



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., Act. No. 30 of 2008)
ANANTAPURAMU – 515 002 (A.P) INDIA

Academic Regulations 2013 (R13) for
B. Tech (Regular-Full time)

(Effective for the students admitted into I year from the Academic Year 2013-2014 onwards)

1. Award of B.Tech. Degree

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

- i. Pursue a course of study for not less than four academic years and in not more than eight academic years.
- ii. Register for 180 credits and secure all 180 credits.

2. Students, who fail to fulfill 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.

3. Courses of study

The following courses of study are offered at present as specializations for the B. Tech. course for non-autonomous, constituent & affiliated colleges from 2013-14

S.No.	Name of the Branch	Branch 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.	Chemical Engineering	08
7.	Electronics and Instrumentation Engineering	10
8.	Information Technology	12
9.	Electronics and Control Engineering	13
10.	Mechanical (Mechatronics) Engineering	14
11.	Computer Science & Systems Engineering	15
12.	Electronics and Computer Engineering	19
13.	Aeronautical Engineering	21

and any other course as approved by the authorities of the University from time to time.

4. Credits

	I Year		Semester	
	Periods / Week	Credits	Periods / Week	Credits
Theory	02	03	04	03
	03+01	05	--	--
Practical	03	04	03	02
Drawing	01+05	05	01+03	03
Seminar & Comprehensive viva-voce	--	--	--	03
Project	--	--	15	10

5. Distribution and Weightage of Marks

5.1 The performance of a student in each semester / I year shall be evaluated subject – wise with a maximum of 100 marks for theory and 75 marks for practical subject. In addition, ‘Seminar & Comprehensive Viva-Voce’ and Project work shall be evaluated for 75 and 200 marks respectively whereas audit courses shall be evaluated for a maximum of 30 internal marks.

- i. For theory subjects the distribution shall be 30 marks for Internal Evaluation and 70 marks for the End-Examination.
- ii. For practical subjects the distribution shall be 25 marks for Internal Evaluation and 50 marks for the End- Examination.

5.2 Internal Examinations:

- i. For theory subjects, during the semester, there shall be two midterm examinations and for first year there shall be three midterm examinations. Each midterm examination consists of objective paper for 10 marks and subjective paper for 20 marks with duration of 1hour 50 minutes (20 minutes for objective and 90 minutes for subjective paper).

Objective paper shall be for 10 marks. Subjective paper shall contain 5 questions of which student has to answer 3 questions evaluated* for 20 marks.

***Note 1:** The subjective paper shall contain 5 questions of equal weightage of 10 marks and the marks obtained for 3 questions shall be condensed to 20 marks, any fraction(0.5 & above) shall be rounded off to the next higher mark.

***Note 2:** The midterm examination shall be conducted first by distribution of the Objective paper simultaneously marking the attendance, after 20 minutes the answered objective paper is collected back. The student is not allowed to leave the examination hall. Then the descriptive question paper and the answer booklet shall be distributed. After 90minutes the answered booklets are collected back.

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

In semester pattern, first midterm examination shall be conducted for I,II units of syllabus and second midterm examination shall be conducted for III,IV & V units.

Final Internal marks shall be arrived at by considering the marks secured by the student in both the mid examinations with 80% weightage to the better mid exam and 20% to the other. For Ex:

Marks obtained in first mid: 25

Marks obtained in Second mid: 20

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

If the student is absent for any one midterm examination, the final internal 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 Ex:

Marks obtained in first mid: Absent

Marks obtained in Second mid: 25

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

- v. For first year, first midterm examination, shall be from unit – I, second midterm examination shall be from II & III units, and third midterm examination shall be from IV & V units.

Final Internal marks shall be arrived at by considering the marks secured by the student in all the three mid examinations with 80% weightage to the average marks of the best two midterm examinations and 20% to the other. For Ex:

Marks obtained in First mid : 25

Marks obtained in Second mid: 20

Marks obtained in Third mid: 15

Average of Better mid exams: $(25+20)/2 = 22.5$

Final Internal Marks: $(22.5 \times 0.8) + (15 \times 0.2) = 21$

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

Marks obtained in First mid: Absent

Marks obtained in Second mid: 25

Marks obtained in Third mid: 20

Average of Better mid exams: $(25+20)/2 = 22.5$

Final Internal Marks: $(22.5 \times 0.8) + (0 \times 0.2) = 18$

If the student is absent for two mid examinations, final internal marks shall be arrived as below:

Marks obtained in First mid: Absent

Marks obtained in Second mid: Absent

Marks obtained in Third mid: 25

Average of Better mid exams: $(25+0.0)/2 = 12.5$

Final Internal Marks: $(12.5 \times 0.8) + (0 \times 0.2) = 10$

5.3 End Examinations:

- i. End examination of theory subjects shall have the following pattern:
 - a. There shall be 6 questions and all questions are compulsory.
 - b. Question I shall contain 10 compulsory short answer questions for a total of 20 marks such that each question carries 2 marks. There shall be 2 short answer questions from each unit.
 - c. 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.
 - d. Each of these questions from 2 to 6 shall cover one unit of the syllabus.
- ii. End examination of theory subjects consisting of two parts of different subjects, for ex: Electrical & Mechanical Technology, shall have the following pattern:
 - a. Question paper shall be in two parts viz., Part A and Part B with equal weightage.
 - b. In each part, there shall be 3 either-or type questions for 12,12 and 11 marks.

Note: The answers for Part A & Part B shall be written in two separate answer books.

5.4 For practical subjects there shall be a continuous evaluation during the semester for 25 sessional marks and end examination shall be for 50 marks. Day-to-day work in the laboratory shall be evaluated for 25 marks by the concerned laboratory teacher based on the regularity/record/ viva. The end examination shall be conducted by the concerned laboratory teacher and senior expert in the same subject of the department.

In a practical subject consisting of two parts (ex: Electrical & Mechanical Lab), the end examination shall be conducted for 25 marks in each part.

5.5 There shall be an audit pass course in Human values & Professional ethics and Advanced Communication skills lab with no credits. There shall be no external examination. However, attendance in the audit course shall be considered while calculating aggregate attendance and student shall be declared pass in the audit course only when he/she secures 40% or more in the internal examinations.

5.6 For the subject having design and/or drawing, such as Engineering Drawing, Machine Drawing and Estimation, the distribution shall be 30 marks for internal evaluation and 70 marks for end examination. 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 2hrs each for 15 marks with weightage of 80% to better mid marks and 20% for the other. However, when offered in the I year as 5 credit course, there shall be three midterm exams with weightage of 80% to average marks of the best two midterm examinations and 20% for the

other. The sum of day to day evaluation and the internal test marks will be the final sessional marks for the subject.

- 5.7 There shall be a seminar presentation in IV year II Semester. For the seminar, the student shall collect the information on a specialized topic and prepare a technical report, showing his/her understanding over the topic, and submit to the department before presentation. The report and the presentation shall be evaluated by the departmental committee consisting of Head of the Department, seminar supervisor and a senior faculty member. The seminar shall be evaluated for 25 marks. The seminar shall be conducted throughout the semester as per the convenience of the department committee and students. There shall be no external examination for seminar.

There shall be a Comprehensive Viva – Voce in IV year II Semester. The Comprehensive viva- voce will be conducted by the committee consisting of Head of the Department and two senior faculty members of the department. The Comprehensive Viva – voce is aimed to assess the students' understanding in various subjects he/she studies during the B.Tech. course of study. The Comprehensive Viva- Voce shall be evaluated for 50 marks by the committee. There are no internal marks for the Comprehensive Viva-Voce.

A student shall acquire 3 credits assigned to the seminar & comprehensive viva-voce only when he/she secures 40% or more marks for the combined total of 75 marks.

- 5.8 Out of a total of 200 marks for the project work, 60 marks shall be for Internal Evaluation and 140 marks for the End Semester Examination (Viva-voce). The Viva-Voce shall be conducted by a committee consisting of HOD, Project Supervisor and an External Examiner nominated by the University. Project work shall start in IV- I and shall continue in the semester break. The evaluation of project work shall be conducted at the end of the IV year – II semester. The Internal Evaluation shall be made by the departmental committee, on the basis of two seminars given by each student on the topic of his/her project.
- 5.9 Laboratory marks and the sessional marks awarded by the college are not final. They are subject to scrutiny and scaling by the University wherever necessary. In such cases, the sessional and laboratory marks awarded by the college will be referred to a committee. The committee will arrive at a scaling factor and the marks will be scaled as per the scaling factor. The recommendations of the Committee are final and binding.
- 5.10 The laboratory records and internal test papers shall be preserved for minimum of 2 years in the respective institutions as per the University norms and shall be produced to the Committees of the University as and when the same are asked for.

6 Attendance Requirements:

- 6.1 A student shall be eligible to appear for University examinations if he acquires a minimum of 75% of attendance in aggregate of all the subjects in a semester/ I year.
- 6.2 Shortage of Attendance below 65% in aggregate shall in NO case be condoned.
- 6.3 Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester or I year may be granted by the College Academic Committee.
- 6.4 Students whose shortage of attendance is not condoned in any semester / I year are not eligible to take their end examination of that class and their registration shall stand cancelled.
- 6.5 A student will not be promoted to the next semester unless he satisfies the attendance requirements of the present semester / I year, as applicable. They may seek readmission for that semester / I year when offered next.
- 6.6 A stipulated fee shall be payable towards condonation of shortage of attendance to the University.

7 Minimum Academic Requirements:

The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in item no.6

- 7.1 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 internal evaluation and end examination taken together. In case of audit courses and the seminar & comprehensive viva – voce he/she should secure 40% of the total marks.
- 7.2 A student shall be promoted from II to III year only if he/she fulfils the academic requirement of securing 26 credits of the subjects that have been studied up to II year I semester from the following examinations, irrespective of whether the candidate takes the end examination or not as per the normal course of study.
 - One regular and one supplementary examinations of I year.
 - One regular examination of II year I semester
- 7.3 A student shall be promoted from third year to fourth year only if he/she fulfils the academic requirements of securing 44 credits of the subjects that have been studied upto III year I semester from the following examinations, irrespective of whether the candidate takes the end examination or not as per the normal course of study.
 - Two regular and two supplementary examinations of I year.
 - Two regular and one supplementary examinations of II year I semester.
 - One regular and one supplementary examinations of II year II semester.
 - One regular examination of III year I semester.

And in case if student is detained for want of credits for particular academic year by sections 7.2 and 7.3 above, the student may make up the credits through supplementary exams of the above exams before the commencement of third or fourth year I semester class work respectively of next year.

7.4 A student shall register and put up minimum attendance in all 180 credits and earn all the 180 credits. Marks obtained in all 180 credits and audit courses shall be considered for the calculation of aggregate percentage of marks obtained.

7.5 Students who fail to earn 180 credits as indicated in the course structure within eight academic years from the year of their admission shall forfeit their seat in B.Tech. course and their admission shall stand cancelled.

8. Course pattern:

8.1 The entire course of study is for four academic years. The first year shall be on yearly pattern and the second, third and fourth years shall be on semester pattern.

8.2 A student eligible to appear for the end examination in a subject, but absent or has failed in the end examination may appear for that subject at the next supplementary examination when offered.

8.3 When a student is detained due to lack of credits/shortage of attendance he 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 the student is presently readmitted.

9. 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 be in the academic regulations into which the candidate is presently readmitted.

10. With-holding of results:

If the candidate has any dues not paid to the university or if any case of indiscipline or malpractice is pending against him, the result of the candidate shall be withheld and he will not be allowed / promoted into the next higher semester. The issue of awarding degree is liable to be withheld in such cases.

11. 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 shall be placed in one of the following four classes:

Class Awarded	% of marks to be secured	From the aggregate marks secured from 180 credits and audit courses.
First Class with Distinction	70% and above	
First Class	Below 70% but not less than 60%	
Second Class	Below 60% but not less than 50%	
Pass Class	Below 50% but not less than 40%	

(The marks in internal evaluation and end examination shall be shown separately in the marks memorandum)

However while awarding the degree, rounding of percentages is permitted to the extent of 0.5% to effect change of class from pass class to Second class, Second class to First class, First class to First class with Distinction for all the courses being offered or to be offered by the University without adding any marks to the original marks secured by the students.

12. Minimum Instruction Days:

The minimum instruction days including exams for each semester / I year shall be 90/180 days respectively.

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

14. General:

14.1 The academic regulations should be read as a whole for purpose of any interpretation.

14.2 Malpractices rules- nature and punishments is appended.

14.3 Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.

14.4 In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.

14.5 The University may change or amend the academic regulations or 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 University.

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