equivalent credit weightage to the students for the credits earned through online learning courses.
- ii. Student registration for the MOOCs shall be only through the respective department of the institution, it is mandatory for the student to share necessary information with the department.
- iii. Credit transfer policy will be applicable to the Professional & Open Elective courses only.
- iv. The concerned department shall identify the courses permitted for credit transfer.
- v. The institution shall notify at the beginning of semester the list of the online learning courses eligible for credit transfer.
- vi. The institution shall designate a faculty member as a Mentor for each course to guide the students from registration till completion of the credit course.
- vii. The Examination section of the institute shall ensure no overlap of MOOC exams with that of the college end semester examination schedule.
- viii. Student pursuing courses under MOOCs shall acquire the required credits only after successful completion of the course and submitting a certificate issued by the competent authority along with the percentage of marks and grades.
- ix. The concerned Head of the Department shall submit the following to the examination section of the college:
  - a) List of students who have passed MOOC courses in the current semester along with the certificate of completion.
  - b) Undertaking form filled by the students for credit transfer.
- x. The principal shall resolve any issues that may arise in the implementation of this policy from time to time and shall review its credit transfer policy in the light of periodic changes brought by UGC, SWAYAM, NPTEL and state government.

**Note:** Students shall be permitted to register for MOOCs offered through online platforms approved by the institution from time to time.

### 14. Academic Bank of Credits (ABC)

The University has implemented Academic Bank of Credits (ABC) to promote flexibility in curriculum as per NEP 2020 to

- i. provide option of mobility for learners across the universities of their choice
- ii. provide option to gain the credits through MOOCs from approved digital platforms

- iii. facilitate award of certificate/diploma/degree in line with the accumulated credits in ABC
- iv. execute Multiple Entry and Exit system with credit count, credit transfer and credit acceptance from students' account.

## **15. Mandatory Internships**

### **Summer Internships**

Two summer internships either onsite or virtual each with a minimum of 08 weeks duration, done at the end of second and third years, respectively are mandatory. It shall be completed in collaboration with local industries, Govt. Organizations, construction agencies, Power projects, software MNCs or any industries in the areas of concerned specialization of the Undergraduate program. One of the two summer internships at the end of second year (Community Service Project) shall be society oriented and shall be completed in collaboration with government organizations/NGOs & others. The other internship at the end of third year is Industry Internship and shall be completed in collaboration with Industries. The student shall register for the internship as per course structure after commencement of academic year. The guidelines issued by the APSCHE / University shall be followed for carrying out and evaluation of Community Service Project and Industry Internship.

Evaluation of the summer internships shall be through the departmental committee. A student will be required to submit a summer internship report to the concerned department and appear for an oral presentation before the departmental committee comprising of Head of the Department, supervisor of the internship and a senior faculty member of the department. A certificate of successful completion from industry shall be included in the report. The report and the oral presentation shall carry 50% weightage each. It shall be evaluated for 50 external marks. There shall be no internal marks for Summer Internship. A student shall secure minimum 40% of marks for successful completion. In case, if a student fails, he/she shall reappear as and when semester supplementary examinations are conducted by the college.

### **Full Semester Internship and Project work:**

In the final semester, the student should mandatorily register and undergo internship (onsite/virtual) and in parallel he/she should work on a project with well-defined objectives. At the end of the semester the candidate shall submit an internship completion certificate and a project report. A student shall also be permitted to submit project report on the work carried out during the internship.

The project report shall be evaluated with an external examiner. The total marks for project work 200 marks and distribution shall be 60 marks for internal and 140 marks for external evaluation. The supervisor assesses the student for 30 marks (Report: 15 marks, Seminar: 15 marks). At the end of the semester, all projects shall be showcased at the department for the benefit of all students and staff and the same is to be evaluated by the departmental Project Review Committee consisting of supervisor, a senior faculty and HOD for 30 marks. The external evaluation of Project Work is a Viva-Voce

Examination conducted in the presence of internal examiner and external examiner appointed by the principal of the institution and is evaluated for 140 marks.

The college shall facilitate and monitor the student internship programs. Completion of internships is mandatory, if any student fails to complete internship, he/she will not be eligible for the award of degree. In such cases, the student shall repeat and complete the internship.

#### **16. Guidelines for offering a Minor**

To promote interdisciplinary knowledge among the students, the students admitted into B.Tech. in a major stream / branch are eligible to obtain degree in Minor in another stream.

- i) The Minor program requires the completion of 12 credits in Minor stream chosen.
- ii) Two courses for 06 credits related to a Minor are to be pursued compulsorily for the minor degree, but maybe waived for students who have done similar/equivalent courses. If waived for a student, then the student must take an extra elective course in its place. It is recommended that students should complete the compulsory courses (or equivalents) before registering for the electives.
- iii) Electives (minimum of 2 courses) to complete a total of 12 credits.

**Note:** A total of 04 Open Electives are offered in the curriculum. A student can complete the requirement for Minor within the 160 credits by opting for the courses offered through various verticals/tracks under Open Electives

#### **17. Guidelines for offering Honours Enrolment into Honors:**

- i) Students of a Department/Discipline are eligible to opt for Honors program offered by the same Department/Discipline
- ii) The enrolment of student into Honors is based on the CGPA obtained in the major degree program. CGPA shall be taken up to III semester in case of regular entry students and only III semester in case of lateral entry students. Students having 7 CGPA without any backlog subjects will be permitted to register for Honors.
- iii) If a student is detained due to lack of attendance either in Major or in Honors, registration shall be cancelled.
- iv) Transfer of credits from Honors to regular B.Tech degree and vice-versa shall not be permitted.
- v) Honors is to be completed simultaneously with a Major degree program.

#### **Registration for Honors:**

- i) The eligible and interested students shall apply through the HOD of his/her parent department. The whole process should be completed within one week before the start of every semester. Selected students shall be permitted to register the courses under Honors.

- ii) The selected students shall submit their willingness to the principal through his/her parent department offering Honors. The parent department shall maintain the record of student pursuing the Honors.
- iii) The students enrolled in the Honors courses will be monitored continuously. An advisor/mentor from parent department shall be assigned to a group of students to monitor the progress.
- iv) There is no fee for registration of subjects for Honors program offered in offline at the respective institutions.

### 18. Attendance Requirements

- i. a) A student shall be eligible to appear for the end semester external examinations if he/she acquires a minimum of 40% attendance in each subject and 75% of attendance in aggregate of all the subjects.
  - b) Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester may be granted by the College Academic Committee.
- ii. Shortage of Attendance below 65% in aggregate shall in NO CASE be condoned.
- iii. A stipulated fee shall be payable towards condonation of shortage of attendance to the Institution.
- iv. Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examination of that class and their registration shall stand cancelled.
- v. A student will not be promoted to the next semester unless he satisfies the attendance requirements of the present semester. They may seek readmission for that semester from the date of commencement of class work.
- vi. If any candidate fulfils the attendance requirement in the present semester, he shall not be eligible for readmission into the same class.
- vii. If the learning is carried out in blended mode (both offline & online), then the total attendance of the student shall be calculated considering the offline and online attendance of the student.
- viii. For induction programme attendance shall be maintained as per AICTE norms.

### 19. Promotion Rules:

The following academic requirements must be satisfied in addition to the attendance requirements mentioned in section 18.

- i. A student shall be promoted from first year to second year if he/she fulfils the minimum attendance requirement as per norms of the institution.
- ii. A student will be promoted from II to III year if he/she fulfils the academic requirement of securing 40% of the credits (any *decimal* fraction should be *rounded off* to *lower* digit) up to in the subjects that have been studied up to III semester.
  - One regular and two supplementary examinations of I Semester
  - One regular and one supplementary examination of II Semester
  - One regular examination of III semester

iii. A student shall be promoted from III year to IV year if he/she fulfils the academic requirements of securing 40% of the credits (any *decimal* fraction should be *rounded off* to *lower* digit) in the subjects that have been studied up to V semester. And in case a student is detained for want of credits for a particular academic year by ii) & iii) above, the student may make up the credits through supplementary examinations and only after securing the required credits he/she shall be permitted to join in the V semester or VII semester respectively as the case may be.

- One regular and four supplementary examinations of I Semester.
- One regular and three supplementary examinations of II Semester.
- One regular and two supplementary examinations of III Semester.
- One regular and one supplementary examination of IV Semester.
- One regular examination of V Semester.

When a student is detained due to lack of credits/shortage of attendance he/she may be re-admitted when the semester is offered after fulfilment of academic regulations. In such case, he/she shall be in the academic regulations into which he/she is readmitted.

## 20. Grading:

As a measure of the student's performance, a 10-point Absolute Grading System using the following Letter Grades and corresponding percentage of marks shall be followed:

After each course is evaluated for 100 marks, the marks obtained in each course will be converted to a corresponding letter grade as given below, depending on the range in which the marks obtained by the student fall.

**Structure of Grading of Academic Performance**

Ranking in which the marks in the subject fall	Grade	Grade Points Assigned
≥ 90	S (Superior)	10
≥ 80 < 90	A (Excellent)	9
≥ 70 < 80	B (Very Good)	8
≥ 60 < 70	C (Good)	7
≥ 50 < 60	D (Average)	6
≥ 40 < 50	E (Pass Average)	5
< 40	F (Fail)	0
Absent	Ab (Absent)	

- i. A student obtaining Grade 'F' or Grade 'Ab' in a subject shall be considered failed and will be required to reappear for that subject when it is offered the next supplementary examination.

- ii. For noncredit audit courses, “Satisfactory” or “Unsatisfactory” shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA/Percentage.

### **Computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):**

The Semester Grade Point Average (SGPA) is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.,

$$SGPA = \frac{\sum (C_i \times G_i)}{\sum C_i}$$

Where,  $C_i$  is the number of credits of the  $i^{\text{th}}$  subject and  $G_i$  is the grade point scored by the student in the  $i^{\text{th}}$  course.

- i. The Cumulative Grade Point Average (CGPA) will be computed in the same manner considering all the courses undergone by a student over all the semesters of a program, i.e.,  $CGPA = \frac{\sum (C_i \times S_i)}{\sum C_i}$  where “ $S_i$ ” is the SGPA of the  $i^{\text{th}}$  semester and  $C_i$  is the total number of credits up to that semester.
- ii. Both SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.
- iii. While computing the SGPA the subjects in which the student is awarded Zero grade points will also be included.
- iv. Conversion of CGPA in to Percentage: Equivalent Percentage =  $(CGPA - 0.5) \times 100$   
Grade Point: It is a numerical weight allotted to each letter grade on a 10-point scale. Letter Grade: It is an index of the performance of students in a said course. Grades are denoted by letters S, A, B, C, D and F.

#### **21. Award of Class:**

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of B.Tech. Degree, he/she shall be placed in one of the following four classes:

<b>Class Awarded</b>	<b>CGPA Secured</b>
First Class with Distinction	$\geq 7.5$
First Class	$\geq 6.5 < 7.5$
Second Class	$\geq 5.5 < 6.5$
Pass Class	$\geq 5.0 < 5.5$

**CGPA to Percentage conversion Formula –  $(CGPA - 0.5) \times 10$**

#### **22. Withholding of Results**

If the candidate has any dues not paid to the institution or if any case of indiscipline or malpractice is pending against him/her, the result of the candidate shall be withheld in such cases.

### 23. Multiple Entry / Exit Option

#### a) Exit Policy:

The students can choose to exit the four-year programme at the end of first/second/third year.

- i. **UG Certificate in (Field of study/discipline)** - Programme duration: First year (first two semesters) of the undergraduate programme, 40 credits followed by an additional exit 10-credit bridge course(s) lasting two months, including at least 6- credit job-specific internship/apprenticeship that would help the candidates acquire job-ready competencies required to enter the workforce.
- ii. **UG Diploma (in Field of study/discipline)** - Programme duration: First two years (first four semesters) of the undergraduate programme, 80 credits followed by an additional exit 10-credit bridge course(s) lasting two months, including at least 6- credit job-specific internship/apprenticeship that would help the candidates acquire job-ready competencies required to enter the workforce.
- iii. **Bachelor of Science (in Field of study/discipline) i.e., B.Sc. Engineering in (Field of study/discipline)** - Programme duration: First three years (first six semesters) of the undergraduate programme, 120 credits.

#### b) Entry Policy:

Modalities on multiple entry by the student into the B.Tech. programme will be provided in due course of time.

**Note:** The Institution shall resolve any issues that may arise in the implementation of Multiple Entry and Exit policies from time to time and shall review the policies in the light of periodic changes brought by UGC, AICTE, State government and JNTUA, Ananthapuramu.

### 24. Gap Year Concept:

Gap year concept for Student Entrepreneur in Residence is introduced and outstanding students who wish to pursue entrepreneurship / become entrepreneur are allowed to take a break of one year at any time after II year to pursue full-time entrepreneurship programme / to establish startups. This period may be extended to two years at the most and these two years would not be counted for the time for the maximum time for graduation. The principal of the respective college shall forward such proposals submitted by the students to the University. An evaluation committee constituted by the University shall evaluate the proposal submitted by the student and the committee shall decide whether to permit the student(s) to avail the Gap Year or not.

### 25. Transitory Regulations

Discontinued, detained, or failed candidates are eligible for readmission as and when the semester is offered after fulfilment of academic regulations. Candidates who have been detained for want of attendance or not fulfilled academic requirements or who have failed after having undergone the course in earlier regulations or have discontinued and wish to continue the course are eligible for admission into the unfinished semester from the date of commencement of class work with the

same or equivalent subjects as and when subjects are offered, subject to Section 2 and they will follow the academic regulations into which they are readmitted.

Candidates who are permitted to avail Gap Year shall be eligible for re-joining into the succeeding year of their B. Tech from the date of commencement of class work, subject to Section 2 and they will follow the academic regulations into which they are readmitted.

**26. Minimum Instruction Days for a Semester:**

The minimum instruction days for each semester shall be 90 days.

**27. Medium of Instruction:**

The medium of instruction of the entire B.Tech undergraduate programme in Engineering & Technology (including examinations and project reports) will be in English only.

**28. Student Transfers:**

Student transfers shall be as per the guidelines issued by the Government of Andhra Pradesh and the University from time to time.

**29. General Instructions:**

- a. The academic regulations should be read as a whole for purpose of any interpretation.
- b. Malpractices rules-nature and punishments are appended.
- c. Where the words “he”, “him”, “his”, occur in the regulations, they also include “she”, “her”, “hers”, respectively.
- d. In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Principal / Chairman-Academic Council is final.
- e. The Institute, with the approval of the Academic Council, may change or amend the academic regulations / structure / credits / syllabi at any time and the changes or amendments shall be made applicable to all the students on rolls with effect from the dates notified by the Institute.

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## ACADEMIC REGULATIONS (R24) FOR B.TECH. (LATERAL ENTRY SCHEME)

*(Effective for the students getting admitted into II year through Lateral Entry Scheme from the Academic Year 2025-2026 onwards)*

### 1. Award of the Degree

#### (a) Award of the B.Tech. Degree / B.Tech. Degree with a Minor if he/she fulfils the following:

Pursues a course of study for not less than three academic years and not more than six academic years. However, for the students availing Gap year facility this period shall be extended by two years at the most and these two years would in addition to the maximum period permitted for graduation (Six years).

Registers for 120 credits and secures all 120 credits.

#### (b) Award of B.Tech. degree with Honors

A student will be declared eligible for the award of the B.Tech. with Honors if he/she fulfils the following:

Student secures additional 15 credits fulfilling all the requisites of a B.Tech. program i.e., 120 credits.

Registering for Honors is optional.

Honors is to be completed simultaneously with B.Tech. programme.

2. Students, who fail to fulfil the requirement for the award of the degree within six consecutive academic years from the year of admission, shall forfeit their seat.

### 3. Minimum Academic Requirements

The following academic requirements have to be satisfied in addition to the requirements mentioned in item no.2

- i. A student shall be deemed to have satisfied the minimum academic requirements and earned the credits allotted to each theory, practical, design, drawing subject or project if he secures not less than 35% of marks in the end examination and a minimum of 40% of marks in the sum total of the mid semester evaluation and end examination taken together.
- ii. A student shall be promoted from III year to IV year if he/she fulfils the academic requirements of securing 40% of the credits (any decimal fraction should be rounded off to lower digit) in the subjects that have been studied up to V semester.

And in case if student is already detained for want of credits for particular academic year, the student may make up the credits through supplementary exams of the above exams before the commencement of IV year I semester class work of next year.

**4. Course Pattern**

- i) The entire course of study is three academic years on semester pattern.
- ii) A student eligible to appear for the end examination in a subject but absent at it or has failed in the end examination may appear for that subject at the next supplementary examination offered.
- iii) When a student is detained due to lack of credits/shortage of attendance the student may be re-admitted when the semester is offered after fulfilment of academic regulations, the student shall be in the academic regulations into which he/she is readmitted.

**5.** All other regulations as applicable for B.Tech. Four-year degree course (Regular) will hold good for B.Tech. (Lateral Entry Scheme).

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**RULES FOR  
DISCIPLINARY ACTION FOR MALPRACTICES / IMPROPER CONDUCT IN EXAMINATIONS**

	<b>Nature of Malpractices/Improper conduct</b>	<b>Punishment</b>
	<i>If the candidate:</i>	
1.(a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation Of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The Hall Ticket of the candidate is to be cancelled.
3.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred for four consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject to the academic regulations, in connection with forfeiture of seat. The performance of the original candidate who has been impersonated, shall be cancelled

		in all the subjects of the examination (including practical's and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for four consecutive semesters from class work and all End Semester examinations, if his involvement is established. Otherwise the candidate is debarred for two consecutive semesters from class work and all End Semester examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all end semester examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject only

6	<p>Refuses to obey the orders of the Chief Superintendent /Assistant - Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.</p>	<p>In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. If the candidate physically assaults the invigilator/ officer-in-charge of the Examinations, then the candidate is also debarred and forfeits his/her seat. In case of outsiders, they will be handed over to the police and a police case is registered against them.</p>
7	<p>Leaves the exam hall taking away answer script or intentionally tears of the script or any part there of inside or outside the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all End Semester examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seats.</p>

8	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred forfeits the seat.
9	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the college expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person(s) who do not belong to the College will be handed over to police and, a police case will be registered against them.
10	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject only or in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester / year examinations, depending on the recommendation of the committee.

12	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the Principal for further action to award suitable punishment.	
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**Note:-**

**Whenever the performance of a student is cancelled in any subject/subjects due to Malpractice, he has to register for End Examinations in that subject/subjects consequently and has to fulfil all the norms required for the award of Degree.**

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