

ADITYA ENGINEERING COLLEGE

An Autonomous Institution

ACADEMIC REGULATIONS (AR20) FOR B.TECH. (REGULAR)

Applicable to the students of B.Tech.(Regular) admitted from the academic year 2020-21 onwards.

1. AWARD OF B. TECH. DEGREE

A student will be declared eligible for the award of B. Tech. Degree if the student fulfills the following academic regulations.

- 1.1 If the student pursued a Program of study in not less than four and not more than eight academic years. After eight academic years from the year of admission, the student shall forfeit his seat in B.Tech. and his admission stands cancelled.
- 1.2 The student shall register for 160 credits and secure all the 160 credits.
- 1.3 The students shall register for NCC/NSS activities and receive a “Satisfactory” grade.
- 1.4 The student shall register for all of the Mandatory courses and receive a “Satisfactory” grade.
- 1.5 A student shall be eligible for the award of B.Tech. degree with Honors or Minor if the student earns 20 credits in addition to the 160 credits. A student shall be permitted to register either for Honors or Minor and not for both simultaneously.

2. PROGRAMS OF STUDY

The following programs of study are offered at present as B.Tech. specializations.

S. No	Branch	Program Code	Short Name
01	Civil Engineering	01	CE
02	Electrical and Electronics Engineering	02	EEE
03	Mechanical Engineering	03	ME
04	Electronics and Communication Engineering	04	ECE
05	Computer Science and Engineering	05	CSE
06	Information Technology	12	IT
07	Mining Engineering	26	Min.E
08	Petroleum Technology	27	PT
09	Agricultural Engineering	35	Ag.E

3. ADMISSION PROCESS

Admission to the B.Tech. program shall be made subject to the eligibility, qualifications and specialization prescribed by the A.P.State Government/ University/ AICTE from time to time. Admissions shall be made either on the basis of the merit rank obtained by the student in the Common Entrance Examination conducted by the A.P. Government/University or on the basis of any other order of merit approved by the A.P.Government/University/AICTE, subject to reservations prescribed.

4. PROGRAM PATTERN

- 4.1 The total duration of B.Tech.(Regular) program is for four academic years and each academic year of study is divided into two semesters.
- 4.2 The minimum number of instruction days in each semester is 90.
- 4.3 The medium of instruction for the entire B.Tech. undergraduate program in Engineering & Technology (including examinations and Project reports) will be in English only.
- 4.4 The student is introduced to “Choice Based Credit System (CBCS)” and Credit Based Semester System (CBSS) as indicated by UGC and AICTE. The credits allotted for a course depends on the following.

1 Hour Lecture (L) per week	1 Credit
1 Hour Tutorial (T) per week	1 Credit
1 Hour Practical (P) per week	0.5 Credit

- 4.5 The student has to register for all courses in a semester.
- 4.6 All the credit courses shall be considered for the calculation of SGPA and CGPA.
- 4.7 Every course shall be assessed using ‘Continuous Internal Evaluation (CIE)’ and ‘Semester End Examination (SEE)’. The CIE marks shall be based on the Sessional Examinations.
- 4.8 In the course structure, in addition to the regular courses, there shall be 10 months internships, 05 Professional Elective courses, 04 Open Elective courses and 05 skill-oriented courses (two shall be skill-oriented courses from the same domain, one shall be employability skills course and the remaining two shall be skill-

advanced courses either from the same domain or job-oriented skill courses which can be of interdisciplinary nature).

- 4.9 The 10 months industry/field mandatory internship, both industry and social, during the summer vacation and also in the final semester is included to acquire the skills required for a job and make engineering graduates connect with the needs of the industry and society at large.
- 4.10 The Open Electives are offered to students of all branches in general. A student shall choose an open elective, by consulting the Head of the Department (HOD) /advisor, from the list in such a manner that he/she has not studied the same course in any form during the program.
- 4.11 A faculty advisor/mentor/proctor is assigned to each student from the same department to provide guidance in career growth/course registration/placements/opportunities for higher studies/GATE/other competitive exams etc.
- 4.12 A student who is eligible to appear for the Semester End Examination in a course but absent from it or has failed in it, may write the examination in that course when conducted next.
- 4.13 When a student is detained for lack of credits/shortage of attendance, the student shall be re-admitted into the same semester in which he has been detained, when offered next.

5. ATTENDANCE REQUIREMENTS

- 5.1 A student shall be eligible to write the Semester End Examinations if he acquires a minimum of 50% of attendance in each course and 75% of attendance in aggregate of all the courses.
- 5.2 Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) on medical grounds in a semester may be granted by the College Academic Committee and a student can be condoned for a maximum of three times only.
- 5.3 Shortage of Attendance below 65% in aggregate shall not be condoned.
- 5.4 Students whose shortage of attendance is not condoned in any semester are detained and not eligible to write their Semester End Examinations.

- 5.5 A medical certificate and a fee of Rs. 500/- shall be payable towards condonation for the shortage of attendance.
- 5.6 If any student fulfills the attendance requirement in the present semester, the student shall not be eligible for re-admission into the same semester.
- 5.7 If a student chooses to take a Certificate Course offered by industries/Professional bodies/APSSDC or any other accredited bodies, in lieu of the skill-oriented course offered by the Department, then his/her attendance in this course shall not be considered for the overall calculation of attendance.
- 5.8 If a student opted to study an elective course under MOOCs provided by an external agency, his/her attendance in this course shall not be considered in the overall calculation of attendance.
- 5.9 A student who has a shortage of attendance in a semester may seek re-admission into that semester when offered next, within 4 weeks from the date of the commencement of classwork.

6. PROMOTION RULES

- 6.1 A student will be promoted to the next semester if the student satisfies the attendance requirement of the present semester.
- 6.2 A student will be promoted from IV semester to V semester, if the student fulfills the attendance requirement in IV Semester and the academic requirement of 50% of the credits upto IV semester from all the examinations, whether or not the student takes the examinations.
- 6.3 A student shall be promoted from VI semester to VII semester if the student fulfills the attendance requirement in VI Semester and the academic requirements of 50% of the credits upto VI semester from all the examinations, whether or not the student takes the examinations.

7. GAP - Year

The concept of Student Entrepreneur in Residence shall be introduced and students who wish to pursue entrepreneurship are allowed to take a break of one year at any time after II

semester to pursue entrepreneurship full time. This period shall be counted for the maximum time for graduation. An evaluation committee shall be constituted to evaluate the proposal submitted by the student and the committee shall decide on permitting the student for availing of the Gap Year.

8. EVALUATION - DISTRIBUTION AND WEIGHTAGE OF MARKS

8.1 The performance of a student in each semester shall be evaluated course-wise with a maximum of 100 marks for Theory courses, Lab courses, Mandatory courses, Community Service Project and Summer Internship. The Full- semester Internship (Project) shall be evaluated for 200 marks.

8.2 For Theory courses, there shall be two Sessional Examinations during the semester for 30 marks each and Semester End Examination for 70 marks. The Sessional marks shall be awarded by giving a weightage of 80% for the best of the two Sessional Examinations and 20% for the other Sessional Examination. The Sessional Examination shall be conducted as Descriptive Examination for 15 marks, Objective Examination for 10 marks and Assignment for 5 marks. The I Sessional Examination is conducted for the first 2½ units of syllabus and II Sessional Examination for the remaining 2 ½ units of syllabus.

The descriptive examination is conducted for 90 minutes. Each descriptive examination question paper shall contain 3 questions of equal marks and all questions need to be answered. The Objective examination is conducted for 20 minutes and shall contain 20 Multiple Choice Questions with a weightage of ½ mark each. For Assignment, the nature of the test (Design, Analysis, Simulation, Algorithms, Drawing, Quiz, Term paper, Tutorial, Surprise test, Seminar, Case study, Lab activity, Minor Project, Virtual Labs etc. as the case may be) will be intimated by the faculty concerned at the beginning of the semester.

The Semester End Examination is conducted for 70 marks for a duration of 180 minutes, which contains ten questions, two questions are from each unit and each question may have sub-questions. The student has to write one question from each unit. Each question carries 14 marks.

- 8.3 For Lab courses, there shall be Sessional Examination during the semester for 30 marks and Semester End Examination for 70 marks. The Sessional marks shall be awarded as, Continuous Evaluation -10 marks, Observation and Record -10 marks and laboratory examination -10 marks. The Semester End Examination shall be conducted by the faculty concerned and external examiner appointed by the Principal.
- 8.4 For Design, Drawing and estimation courses as a Theory course (such as Engineering Graphics, Machine Drawing, Design and Drawing of Reinforced Concrete Structures etc.), the distribution shall be 30 marks for Sessional evaluation (15 marks for continuous evaluation, and 15 marks for Sessional Examination) and 70 marks for Semester End examination. There shall be two Sessional Examinations in a Semester. The Sessional marks shall be awarded by giving a weightage of 80% for the best of two Sessional Examinations and 20% for the other Sessional Examination. The Semester End Examination pattern is based on the nature of the course.
- 8.5 For Integrated courses (Theory + Lab), there shall be a separate examination for Theory and Lab. The student has to pass the Theory examination and Lab examination simultaneously. Otherwise, the student has to appear for supplementary examination for both theory and lab. The final marks shall be calculated on weighted average method for converting marks into grade points. Sample calculation: Assume Integrated course is for 3 credits (Theory is for 2 credits and Lab is for 1 credit). If Total Marks obtained in Theory is 75 out of 100 (2 Credits) and Total Marks obtained in Lab is 90 out of 100 (1 Credit), the final marks for the integrated course are 80.
- $$\text{Final Marks} = \frac{(75 * 2) + (90 * 1)}{3} = 80$$
- 8.6 A student is deemed to have passed a course(Theory or Lab) and earns the credits allotted to that course by securing not less than 35% of marks in the Semester End Examination, and a minimum 40% of marks of the total marks (sum of Sessional marks and Semester End Examination marks).

- 8.7 For Mandatory Courses, during a semester there shall be one examination for 100 marks for a duration of 180 minutes in which a student should get a minimum of 40% of the marks to get the result as “Satisfactory”, otherwise the student performance is considered as “Not Satisfactory”. The examination is conducted at the department level by covering the topics of all units, which contains five 20 marks questions with internal choice from each unit and each question may have sub-questions. If a student fails to get “Satisfactory” or is absent for examination, the student has to write the examination in that course when conducted next.
- 8.8 For Employability Skills (which includes Aptitude and Soft Skills) as a Mandatory Course, during a semester, there shall be an evaluation for 100 marks at the department level. There shall be a separate evaluation for Aptitude and Soft skills. The marks obtained for Employability Skills is the sum of marks obtained in Aptitude and Soft Skills together. The student should get a minimum of 40% of the marks for a “Satisfactory” result; otherwise, the student's performance is considered as “Not Satisfactory”. If a student fails to get “Satisfactory” or is absent for examination, the student has to write the examination in that course when conducted next.
- 8.9 For Employability Skills (which includes Aptitude and Soft Skills) as a credit course, the examination is conducted for 100 marks in which 30 marks are for Sessional Examination and 70 marks for Semester End Examination. There shall be two Sessional Examinations during the semester. There shall be a separate evaluation for Aptitude and Soft skills. For Aptitude, the Sessional Examination is conducted for 30 minutes with 30 questions (Multiple Choice Questions with a weightage of $\frac{1}{2}$ mark each) carrying 15 marks and for Soft Skills, the Sessional Examination is conducted as activity-based for 15 marks. The Sessional Marks for Employability Skills is the sum of marks obtained in Aptitude and Soft Skills together. The final Sessional marks shall be awarded by giving 80% weightage for the best of two Sessional Examinations and 20% weightage for other Sessional Examination.
- The Semester End Examination for Aptitude is conducted for 140 minutes with 140 questions (Multiple Choice Questions with a weightage of $\frac{1}{4}$ mark each)

carrying 35 marks and for Soft Skills, an activity-based examination is conducted for 35 marks by the faculty concerned and external examiner appointed by the Principal.

- 8.10 For Skill-oriented courses, a 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/APSSDC or any other accredited bodies approved by the HOD. If a student chooses to take a Certificate Course offered by external agency, the agency has to issue a certificate with “Satisfactory” condition. If the certificate issued by external agency is marked with “ Not Satisfactory” condition, the student shall repeat the course either in the college or at external agency, when offered next. After successful completion, a student shall submit a record/report on the skills learned with the certificate issued by the agency included in it. The course will be evaluated at the end of the semester for 100 marks (record/report: 30 marks, examination & viva-voce: 70 marks) along with laboratory Semester End Examinations in the presence of internal examiner (course instructor or mentor) and External examiner appointed by Principal. There are no sessional marks. A student has to secure atleast 40% of marks to pass the course.
- 8.11 A student shall be permitted to pursue upto a maximum of two elective courses under MOOCs (Massive Open Online Courses) during the B.Tech. Program. Each of the courses must be a minimum of 12 weeks in duration. The student has to pursue and acquire a certificate for the MOOCs only from the organizations/agencies approved by the HOD. The student needs to earn a certificate by passing the examination. The student will be awarded the credits given in the curriculum only upon submission of the certificate. In case a student does not pass the courses registered through MOOCs, the same or alternative equivalent course may be registered again through MOOCs in the next semester with the recommendation of HOD.
- 8.12 The students shall mandatorily register for NCC/NSS activities and is required to participate in an activity specified by NCC/NSS officer during the second or third semesters. The grade shall be awarded as “Satisfactory” or “Not Satisfactory” in

the III semester grade sheet on the basis of participation, attendance, performance and behavior. If a student obtains a “Not Satisfactory” grade, he/she shall repeat the above activity in the subsequent years, in order to complete the degree requirements.

- 8.13 For Summer Internship, the students can undergo Industrial Training / Internship at Govt. Organizations, Construction agencies, Industries, Hydel and Thermal Power Plants, software MNCs etc. or do Research projects in National Laboratories/Academic Institutions like IITs, NITs etc. during summer breaks after completion of IV Semester and VI Semester End Examinations. However, the Summer Internship shall be evaluated in the V semester and VII semester, respectively. A group of students or even a single student can take up the Internship. Completion of internship is mandatory. After successful completion, students shall submit a summer internship technical report to the department concerned. A certificate from the industry/organization shall be included in the report. There shall be no sessional marks.

Community Service Project is an alternative to the Summer Internship, whenever there is an exigency and students cannot pursue their Summer Internship. A group of students or even a single student can take up the Community Service Project during summer breaks. However, a student can opt for this only once. The students have to identify social problems existing in any geographical area/village and try to solve them technically or suggest to people the necessary solutions for solving these problems. After successful completion, students shall submit a detailed report to the department concerned.

The Summer Internship or Community Service Project shall be evaluated for 100 marks at the end of the semester based on the report submitted and an oral presentation. The report carries 30 marks and oral presentation carries 70 marks. The student shall appear for the oral presentation before the Project Review Committee (PRC)* and an External Examiner appointed by Principal. A student has to secure atleast 40% of marks for successful completion. In case, a student fails, he/she shall reappear for the examinations when conducted next.

*The PRC consists of HOD, Supervisor, and a senior faculty member of the department.

- 8.14 For Full-semester Internship (Project) in the final semester, the student should mandatorily register and undergo internship 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. For Project, 200 marks are awarded, out of which 60 marks shall be for Sessional Evaluation and 140 marks for the Semester End Examination. A group of students or even a single student can take up the Internship for full semester. The supervisor shall assess 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/staff and the same shall be evaluated by the PRC for 30 marks. The Sessional marks for Project are the sum of marks allotted by the Supervisor and the marks allotted by PRC. The Semester End Examination (Viva-Voce) shall be conducted by the committee that consists of an External Examiner appointed by Principal and PRC.
- 8.15 The distribution and weightage of marks are as follows.

S. No	Components	CIE	SEE	Total
1	Theory Courses	30	70	100
2	Lab Courses	30	70	100
3	Mandatory Courses	----	120	100
4	Skill Oriented Courses	----	120	100
5	Summer Internship/Community Service Project	----	120	100
6	Full-semester Internship(Project)	60	140	200

- 8.16 Script Viewing / Re-evaluation of the Semester End Examination: A student can request for Script Viewing / Revaluation of his/her answer booklet of theory courses only, on payment of a prescribed fee as per norms.
- 8.17 Supplementary Examinations: A student who has failed a course can appear for supplementary examinations as and when conducted.

- 8.18 Malpractices in Examinations: Disciplinary action shall be taken in case of malpractices during Sessional/Semester End Examinations as per the malpractice rules.

9. HONORS PROGRAM

- 9.1 Students of a Department/Discipline are eligible to opt for Honors Program offered by the same Department/Discipline.
- 9.2 A student shall be permitted to register for the Honors program at the beginning of the IV semester provided that the student must have acquired a minimum of 8.0 CGPA up to the end of III semester without any backlogs. A CGPA of 8 has to be maintained in the subsequent semesters in order to keep the Honors registration active.
- 9.3 Students can select the additional and advanced courses from their respective branch in which they are pursuing the degree and get an honors degree in the same. For example, If a Mechanical Engineering student completes the selected advanced courses from the same branch under this scheme, he will be awarded B.Tech. (Honors) in Mechanical Engineering.
- 9.4 In addition to fulfilling all the requisites of a B.Tech.(Regular) program, a student shall earn 20 additional credits to be eligible for the award of B. Tech (Honors) degree. This is in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline (i.e. 160 credits).
- 9.5 Of the 20 additional Credits to be acquired, 16 credits shall be earned by undergoing specified courses listed as pools, with four courses, each carrying 4 credits. The remaining 4 credits must be acquired through two MOOCs, which shall be domain-specific, each with 2 credits and with a minimum duration of 8 weeks with the approval of HOD. The pattern of assessment for all these courses is as mentioned in Section 8.
- 9.6 A student shall be permitted to choose only those courses that he has not studied in any form during the Program.
- 9.7 In case a student fails to meet the CGPA requirement for Degree with Honors at any point after registration, he will be dropped from the list of students

eligible for Degree with Honors and they will receive regular B.Tech. degree only. However, such students will receive a separate grade sheet mentioning the additional courses completed by them.

- 9.8 If a student discontinues or is terminated from the Honors program, the additional credits so far earned cannot be considered for open electives or professional electives; these credits will remain extra. These additional courses will find mention in the transcript (but not in the degree certificate). In such cases, the student may choose between the actual grade or a “Pass (P)” grade and also choose to omit the mention of the course as per the following:

- All the courses done under the dropped Honors will be shown in the transcript.
- None of the courses done under the dropped Honors will be shown in the transcript.

- 9.9 The Honors degree must be completed simultaneously with a major degree program. A student cannot earn Honors degree after he has already earned a bachelor's degree.

10. MINOR PROGRAM

- 10.1 Students who are desirous of pursuing their special interest areas other than the chosen discipline of Engineering may opt for additional courses in minor specialization groups offered by a department other than their parent department. For example, If a Mechanical Engineering student selects courses from Civil Engineering under this scheme, he will get a Major degree in Mechanical Engineering with a Minor degree in Civil Engineering.

A student can also opt for Industry relevant tracks of any branch to obtain the Minor Degree. For example, a B.Tech. Mechanical Engineering student can opt for the industry-relevant tracks like Data Mining, IoT, Machine learning etc.

The minor tracks can be the fundamental courses in CE, EEE, ME, ECE, CSE etc., or industry relevant tracks such as Artificial Intelligence (AI), Machine Learning (ML), Data Science (DS), Robotics, Electric vehicles, VLSI etc.

- 10.2 A student shall be permitted to register for Minors program at the beginning of the IV semester, provided that the student must have acquired 8 CGPA upto the end of the III semester without any backlogs. A CGPA of 8 has to be maintained in the subsequent semesters in order to keep the Minors registration active.
- 10.3 In case a student fails to meet the CGPA requirement for the B.Tech. degree with Minor at any point after registration, he will be dropped from the list of students eligible for a degree with Minors and they will receive B. Tech degree only. However, such students will receive a separate grade sheet mentioning the additional courses completed by them.
- 10.4 A student shall earn additional 20 credits in the specified area to be eligible for the award of B. Tech degree with Minor. This is in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline (i.e. 160 credits).
- 10.5 Out of the 20 Credits, 16 credits shall be earned by undergoing specified courses listed. It is the responsibility of the student to acquire/complete the prerequisite before taking the respective course. A student shall be permitted to choose only those courses that he has not studied in any form during the Program. The remaining 4 credits must be acquired through two MOOCs with the approval of the HOD, which shall be domain-specific, each with 2 credits and with a minimum duration of 8 weeks. The pattern of assessment for all these courses is the same as mentioned in Section 8.
- 10.6 If a student discontinues or is terminated from the Minor program, the additional credits so far earned cannot be considered for open electives or professional electives; these credits will remain extra. These additional courses will find mention in the transcript (but not in the degree certificate). In such cases, the student may choose between the actual grade or a “Pass (P)” grade and also choose to omit the mention of the course as per the following:
- All the courses done under the dropped Minors will be shown in the transcript.
 - None of the courses done under the dropped Minor will be shown in the transcript.

- 10.7 The Minor degree must be completed simultaneously with a major degree program. A student cannot earn a Minor degree after he has already earned a bachelor's degree.

11. AWARD OF GRADE POINT AVERAGE AND CLASS

11.1 GRADING

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

Letter Grade: It is an index of the performance of students in a said course. Grades are denoted by letters A+, A, B, C, D, E and F. If a student is absent for the examination, it is denoted as AB.

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

For Credit Courses:

Range of Marks (%)	Letter Grade	Level	Grade Point
≥ 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
-	AB	Absent	0

For Mandatory Courses/Non-Credit Courses:

Range of Marks	Letter Grade	Result
≥ 40	S	Satisfactory
< 40	N	Not Satisfactory

11.2 CALCULATION OF GRADE POINT AVERAGE

i. Calculation of Semester Grade Point Average (SGPA)

The SGPA is the ratio of the 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.

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

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

ii. Calculation of Cumulative Grade Point Average (CGPA)

The CGPA is also calculated in the same manner taking into consideration all the courses undergone by a student over all the semesters of the program.

$$CGPA = \frac{\sum(C_i \times S_i)}{\sum(C_i)}$$

where S_i is the SGPA of the i^{th} semester and

C_i is the total number of credits in that semester

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

iv. While computing the SGPA/CGPA, the courses in which the student is awarded zero grade points will also be included.

v. Grade Point Average can be converted into an equivalent percentage using

$$\text{Percentage of Marks} = (\text{CGPA} - 0.75) \times 10$$

vi. Illustration of Computation of SGPA and CGPA

Illustration for SGPA: Let us assume there are 6 courses in a semester and the grades obtained by a student are as follows:

Course	Credit	Grade Obtained	Grade point	S _i = Credit Point (Credit x Grade)
Course 1	3	B	8	3 X 8 = 24
Course 2	4	C	7	4 X 7 = 28
Course 3	3	D	6	3 X 6 = 18
Course 4	3	A+	10	3 X 10 = 30
Course 5	3	E	5	3 X 5 = 15
Course 6	4	D	6	4 X 6 = 24
	20			139

Thus, **SGPA = 139/20 = 6.95**

Illustration for CGPA: Let us assume the Credits and SGPA secured by the student in all the 8 semesters are as follows:

Semester 1	Semester 2	Semester 3	Semester 4
Credits: 20 SGPA: 6.95	Credits: 19 SGPA: 7.86	Credits: 21 SGPA: 5.68	Credits: 22 SGPA: 6.12
Semester 5	Semester 6	Semester 7	Semester 8
Credits: 20 SGPA: 6.34	Credits: 23 SGPA: 8.0	Credits: 21 SGPA: 6.45	Credits: 14 SGPA: 7.59

Thus,

$$CGPA = \frac{20 * 6.95 + 19 * 7.86 + 21 * 5.68 + 22 * 6.12 + 20 * 6.34 + 23 * 8 + 21 * 6.45 + 14 * 7.59}{160}$$

$$= 6.84$$

11.3 AWARD OF CLASS

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

Class Awarded	CGPA secured from 160 Credits
First Class with Distinction	≥ 7.75 (Without any supplementary appearance)
First Class	≥ 6.75
Second Class	≥ 5.75 to < 6.75
Pass Class	≥ 4.75 to < 5.75

12. TRANSFER OF STUDENTS

- 12.1 The guidelines given by JNTUK / State Government will be followed for students to transfer from one college to another college.
- 12.2 In case of transferred students from other Universities/Colleges to AEC, the credits shall be transferred as per the academic regulations and course structure. Students have to obtain the credits of any equivalent courses as prescribed by the college if required.
- 12.3 There shall be no branch transfers after the completion of the admission process.

13. WITHHOLDING OF RESULTS

If the student has any dues in the college or is involved in indisciplinary/malpractice/court cases, his result will be withheld.

14. TRANSITORY REGULATIONS

- 14.1 Discontinued or detained students are eligible for readmission as and when next offered.
- 14.2 The re-admitted students will be governed by the regulations under which the student has been admitted.

15. GENERAL

- 15.1 Wherever the words "he", "him", "his", occur in the regulations, they include "she", "her", "hers".
- 15.2 The academic regulations should be read as a whole for the purpose of any interpretation.
- 15.3 In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Academic Council is final.
- 15.4 The college may change or amend the academic regulations or syllabi as and when the need arises and the changes or amendments made shall apply to all the students with effect from the dates notified by the College.

ACADEMIC REGULATIONS (AR20) FOR B.TECH.(LATERAL ENTRY)

Applicable to the students admitted into B.Tech. III semester from the Academic Year 2021-22 onwards

1. AWARD OF B. TECH. DEGREE

A student will be declared eligible for the award of B. Tech. Degree if the student fulfills the following academic regulations.

- 1.1 If the student pursued a Program of study in not less than three and not more than six academic years. After six academic years from the year of admission, the student shall forfeit his seat in B.Tech. and his admission stands cancelled.
- 1.2 The student shall register for 121 credits and secure all the 121 credits.
- 1.3 A student shall be eligible for the award of B.Tech. degree with Honors or Minor if the student earns 20 credits in addition to the 121 credits. A student shall be permitted to register either for Honors or Minor and not for both simultaneously.

2. PROMOTION RULES

- 2.1 A student will be promoted to the next semester if the student satisfies the attendance requirement of the present semester.
- 2.2 A student shall be promoted from VI semester to VII semester if the student fulfills the attendance requirement in VI semester and the academic requirements of 50% of the credits up to VI semester from all the examinations, whether or not the student takes the examinations.

3. AWARD OF CLASS

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

Class Awarded	CGPA secured from 121 Credits
First Class with Distinction	≥ 7.75 (Without any supplementary appearance)
First Class	≥ 6.75
Second Class	≥ 5.75 to < 6.75
Pass Class	≥ 4.75 to < 5.75

4. All the other regulations applicable to B. Tech(Regular) remain the same for B.Tech.(Lateral Entry) also.

COMMUNITY SERVICE PROJECT

1. INTRODUCTION

- Community Service Project is an experiential learning strategy that integrates meaningful community service with instruction, participation, learning and community development
- Community Service Project involves students in community development and service activities and applies the experience to personal and academic development.
- Community Service Project is meant to link the community with the college for mutual benefit. The community will be benefited with the focused contribution of the college students for the village/ local development. The college finds an opportunity to develop social sensibility and responsibility among students and also emerge as a socially responsible institution.

2. OBJECTIVE

Community Service Project should be an integral part of the curriculum, as an alternative to the 2 months of Summer Internships / Apprenticeships / On the Job Training, whenever there is an exigency when students cannot pursue their summer internships. The specific objectives are

- To sensitize the students to the living conditions of the people who are around them,
- To help students to realize the stark realities of the society.
- To bring about an attitudinal change in the students and help them to develop societal consciousness, sensibility, responsibility and accountability
- To make students aware of their inner strength and help them to find new /out of box solutions to the social problems.
- To make students socially responsible citizens who are sensitive to the needs of the disadvantaged sections.
- To help students to initiate developmental activities in the community in coordination with public and government authorities.
- To develop a holistic life perspective among the students by making them study

culture, traditions, habits, lifestyles, resource utilization, wastages and its management, social problems, public administration system and the roles and responsibilities of different persons across different social systems.

3. IMPLEMENTATION OF COMMUNITY SERVICE PROJECT

- Every student should put in a minimum of 180 hours for the Community Service Project during the summer vacation.
- Each class/section should be assigned with a mentor.
- Specific Departments could concentrate on their major areas of concern. For example, Dept. of Computer Science can take up activities related to Computer Literacy to different sections of people like - youth, women, housewives etc.
- A logbook has to be maintained by each of the students, where the activities undertaken/involved are to be recorded.
- The logbook has to be countersigned by the mentor/faculty in charge.
- Evaluation to be done based on the active participation of the student and grade could be awarded by the mentor/faculty member.
- The final evaluation to be reflected in the grade memo of the student.
- The Community Service Project should be different from the regular programmes of NSS/NCC/Green Corps/Red Ribbon Club, etc.
- A project report should be submitted by each student. An internal viva shall be conducted by a committee constituted by the Principal.
- Award of marks shall be made as per the guidelines of Internship/apprentice/on the job training.

4. PROCEDURE

- 4.1** A group of students or even a single student could be assigned for a particular habitation or village or municipal ward, as far as possible, in the near vicinity of their place of stay, so as to enable them to commute from their residence and return back by evening or so.
- 4.2** The Community Service Project is a twofold one –
- a) First, the student/s could conduct a survey of the habitation, if necessary, in terms of their own domain or subject area. Or it can even be a general survey,

incorporating all the different areas. A common survey format could be designed. This should not be viewed as a duplication of work by the Village or Ward volunteers, rather, it could be another primary source of data.

b) Secondly, the student/s could take up a social activity, concerning their domain or subject area. The different areas, could be like –

- | | |
|-------------------------------|----------------------|
| • Agriculture | • Horticulture |
| • Health | • Fisheries |
| • Marketing and Cooperation | • Sericulture |
| • Animal Husbandry | • Revenue and Survey |
| • Natural Disaster Management | • Energy |
| • Irrigation | • Internet |
| • Law & Order | • Free Electricity |
| • Excise and Prohibition | • Drinking Water |
| • Mines and Geology | etc. |

5. EXPECTED OUTCOMES

5.1 BENEFITS OF COMMUNITY SERVICE PROJECT TO STUDENTS

Learning Outcomes

- Positive impact on students' academic learning
- Improves students' ability to apply what they have learned in "the real world"
- Positive impact on academic outcomes such as demonstrated complexity of understanding, problem analysis, problem-solving, critical thinking, and cognitive development
- Improved ability to understand complexity and ambiguity

Personal Outcomes

- Greater sense of personal efficacy, personal identity, spiritual growth, and moral development.
- Greater interpersonal development, particularly the ability to work well with others, and build leadership and communication skills

Social Outcomes

- Reduced stereotypes and greater inter-cultural understanding.
- Improved social responsibility and citizenship skills.
- Greater involvement in community service after graduation.

Career Development

- Connections with professionals and community members for learning and career opportunities.
- Greater academic learning, leadership skills, and personal efficacy can lead to greater opportunity.

Relationship with the Institution

- Stronger relationships with faculty
- Greater satisfaction with college
- Improved graduation rates

5.2 BENEFITS OF COMMUNITY SERVICE PROJECT TO FACULTY MEMBERS

- Satisfaction with the quality of student learning.
- New avenues for research and publication via new relationships between faculty and community.
- Providing networking opportunities with engaged faculty in other disciplines or institutions.
- A stronger commitment to one's research.

5.3 BENEFITS OF COMMUNITY SERVICE PROJECT TO COLLEGES AND UNIVERSITIES

- Improved institutional commitment.
- Improved student retention.
- Enhanced community relations.

5.4 BENEFITS OF COMMUNITY SERVICE PROJECT TO COMMUNITY

- Satisfaction with student participation.
- Valuable human resources needed to achieve community goals.
- New energy, enthusiasm and perspectives applied to community work.
- Enhanced community-university relations.

6. LIST OF PROGRAMMES UNDER COMMUNITY SERVICE PROJECT

The following is the recommended list of projects for Engineering students. The lists are

not exhaustive and open for additions, deletions and modifications. Students are expected to focus on specific local issues for this kind of projects. The students are expected to carry out these projects with involvement, commitment, responsibility and accountability. The mentors of a group of students should take the responsibility of motivating, facilitating, and guiding the students. They have to interact with local leadership and people and appraise the objectives and benefits of this kind of projects. The project reports shall be placed in the college website for reference. Systematic, Factual, methodical and honest reporting shall be ensured.

List of Projects

- Water facilities and drinking water availability.
- Health and hygiene.
- Stress levels and coping mechanisms.
- Health intervention programmes.
- Horticulture.
- Herbal plants.
- Botanical survey.
- Zoological survey.
- Marine products.
- Aqua culture.
- Inland fisheries.
- Animals and species.
- Nutrition.
- Traditional health care methods.
- Food habits.
- Air pollution.
- Water pollution.
- Plantation.
- Soil protection.
- Renewable energy.
- Plant diseases.
- Yoga awareness and practice.
- Health care awareness programmes and their impact.
- Use of chemicals on fruits and vegetables.
- Organic farming.
- Crop rotation.
- Floury culture.
- Access to safe drinking water.
- Geographical survey.
- Geological survey.
- Sericulture.
- Study of species.
- Food adulteration.
- Incidence of Diabetes and other chronic diseases.
- Human genetics.
- Blood groups and blood levels.
- Internet Usage in Villages.
- Android Phone usage by different people.
- Utilization of free electricity to farmers and related issues.
- Gender ration in schooling level-observation.

7. AWARENESS CAMPAIGNS

Complimenting the community service project, the students may be involved to take up

some awareness campaigns on social issues/special groups. The suggested list of programmes are:

7.1 Programmes for School Children

- Reading Skill Programme (Reading Competition).
- Preparation of Study Materials for the next class.
- Personality / Leadership Development.
- Career Guidance for X class students.
- Screening Documentary and other educational films.
- Awareness Programme on Good Touch and Bad Touch (Sexual abuse).
- Awareness Programme on Socially relevant themes.

7.2 Programmes for Women Empowerment

- Government Guidelines and Policy Guidelines.
- Women's Rights.
- Domestic Violence.
- Prevention and Control of Cancer.
- Promotion of Social Entrepreneurship.

7.3 General Camps

- | | |
|---|--|
| • General Medical camps. | • AIDS awareness camp. |
| • Eye Camps. | • Anti Plastic Awareness. |
| • Dental Camps. | • Programmes on Environment. |
| • Importance of protected drinking water. | • Health and Hygiene. |
| • Open Defecation Free(ODF) awareness camp. | • Hand wash programmes. |
| • Swatch Bharat. | • Commemoration and Celebration of important days. |

7.4 Programmes for Youth Empowerment

- Leadership.
- Anti-alcoholism and Drug addiction.
- Anti-tobacco.

- Awareness on Competitive Examinations.
- Personality Development.

7.5 Common Programmes

- Awareness on RTI.
- Health intervention programmes.
- Yoga.
- Tree plantation.
- Programmes in consonance with the Govt. Departments like –
 - i. Agriculture.
 - ii. Health.
 - iii. Marketing and Cooperation.
 - iv. Animal Husbandry.
 - v. Horticulture.
 - vi. Fisheries.
 - vii. Sericulture.
 - viii. Revenue and Survey.
 - ix. Natural Disaster Management.
 - x. Irrigation.
 - xi. Law & Order.
 - xii. Excise and Prohibition.
 - xiii. Mines and Geology.
 - xiv. Energy.

7.6 Role of Students:

- Students may not have the expertise to conduct all the programmes on their own. The students then can play a facilitator role.
- For conducting special camps like Health related, they will be coordinating with the Governmental agencies.
- As and when required the College faculty themselves act as Resource Persons.
- Students can work in close association with Non-Governmental Organizations like Lions Club, Rotary Club, etc or with any NGO actively working in that habitation.
- And also, with the Governmental Departments. If the programme is rolled out, the District Administration could be roped in for the successful deployment of the programme.
- An in-house training and induction programme could be arranged for the faculty and participating students, to expose them to the methodology of Service Learning.

8. TIMELINE FOR THE COMMUNITY SERVICE PROJECT ACTIVITY

Duration: 6 weeks

- **Preliminary Survey (One Week)**

- a) A preliminary survey including the socio-economic conditions of the allotted habitation to be conducted.
- b) A survey form based on the type of habitation to be prepared before visiting the habitation with the help of social sciences faculty. (However, a template could be designed for different habitations, rural/urban).
- c) The Governmental agencies, like revenue administration, corporation and municipal authorities and village secretariats could be aligned for the survey.

- **Community Awareness Campaigns (One Week)**

Based on the survey and the specific requirements of the habitation, different awareness campaigns and programmes to be conducted, spread over one week of time. The list of activities suggested could be taken into consideration.

- **Community Immersion Programme (Three Weeks)**

Along with the Community Awareness Programmes, the student batch can also work with any one of the governmental agencies and work in tandem with them. This community involvement programme will involve the students in exposing themselves to the experiential learning about the community and its dynamics. Programmes could be in consonance with the Govt. Departments.

- **Community Exit Report (One Week)**

During the last week of the Community Service Project, a detailed report of the outcome of the 6 weeks works to be drafted and a copy shall be submitted to the local administration. This report will be a basis for the next batch of students visiting that particular habitation. The same report submitted to the teacher-mentor will be evaluated by the mentor and suitable marks are awarded. Throughout the Community Service Project, a daily logbook needs to be maintained by the students batch, which should be countersigned by the governmental agency representative and the teacher-mentor, who is required to periodically visit the students and guide them.

ABBREVIATIONS

AICTE	All India Council for Technical Education
APSSDC	Andhra Pradesh State Skill Development Corporation
CBCS	Choice Based Credit System
CBSS	Credit Based Semester System
CGPA	Cumulative Grade Point Average
CIE	Continuous Internal Evaluation
GATE	Graduate Aptitude Test in Engineering
IIT	Indian Institute of Technology
JNTUK	Jawaharlal Nehru Technological University
MNC	Multinational Corporation
MOOCs	Massive Open Online Course
NCC	National Cadet Corps
NGO	Non-Governmental Organization
NIT	National Institute of Technology
NSS	National Service Scheme
PRC	Project Review Committee
RTI	Right to Information
SEE	Semester End Examination
SGPA	Semester Grade Point Average
UGC	University Grants Commission

MALPRACTICES RULES

Disciplinary Action for /Improper Conduct in Examinations

The Chief Controller of examinations shall refer the cases of malpractices in Sessional and End Examination to an Enquiry Committee constituted by him / her. The Committee will submit a report on the malpractice allegedly committed by the student to the Chief Controller of Examinations. The Chief Controller of Examinations along with the members of the Committee is authorized to impose a suitable punishment if the student is found guilty as per the following guidelines.

	Nature of Malpractices / Improper conduct	Punishment
	If the candidate	
1(a)	Possesses or keeps accessible in the examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers or any other form of material concerned with or related to the course 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 course of the examination)	Expulsion from the examination hall and cancellation of the performance in that course only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the examination hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that course only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the course of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the courses of that Semester.

3	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the courses of that Semester
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 the performance in that course and all other courses the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that Semester. The candidate is also debarred for two consecutive semesters from class work and all Semester End examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that Semester. The candidate is also debarred for two consecutive semesters from class work and all Semester End examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
6	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that

		Semester. The candidate is also debarred and forfeits of seat.
7	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from the examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate, who has been impersonated, shall be cancelled in all the courses of the examination (including practical and project work) already appeared and shall not be allowed to appear for examinations of the remaining courses of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the impostor is an outsider, he will be handed over to the police and a case is registered against him.
8	Refuses to obey the orders of the Chief Controller of examinations / Observer / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walkout or instigates others to walkout, 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	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that course and all other courses the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the courses of that semester. The candidates also are debarred and forfeit their seats. In the case of outsiders, they will be handed over to the police and a police case is registered against them.

	or 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.	
9	If a student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student expulsion from the examination hall and cancellation of the performance in that course and all other courses the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The candidate is also debarred and forfeits the seat.
10	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 course.
11	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that course and all other courses the candidate has appeared including practical examinations and project work of that End examination.
12	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the Chief Controller of examinations for further action to award suitable punishment.	

Ragging

Prohibition of ragging in educational institutions Act 26 of 1997

Salient Features			
⇒ Ragging within or outside any educational institution is prohibited. ⇒ Ragging means doing an act which causes or is likely to cause Insult or Annoyance of Fear or Apprehension or Threat or Intimidation or outrage of modesty or Injury to a student			
	Imprisonment Upto		Fine Upto
Teasing, Embarrassing and Humiliation	 6 Months	+	Rs. 1,000/-
Assaulting or Using Criminal force or Criminal intimidation	 1 Year	+	Rs. 2,000/-
Wrongfully restraining or on fining or causing hurt	 2 Years	+	Rs. 5,000/-
Causing grievous hurt, kidnapping or Abducts or rape or committing unnatural offence	 5 Years	+	Rs. 10,000/-
Causing death or abetting suicide	 10 Years	+	Rs. 50,000/-

In Case of Emergency CALL TOLL FREE NO. : 1800 - 425 - 1288

LET US MAKE ADITYA A RAGGING FREE CAMPUS

Ragging



ABSOLUTELY NO TO RAGGING

1. Ragging is prohibited as per Act 26 of A.P. Legislative Assembly, 1997.
2. Ragging entails heavy fines and/or imprisonment.
3. Ragging invokes suspension and dismissal from the College.
4. Outsiders are prohibited from entering the College and Hostel without permission.
5. Girl students must be in their hostel rooms by 7.00 p.m.
6. All the students must carry their Identity Cards and show them when demanded
7. The Principal and the Wardens may visit the Hostels and inspect the rooms at any time.

In Case of Emergency CALL TOLL FREE NO. : 1800 - 425 - 1288

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