



SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (AUTONOMOUS)

(Approved by AICTE, New Delhi, Affiliated to JNTUK, Kakinada)

Accredited by NAAC with 'A+' Grade.

Recognised as Scientific and Industrial Research Organisation

SRKR MARG, CHINA AMIRAM, BHIMAVARAM – 534204 W.G.Dt., A.P., INDIA

ACADEMIC REGULATIONS (R23)

For B.Tech. FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted from 2023-24)

Sagi Rama Krishnam Raju Engineering College 2023 Regulations (R23 Regulations) applicable to all programmes given hereunder. These regulations govern the B. Tech. programmes offered by all the Departments with effect from the students admitted into the programmes from academic year 2023-24.

1. Courses of Study

The following programmes of study are offered at present as specializations for the B. Tech. programmes in S R K R Engineering College.

S.No	Programme	Code	Short Name
1.	Civil Engineering	01	CE
2.	Electrical & Electronics Engineering	02	EEE
3.	Mechanical Engineering	03	ME
4.	Electronics & Communication Engineering	04	ECE
5.	Computer Science & Engineering	05	CSE
6.	Information Technology	12	IT
7.	Artificial Intelligence and Data Science	54	AIDS
8.	Computer Science and Business System	57	CSBS
9.	Artificial Intelligence and Machine Learning	61	AIML
10.	Computer Science and Design	62	CSG
11.	CSE - Internet of Things and Cyber Security including Block Chain Technology	47	CIC
12.	Computer Science and Information Technology	07	CSIT

2. Award of the Degree

- a. **Award of the B.Tech. Degree / B.Tech. Degree with a Minor** if he/she fulfils the following:
 - i. Pursues a Programme 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.

3. 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. Programme and their admission stands cancelled. This clause shall be read along with clause 2 a) i).
4. **Admission** to the B. Tech Programme shall be made subject to the eligibility, qualifications and specialization prescribed by the A.P. State Government/ JNTUK 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**

Credit: A unit by which the course work is measured. It determines the number of hours of instruction 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

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

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

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 College 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	Breakup of Credits (Total 160)	Percentage of total credits	AICTE Recommendation (%)
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 %	30 – 36%
5.	Electives – Professional (PE) & Open (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	-

8. All courses/ courses offered for the undergraduate programme in Engineering & Technology (B.Tech. degree programmes) 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 courses related to the parent discipline/department/branch of Engineering
3.	Elective Courses	Professional Elective Courses (PE)	Includes elective courses related to the parent discipline/department/ branch of Engineering
		Open Elective Courses (OE)	Elective courses which include interdisciplinary courses or courses 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 courses	Covering courses of developing desired attitude among the learners

9 Programme Pattern

- i. The total duration of the B. Tech (Regular) Programme is four academic years.
- ii. Each academic year of study is divided into two semesters.
- iii. The minimum number of instruction days in each semester is 90 days.
- iv. There shall be a 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/programme. 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 enhancement 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 the 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. An undergraduate degree with Honors is introduced by the College for the students having good academic record.
- xvi. 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. Students shall be made to work on virtual lab experiments during the regular labs.
- xvii. 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.
- 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 course-wise with a maximum of 100 marks for theory and 100 marks for practical course. 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 internally for 30 marks.

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

THEORY COUSES

Evaluation Process	Marks
Continuous Internal Evaluation	30
Semester End Examination	70
Total	100

- i. For theory courses and practical courses, the distribution shall be 30 marks for Continuous Internal Evaluation and 70marks for the Semester End Examination.
- ii. If any course contains two different branch courses, the syllabus shall be written into two parts with 3 units each (Part-A and Part-B) and Semester end examination question paper shall be set with two parts each for 35 marks.
- iii. If any course is having both theory and practical components, they will be evaluated separately as theory course and practical course. However, they will be given same course code.

a. **Continuous Internal Evaluation**

- i) For theory courses, during the semester, there shall be two internal examinations. Each internal examination shall be evaluated for 30 marks of which 10 marks for objective paper (20 minutes duration), 15 marks for subjective paper (90 minutes duration) and 5 marks for assignment.
- ii) Objective paper shall contain for 05 short answer questions with 2 marks each OR maximum of 20 bits for 10 marks. 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 5 marks.

Note:

- The objective paper shall be prepared in line with the quality of competitive examinations questions.
 - 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.
 - The objective paper shall be conducted in online / offline mode on the day of subjective paper test.
 - 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.
- iii) If the student is absent for the internal examination, no re-exam shall be conducted.
 - iv) The first internal examination shall be conducted for I, II and half of the III unit syllabus with one either or type question from each unit. The second internal examination shall be conducted for remaining half of the syllabus from III unit, IV and V units with one either or type question from each unit.
 - v) Final internal marks shall be arrived at by considering the marks secured by the student in both the internal examinations with 80% weightage given to the better internal exam and 20% to the other.

For Example:

Marks obtained in first internal exam: 25

Marks obtained in second internal exam: 20

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

b. End Examination Evaluation:

End examination of theory courses shall have the following pattern:

- i) There shall be 11 questions in which first question is compulsory and from questions 2 to 11 there shall be two questions from each unit with internal choice.
- ii) Question 1 shall contain 10 compulsory short answer questions, two from each unit for a total of 20 marks such that each question carries 2 marks.
- iii) From questions 2 to 11, each question carries 10 marks. Student shall answer one question from each unit.

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

- i) The 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 7, there shall be two questions from each unit with internal choice for 10 marks each. Students shall answer any one of them.

PRACTICAL COURSES

Evaluation Process	Marks
Continuous Internal Evaluation	30
Semester End Examination	70
Total	100

- a) For practical courses, there shall be a continuous evaluation during the semester for 30 internal marks and the end examination shall be for 70 marks.
- b) 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.
- c) The end examination shall be evaluated for 70 marks, conducted by the concerned laboratory teacher and a senior expert in the course from the same department.
 - Procedure: 20 marks
 - Experimental work & Results: 30 marks
 - Viva voce: 20 marks.

In a practical course consisting of two parts (Eg: Basic Electrical & Electronics Engineering Lab), the end examination shall be conducted for 70 marks as a single laboratory in 3 hours. Internal examination shall be evaluated for 30 marks in each part, and final internal marks shall be arrived by considering the average of marks obtained in two parts.

- d) For the course having design and/or drawing, such as Engineering Drawing / Graphics, the distribution of marks shall be 30 for Continuous Internal Evaluation and 70 for Semester end examination.

Evaluation Process	Marks
Continuous Internal Evaluation	30
Semester End Examination	70
Total	100

Day-to-day work shall be evaluated for 15 marks by the concerned course teacher based on the reports/submissions prepared in the class. And there shall be two internal examinations in a semester for duration of 90 Minutes each for 15 marks with weightage of 80% to better internal exam marks and 20% for the other. The subjective papers shall contain 3 either or type questions of equal weightage of 5 marks. There shall be no objective paper in internal examinations. The sum of day-to-day evaluation and the internal exam marks will be the final internal marks for the course.

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

- e) 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 2 & 3 of the regulations.
- f) The laboratory records and internal exam test papers shall be preserved for a minimum of 3 years in the respective Departments as per the College/University norms and shall be produced to the Committees of the College/University as and when the same are asked for.

Revaluation: A student can request for Revaluation of his/her answer book on payment of a prescribed fee as per College norms.

Note: Revaluation applicable for Semester End Examinations (SEE) of Theory Courses only.

Third valuation: If the difference between the First valuation and Revaluation is more than 20% of the marks, then those scripts will be sent for Third valuation.

11. Skill Enhancement Courses

- i) There shall be five skill enhancement courses offered during III to VII semesters.
- ii) Out of the five skill enhancement courses two shall be from the same domain. The remaining three skill enhancement courses, one shall be a soft skill course and the remaining two shall be skill-advanced courses from the same domain/Interdisciplinary/Job oriented.
- iii) The course shall carry 100 marks and shall be evaluated through continuous assessments during the semester for 30 internal 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/internal exam. The end examination is similar to practical examination pattern shall be conducted by the concerned teacher and an expert in the course nominated by the Controller of Examinations/principal.
- iv) The student shall be given an option to choose either the skill enhancement 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 Department/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/University at the beginning of the semester. The HOD of the respective Department shall forward such proposals to the Board of

Studies/Academic Council for approval.

- vi) If a student prefers to take a certificate course offered by external agency, the concerned 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.

12 Massive Open Online Courses (MOOCs):

A Student has to pursue and complete one course compulsorily through MOOCs approved by the concerned Board of Studies. 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.

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. The 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 College 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) The 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/ Department shall notify at the beginning of semester the list of the online learning courses eligible for credit transfer.
- vi) The Institution/ Department 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 Institution shall ensure no overlap of MOOC exams with that of the College examination schedule. In case of delay in results, the Institution will re-issue the marks sheet for such students.
- viii) Students 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 Departments shall submit the following to the confidential Section of the

Institution:

- 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 Institution/university 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 Department/ Institution from time to time.

14 Academic Bank of Credits (ABC)

The Institution 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 institutions/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 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/ Institute 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 marks. A student shall secure a minimum of 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 Institution.

16 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 by an external examiner. The total marks for project work are 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 Institution and is evaluated for 140 marks.

The concerned Department 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.

17 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 a 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.

* Complete Guidelines for Minor Courses will be given later

18 Guidelines for offering Honors

The objective of introducing B.Tech. (Hons.) is to facilitate the students to choose additionally the specialized courses of their choice and build their competence in a specialized area in the UG level. The programme is a best choice for academically excellent students having good academic record and interest towards higher studies and research.

- i) Honors is introduced in the curriculum of all B. Tech. programs offering a major degree and is applicable to all B. Tech (Regular and Lateral Entry) students admitted in Engineering & Technology.
- ii) A student shall earn additional 15 credits for award of B.Tech.(Honors) degree from same branch/department/discipline registered for major degree. This is in addition to the credits essential for obtaining the Undergraduate degree in Major Discipline (i.e., 160 credits).
- iii) A student is permitted to register for Honors in IV semester after the results of III Semester are declared and students may be allowed to take maximum two courses per semester pertaining to the Honors from V Semester onwards.
- iv) The concerned Head of the Department shall arrange separate class work and time table of the courses offered under Honors program.

- v) Courses that are used to fulfill the student's primary major may not be double counted towards the Honors. Courses with content substantially equivalent to courses in the student's primary Major may not be counted towards the Honors.
- vi) Students can complete the courses offered under Honors either in the college or in online platforms like SWAYAM with a minimum duration of 12 weeks for a 3-credit course and 8 weeks duration for a 2-credit course satisfying the criteria for credit mobility. If the courses under Honors are offered in conventional mode, then the teaching and evaluation procedure shall be similar to regular B.Tech courses.
- vii) The attendance for the registered courses under Honors and regular courses offered for Major degree in a semester are to be considered separately.
- viii) A student shall maintain an attendance of 75% in all registered courses under Honors to be eligible for attending semester end examinations.
- ix) A student registered for Honors shall pass in all courses that constitute the requirement for the Honors degree program. No class/division (i.e., second class, first class and distinction, etc.) shall be awarded for Honors degree programme.
- x) If a student drops or is terminated from the Honors program, the additional credits so far earned cannot be converted into open or core electives; they will remain extra. However, such students will receive a separate grade sheet mentioning the additional courses completed by them.
- xi) Honors will be mentioned in the degree certificate as Bachelor of Technology (Honors) in XYZ. For example, B.Tech. (Honors) in Mechanical Engineering

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 students 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 courses 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 the parent department shall be assigned to a group of students to monitor the progress.
- iv) There is no fee for registration of courses for Honors program offered in offline at the respective institutions.

19 Attendance Requirements:

- i. A student shall be eligible to appear for the external examinations if he/she acquires a minimum of 40% attendance in each course and 75% of attendance in aggregate of all the courses. 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 College.
- 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.

20 Promotion Rules:

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

- i. A student shall be promoted from first year to second year if he/she fulfils the minimum attendance requirement as per Institution norms.
- ii. A student will be promoted from II to III year if he/she fulfils the minimum attendance requirement and academic requirement of securing 40% of the credits (any *decimal* fraction should be *rounded off* to *lower* digit) up to in the courses that have been studied up to IV Semester.
- iii. A student shall be promoted from III year to IV year if he/she fulfils the minimum attendance requirement and academic requirements of securing 40% of the credits (any *decimal* fraction should be *rounded off* to *lower* digit) in the courses that have been studied up to VI 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.
- iv. 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.

21 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.

22 Structure of Grading of Academic Performance

Range in which the marks in the course fall	Grade	Grade points Assigned
90 & above	S (Superior)	10
80 - 89	A (Excellent)	9
70 - 79	B (Very Good)	8
60 - 69	C (Good)	7
50 - 59	D (Average)	6
40 - 49	E (Pass)	5
< 40	F (Fail)	0
Absent	Ab (Absent)	0

- i) A student obtaining Grade 'F' or Grade 'Ab' in a course shall be considered failed and will be required to reappear for that course when it is offered the next supplementary examination.
- ii) For non-credit 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^{th} course and G_i is the grade point scored by the student in the i^{th} course.

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^{th} semester and C_i is the total number of credits up to that semester.

Both SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts. While computing the SGPA the courses in which the student is awarded Zero grade points will also be included.

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 the letters S, A, B, C, D and F.

23 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:

Class Awarded	CGPA Secured
First Class with Distinction	≥ 7.5 (Without any supplementary appearance)
First Class	$\geq 6.5 < 7.5$
Second Class	$\geq 5.5 < 6.5$
Pass Class	$\geq 5.0 < 5.5$

Note: * Students who have written supplementary examinations to fulfil the credit requirement will not be awarded First Class with Distinction. For such students the highest degree that is awarded will be First Class Only.

CGPA to Percentage conversion Formula – (CGPA – 0.5) x 10

With-holding 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.

24 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 Institute/Universities 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 and State government.

25 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 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

26 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 courses as and when courses 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.

27 Minimum Instruction Days for a Semester:

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

28 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.

29 Student Transfers:

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

30 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 Institute 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 institute.

ACADEMIC REGULATIONS (R23) FOR B.TECH. (LATERAL ENTRY SCHEME)

(Effective for the students getting admitted into II year through Lateral Entry Scheme from the Academic Year 2024-2025 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:
 - i. Pursues a programme 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).
 - ii. 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:
 - i. Student secures additional 15 credits fulfilling all the requisites of a B.Tech. program i.e., 120 credits.
 - ii. Registering for Honors is optional.
 - iii. 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 course 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 minimum attendance requirement and academic requirements of securing 40% of the credits (any decimal fraction should be rounded off to lower digit) in the courses that have been studied up to VI 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 course but absent at it or has failed in the end examination may appear for that course 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).