JNTUA COLLEGE OF ENGINEERING (AUTONOMOUS) ANANTAPUR
ANANTHAPURAMU–515 002 (A.P) INDIA

Academic Regulations (R20) for
B. Tech (Regular-Full time)
(Effective for the students admitted into I year from the Academic Year 2020-2021 onwards)

1. **Award of B.Tech. Degree**
   A student will be declared eligible for the award of the B.Tech. degree if he/she fulfills the following academic regulations:

   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 be in addition to the maximum period permitted for graduation (Eight years).

   ii. Registers for 160 credits and secures all 160 credits.

   iii. A student will be eligible to get Undergraduate degree with Honors or additional Minor chosen degree in Engineering, if he/she completes an additional 20 credits for each.

   iv. A student will be permitted to register for either Honors degree or additional Minor degree in Engineering.

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. This clause shall be read along with clause 1 (i).

3. **Programmes offered by the College:**
   The following Programmes are offered at present as specializations for the B. Tech. course from 2020-21

S.No.	Name of the Programme	Programme 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

4. Admissions:
Admission to the B. Tech Program shall be made subject to the eligibility, qualifications and specialization prescribed by the A.P. State Government/University from time to time. Admissions shall be made either based on the merit rank obtained by the student in the common entrance examination conducted by the A.P. Government/University or any other order of merit approved by

the A.P. Government/University, subject to reservations as prescribed by the Government/University from time to time.

5. Programme related terms:

i. *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.

ii. *Academic Year :* Two consecutive (one odd + one even) semesters constitute one academic year.

iii. *Choice Based Credit System (CBCS):* The CBCS provides choice for students to select from the Prescribed courses.

iv. Each course is assigned certain number of credits based on following criterion:

	Semester	
	Hours/ Week	Credits
Theory (Lecture/Tutorial)	02	02
	03	03
	04	04
Practical	02	01
	03	1.5
	04	02

6. Structure of the Undergraduate Programme

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

S. No.	Category	Code	Breakup of Credits (Total 160)
1	Humanities and Social Science including Management courses	HS	10.5
2	Basic Science courses	BS	21
3	Engineering Science Courses	ES	24
4	Professional Core Courses	PC	51
5	Professional Elective Courses	PE	15
6	Open Elective Courses	OE	12
7	Skill Oriented/Advanced Courses	SC	10
8	Internship, Project work	PR	16.5
9	Non-credit Mandatory Courses	MC	0

7. Program 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.

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. All undergraduate students shall register for NCC/NSS/ activities. A student will be required to participate in an activity for two hours in a week either in third or fourth semester. Grade shall be awarded as Satisfactory or Unsatisfactory in the mark sheet based on participation, attendance, performance, and

behaviour. If a student gets an unsatisfactory grade, he/she shall repeat the above activity in the subsequent years, to complete the degree requirements

vi. Courses like Environmental Sciences, Universal Human Values, Indian Constitution, Design Thinking for Innovation and Employability Skills is offered as non-credit mandatory courses for all branches.

vii. Increased flexibility for students through an increase in the elective component of the curriculum, with 05 Professional Elective courses and 04 Open Elective courses.

viii. 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 an emerging area within the chosen field of study.

ix. Student can opt for any open elective other than open elective offered by his/her own department. While choosing the electives, students shall ensure that they do not opt for the courses with syllabus contents similar to that of their departmental core/elective courses.

x. 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.

xi. Students shall undergo mandatory summer internships, for a minimum of six weeks duration at the end of second and third year of the programme. There shall also be mandatory full internship in the final semester of the programme along with the project work.

xii. Undergraduate degree either with Honours or a Minor is introduced by the College for the students having good academic record

xiii. Each department 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.

xiv. Each department 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.

xv. Preferably 25% course work for the theory courses in every semester shall be conducted in the blended mode of learning.

8. 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 each, Full Internship & Project work in final semester shall be evaluated for 200 marks whereas mandatory courses with no credits shall be evaluated for 30 mid semester 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 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).
   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.

8.1. Midterm Examination Evaluation:

i) For theory subjects, during the semester, there shall be two midterm examinations. Each midterm examination shall be evaluated for 30 marks of which 10 marks for objective paper with 20 objective type questions (20 minutes duration), 15 marks for subjective paper (90 minutes duration) with 3 either or type questions (totally 6 questions from 1 to 6) of which student has to answer one from each either or type question and 5 marks for assignment.

*Note 1: The objective paper with 20 objective type questions shall be prepared in line with the quality of UPSC/ GATE examination questions.

*Note 2: The subjective paper shall contain 3 either or type questions of equal weightage of 5 marks. Any fraction shall be rounded off to the next higher mark.

*Note 3: The midterm examination shall be conducted first by distribution of the Objective paper, simultaneously marking the attendance, after 20 minutes the answered objective paper shall be 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.

*Note4:The assignment shall contain objective type/essay type question/numerical problems/software development. It should be continuous assessment throughout the semester. There shall be at least two assignments in a semester and the average marks of the two assignments shall be considered.

ii) 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.

iii) First midterm examination shall be conducted for I, II and half part of the III units of syllabus. The second midterm examination shall be conducted for remaining part of III, IV and V units.

iv) Final midterm marks shall be arrived at by considering the marks secured by the student in both the mid examinations with 80% weightage given to the better mid exam and 20% to the other.

For Example:

> 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 Example:

> Marks obtained in first mid: Absent
> Marks obtained in second mid: 25
> Final Internal Marks: $(25 \times 0.8) + (0 \times 0.2) = 20$

8.2. End Examination Evaluation:

i) End examination of theory subjects shall have the following pattern:

    a. There shall be 6 questions and all questions are compulsory.
    b. Question 1 shall contain 10 compulsory short answer questions for a total of 20 marks such that each question carries 2 marks. There shall be two short answer questions from each unit. The questions shall be in line with quality of UPSC/GATE examination.

c. In each of the questions from 2 to 6 (2 to 11 in s.no. wise), there shall be either/or type questions of 10 marks each. Student shall answer any one of them.

d. The questions from 2 to 6 shall be set by covering one either or type question from each unit of the syllabus.

ii) End examination of theory subjects consisting of two parts of different subjects, for Example:

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 of 35 marks each.

b. In each part, question 1 shall contain 5 compulsory short answer questions for a total of 5 marks such that each question carries 1 mark.

c. In each part, questions from 2 to 7, there shall be either/or type questions of 10 marks each. Student shall answer any one of them.

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

iii) For practical courses, there shall be a continuous evaluation during the semester for 30 sessional marks and end examination shall be for 70 marks. Day-to-day work in the laboratory shall be evaluated for 15 marks by the concerned laboratory teacher based on the regularity/record/viva and 15 marks for the internal test. The end examination shall be conducted by the concerned laboratory teacher and a senior expert in the subject from the same department. For passing the laboratory examination a student shall obtain minimum 35% marks in the external examination and shall obtain minimum 40% including internal and external examinations.

iv) In a practical subject consisting of two parts (Eg: Electrical & Mechanical Engg. Lab), the end examination shall be conducted for 35 marks in each part. Internal marks shall be evaluated for 15 marks in each part. Minimum of 35% of lab in each part in the end exam. i.e., 12 for each and overall student shall obtain minimum 40% including internal and external evaluation.

v) For the subject having design and/or drawing, such as Engineering Drawing, the distribution of marks shall be 30 for internal evaluation and 70 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 2 hours each for 15 marks with weightage of 80% to better mid marks and 20% for the other. The subjective paper (Midterm examination) shall contain 3 either or type questions of equal weightage of 5 marks. There shall be no objective paper in midterm examination. The sum of day-to-day evaluation and the internal test 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 is to be mentioned along with the syllabus.

vi) There shall be no external examination for mandatory courses with zero credits. However, attendance in the audit course 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 every six months/semester at a mutually convenient date of college/student satisfying the conditions mentioned in item 1 & 2 of the regulations.

vii) The midterm test papers and lab records shall be preserved for a minimum of 3 years in the respective departments as per the Institution norms and shall be produced to the Committees as and when the same are asked for.

9. 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.

f) 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 15 marks by the concerned teacher based on the regularity/assignments/viva and remaining 15 marks through 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 College 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 as approved by the College.

10. Choice Based Credit Courses (CBCC)

There shall be four open elective courses, five professional elective courses and two humanities elective courses which are **Choice Based Credit Courses (CBCC)** from III semester onwards. Among them, professional elective course offered in VI semester shall be pursued in MOOC manner. The student shall register for the course (Minimum of 12 weeks) offered by SWAYAM/NPTEL through online with the approval of Head of the Department. The Head of the Department shall appoint one mentor to monitor the student's assignment submissions given by SWAYAM/NPTEL. 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. In case, if student does not pass subject registered through SWAYAM/NPTEL, the College shall conduct the external examination for the MOOC subject for 100 marks based on the syllabi of the respective subject provided in the curriculum.

11. Credit Transfer Policy

a) As per University Grants Commission (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016, a 'Gazette Notification' issued on 19th July 2016 & 17th August 2016,

respectively, the University shall allow up to 20% of the total courses being offered in a particular Programme in a semester through the Online Learning courses through SWAYAM.

i) The University shall offer credit mobility for MOOCs and give the equivalent credit weightage to the students for the credits earned through online learning courses through SWAYAM platform.

ii) The online learning courses available on the SWAYAM platform will be considered for credit transfer.

iii) Student registration for the MOOCs shall be only through the institution, it will be mandatory for the student to share necessary information with the institution.

iv) Credit transfer policy will be applicable to the Skill courses, Elective courses (Professional, Open & Humanities) offered by the university under Choice Based Credit System (CBCS).

v) The institution shall select the courses to be permitted for credit transfer through SWAYAM. However, while selecting courses in the online platform institution would essentially avoid the courses offered through the curriculum in the offline mode.

vi) The institution shall notify in June and November every year the list of the online learning courses eligible for credit transfer in the forthcoming Semester.

vii) The heads of the departments shall also ensure that the student has to complete the course and produce the course completion certificate as per the academic schedule given for the regular courses in that semester

viii) SWAYAM Course credit points are as specified in the platform

ix) The head of the department shall designate a faculty member as a Mentor for each course to guide the students from registration till completion of the credit course.

x) The college shall ensure no overlap of SWAYAM MOOC exams with that of the college examination schedule. In case of delay in SWAYAM results, the college will re-issue the marks sheet for such students.

xi) 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/grades.

xii) The departments 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 certificates of completion.
      b) Undertaking form filled by the students for credit transfer.

xiii) The college 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.

b) Students shall also be permitted to take online courses through other MOOC platforms like Coursera, edX, Udemy etc. as per the guidelines specified in a). Only the courses with evaluation specified in percentage/grades shall be considered. If not specified in the online platform, then following credit equivalence shall be considered:
      Courses of 8 weeks duration: 2 Credits
      Courses of 10 weeks duration: 3 Credits
      Courses 12 weeks duration: 4 Credits

12. Mandatory Internships

a) Summer Internships:
Two summer internships either onsite or virtual each with a minimum of six 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, Hydel and thermal power projects, software MNCs or any industries in the areas of concerned specialization of the Undergraduate program. One of the two summer internships shall be society oriented and shall be completed in collaboration with government

organizations/NGOs & others. The student shall register for the internship as per course structure after commencement of academic year.

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 from industry shall be included in the report. The report and the oral presentation shall carry 40% and 60% weightages, respectively. 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.

b) 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.

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 based on Motivation, Technical Knowledge and Awareness related to the Project. At the end of the semester, it 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 college 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.

13. Minor degree in a discipline(Minor degree/Programme):

- This concept is introduced in the curriculum of all conventional B. Tech. Programmes offering a major degree. The main objective of Minor in a discipline is to provide additional learning opportunities for academically motivated students and it is an optional feature of the B. Tech. Programme. A student can get a Minor degree in a discipline other than his/her parent discipline if he/she earn 20 extra credits from the discipline in which he/she wants to acquire Minor degree through professional core/professional elective or equivalent MOOC courses pertaining to the discipline in which Minor degree is needed, available under SWAYAM platform. The list of courses to be studied either in MOOCs or conventional type will be decided by the College at the time of registration for Minor degree.
  a. Students having a CGPA of 8.0(for SC/ST students CGPA of 7.5) or above up to II year-I semester and without any backlog subjects will be permitted to register for Minor degree. An SGPA and CGPA of 7.5 (for SC/ST students CGPA of 7.0)has to be maintained in the subsequent semesters without any backlog subjects in order to keep the Minor discipline registration live or else it will be cancelled.
  b. Students aspiring for a Minor degree must register from **V** semester onwards and must opt for a Minor degree in a discipline other than the discipline he/she is registered in. However, Minor discipline registrations are not allowed before V semester and after VI semester.
  c. Students will not be allowed to register and pursue more than two subjects in any semester.
  d. The Evaluation pattern of theory subjects will be similar to the regular Programme evaluation.
  e. Students may enlist their choice of Minor discipline Programmes, in order of preference, for which they wish to register. It will not be permissible to alter the choices after the application has been submitted. However, students are allowed to opt for only one Minor discipline Programme in the

order of preference given by them.

f. Minimum strength required for offering a Minor in a discipline is considered as 20% of the class size and Maximum would be 80% of the class size.

g. Completion of a Minor discipline Programme requires no addition of time to the regular Four year Bachelors' Programme. That is, Minor discipline Programme should be completed by the end of final year B. Tech. Programme along with the major discipline.

h. There shall be separate course/class work and time table of the various Minor Programmes. Attendance regulations for these Minor discipline Programmes will be as per regular courses.

i. A student registered for Minor in a discipline shall pass in all subjects that constitute the requirement for the Minor degree Programme. No class/division (i.e., second class, fist class and distinction, etc.) shall be awarded for Minor degree Programme.

j. Five courses of the pattern (3-0-2) or (3-1-0) have to be studied.

k. The Minor in a discipline will be mentioned in the degree certificate as Bachelor of Technology in XXX with Minor in YYY. For example, Bachelor of Technology in **Computer Science & Engineering** with Minor in **Electronics &Communication Engineering**. This fact will also be reflected in the transcripts, along with the list of courses taken for Minor Programme with CGPA mentioned separately.

l. There shall be no limit on the number of minor programs to be offered. BOS can identify as many as no. of tracks.

m. If the student drops (or terminated) from the minor program, the earned credits cannot be converted into core electives and they will appear as extra credits in the marks sheet.

14. **Honors degree in a discipline:**

a. This concept is introduced in the curriculum for all conventional B. Tech. Programmes. The main objective of Honors degree in a discipline is to provide additional learning opportunities for academically motivated students and it is an optional feature of the B. Tech. Programme. In order to earn a Honors degree in his/her discipline, a student has to earn 20 extra credits by studying five advanced courses of (3-0-2)in the concerned branch of Engineering. In place of advanced courses, he/she can study equivalent MOOC courses available under SWAYAM platform, as decided by the College from time to time. The Evaluation pattern of theory subjects will be similar to the regular Programme evaluation. Students aspiring for Honors degree must register from **V** semester onwards. However, Honors degree registrations are not allowed before V semester and after VI semester.

b. Minimum strength required for offering a Honor in a discipline is considered as 5% of the class size

c. Students having a CGPA of 8.0 (for SC/ST students CGPA of 7.5) or above up to II year-I semester and without any backlog subjects will be permitted to register for degree with Honors. An SGPA and CGPA of 7.5 (for SC/ST students CGPA of 7.0) has to be maintained in the subsequent semesters without any backlog subjects in order to keep the degree with Honors registration live or else it will be cancelled and degree will be given as B.Tech. (Regular).

d. Students are allowed to register either Minor or Honor degree only. No student will be allowed to register both.

e. If the student drops (or terminated) from the honor program, the earned credits cannot be converted into core electives and they will appear as extra credits in the marks sheet.

15. **Attendance Requirements in Academics:**

i) A student shall be eligible to appear for external examinations if he/she acquires a minimum of 40% attendance in each subject and 75% of attendance in aggregate of all the subjects

ii) 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.

iii) Shortage of Attendance below 65% in aggregate shall in <u>NO CASE</u> be condoned.

iv) A stipulated fee shall be payable towards condonation of shortage of attendance to the Institution.

v) 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.

vi) 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 when offered next.

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 the AICTE norms.

16. Promotion Rules

The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in section 15.

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 (Sum of Internal and External Marks). In case of mandatory courses he/she should secure 40% of the total marks.

ii) A student shall be promoted from first year to second year if he/she fulfils the minimum attendance requirement as per college norms.

iii) A student shall be promoted from IV to V Semester only if he/she fulfils the academic requirement of securing 40% (any decimal fraction should be rounded off to lower digit) of the credits in the subjects that have been studied up to III 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 two supplementary examinations of I Semester.
> One regular and one supplementary examination of II Semester.
> One regular examination of III semester.

iv) A student shall be promoted from VI semester to VII semester only if he/she fulfils the academic requirements of securing 40% (any decimal fraction should be rounded off to lower digit) of the credits in the subjects that have been studied up to V 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 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 examinations of IV Semester.
> One regular examination of V Semester.

And in case a student is detained for want of credits for particular academic year by sections iii) and iv) 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 as the case may be.

v) 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.

vi) A student shall register and put up minimum attendance in all 160 credits and earn all the 160 credits.

vii) Students who fail to earn 160 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, subjected to clause 1(i).

17. With–holding of Results:

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

18. Gap Year Concept:

- Gap year concept for Student Entrepreneur in Residence is introduced and outstanding students who wish to pursue entrepreneurship are allowed to take a break of one year at any time after I/II/III year to pursue full-time entrepreneurship.
- This period may be extended to two years at most and these two years would be in addition to the maximum period permitted for graduation.
- The Principal of the college shall take the decision on proposals submitted by the students. An evaluation committee constituted by the Principal of the College 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.

19. Transitory Regulations:

- Discontinued, detained, or failed candidates are eligible for readmission as and when the semester is offered after fulfillment 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 rejoining 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.

20 . Minimum Instruction Days for a Semester:

The minimum instruction days including exams for each semester shall be 90 working days.

21. Medium of Instruction:

The Medium of Instruction is **English** for all courses, laboratories, internal and external examinations, Comprehensive Viva-Voce, seminar presentations and project reports.

22. Student Transfers:

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

23. Award of Grades:

After each subject is evaluated for 100 marks, the marks obtained in each subject 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

Range in which the marks in the subject fall	Grade	Grade points Assigned
≥ 90	A+ (Outstanding)	10
80-89	A (Excellent)	9
70-79	B (Very Good)	8
60-69	C (Good)	7
50-59	D (Fair)	6
40-49	E (Satisfactory)	5
< 40	F (Fail)	0
Absent	Ab (Absent)	0

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 mandatory courses, "Satisfactory" or "Unsatisfactory" shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.

24. Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

i. 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.,

$$SGPA = \Sigma\ (C_i \times G_i)/\Sigma\ C_i$$

where, C_i is the number of credits of the ith subject and G_i is the grade point scored by the student in the ith course.

ii. The Cumulative Grade Point Average (CGPA) will be computed in the same manner taking into account all the courses undergone by a student over all the semesters of a Programme, i.e.,

$$CGPA = \Sigma\ (C_i \times S_i)/\ \Sigma\ C_i$$

where "S_i" is the SGPA of the ith semester and C_i is the total number of credits up to that semester.

iii. Both SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

iv. While computing the SGPA the subjects in which the student is awarded Zero grade points will also be included.

v. *Grade Point:* It is a numerical weight allotted to each letter grade on a 10-point scale.

vi. *Letter Grade:* It is an index of the performance of students in a said course. Grades are denoted byletters A+, A, B, C, D, E and F.

vii. As per AICTE regulations, conversion of CGPA into equivalent percentage as follows:
Equivalent Percentage = (CGPA - 0.50) x 10

25. Award of Class:

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

Class Awarded	CGPA Secured
First Class with Distinction	≥ 7.5
First Class	≥ 6.5 < 7.5
Second Class	≥ 5.5 < 6.5
Pass Class	≥ 4.0 < 5.5

26. 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 is final.

e. The Principal may change or amend the academic regulations of common B.o.S 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 Principal.

f. The above rules and regulations are to be approved/ratified by the College Academic Council as and when any modifications are to be done.

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ACADEMIC REGULATIONS FOR B. TECH.(R20)
(LATERAL ENTRY SCHEME)
(Effective for the students getting admitted into II year through Lateral Entry Scheme from the Academic Year 2021-2022and onwards)

1. **Award of B.Tech. Degree**

    A student admitted in Lateral Entry Scheme (LES) will be declared eligible for the award of the B.Tech degree if the student fulfills the following academic regulations:

    a) Pursues a course of study for not less than three academic years and not more than six academic years.

    b) Registers for *121* credits and secures all *121* credits from II to IV year of Regular B.Tech. Programme.

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

3. The regulations **3** to **6**except 5.1 are to be adopted as that of B. Tech. (Regular).

4. **Minimum Academic Requirements:**

    The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in item no.**5**

    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 internal evaluation and end examination taken together.

    ii. A student shall be promoted from third year to fourth year only if the student fulfills the academic requirements of securing 40% of credits from the following examinations, irrespective of whether the candidate takes the end examination or not as per the normal course of study.

        a. One regular and Two supplementary examinations of III semester.

        b. One regular and one supplementary examinations of IV semester.

        c. One regular examination of 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.

5. **Course Pattern**

    5.1. The entire course of study is three academic years on semester pattern.

    5.2.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.

    5.3. 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 fulfillment of academic regulations, the student shall be in the academic regulations into which he/she is readmitted.

    6. The regulations**8**to **16**are to be adopted as that of B. Tech. (Regular). All other regulations as applicable for B. Tech. Four-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).

7. **Minimum Academic Requirements and Award of the Degree:**

    The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in section 6 of B.Tech. (Regular).

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 and end examination marks taken together. In case of mandatory courses he/she should secure 40% of the total marks.

7.2 A lateral entry student shall be promoted from VI semester to VII semester only if he/she fulfils the academic requirements of securing 40% of the credits in the subjects that have been studied up to V 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 two supplementary examinations of III Semester.
One regular and one supplementary examinations of IV Semester.
One regular examination of V Semester.

And in case a student is detained for want of credits for particular academic year by section 7.2 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 VII semester as the case may be.

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RULES FOR
DISCIPLINARY ACTION FOR MALPRACTICES / IMPROPER CONDUCT IN EXAMINATIONS

S. No.	Nature of Malpractices/Improper conduct	Punishment
	If the Candidate:	
1 (a)	Possesses or keeps accessible in examination hall, any paper, note book, Programmemable 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.
1 (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, Programmemable 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 practicals 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 examinations, if his involvement is established. Otherwise, the candidate is debarred for two 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.

		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 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	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.	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.
7	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.	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 the examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
8	Possess any lethal weapon or firearm	Expulsion from the examination hall and

	in the examination hall.	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.
9	If student of the college, who is not a candidate for the particular examination or any person not connectedwith the college indulges in any malpractice orimproper conduct mentioned in clause 6 to 8.	Student of the colleges 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 Institution for further action to award suitable punishment.	

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 fulfill all the norms required for the award of Degree.