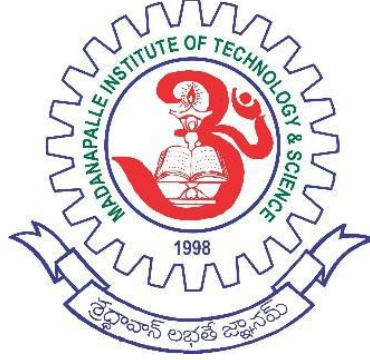


# MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

**MADANAPALLE**

(UGC-AUTONOMOUS)

[www.mits.ac.in](http://www.mits.ac.in)



## ACADEMIC REGULATIONS

(R20)

For the students admitted to

**B.Tech. Regular Four Year Degree Programme from the Academic Year 2020-21**

and

**B.Tech. Lateral Entry Scheme from the Academic Year 2021-22**





## **Applicable for students admitted to B.Tech. (Regular) from 2020-21 batch onwards**

### **1. Admission Procedure**

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

- a) As per the norms of Government of Andhra Pradesh, A-Category (based on the rank obtained in EAMCET) seats will be filled by the Convener, EAMCET.
- b) As per the norms of Government of Andhra Pradesh, B-Category seats will be filled by the management.

### **2. Programmes of Study**

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

<b>Sl. No</b>	<b>Specialization</b>	<b>Code</b>
1.	Civil Engineering	01
2.	Electrical & Electronics Engineering	02
3.	Mechanical Engineering	03
4.	Electronics and Communication Engineering	04
5.	Computer Science & Engineering	05
6.	Computer Science and Technology	28
7.	Computer Science and Engineering (Internet of Things)	35
8.	Computer Science and Engineering (Artificial Intelligence)	31
9.	Computer Science and Engineering (Cyber Security)	37
10.	Computer Science and Engineering (Data Science)	32

### **3. Programme Pattern**

- 3.1 The medium of instruction, examinations and project reports shall be English.
- 3.2 The entire programme of study is for four academic years. All four academic years shall be on semester pattern.
- 3.3 A student admitted to a programme should complete it within a period equal to twice the prescribed duration of the programme from the date of admission.
- 3.4 The minimum instruction days for each Semester shall be 90.
- 3.5 A student eligible to appear for the end examination in a course, but absent or has failed in the end examination may appear for that course at the next supplementary examination when offered.
- 3.6 Lateral Entry students of all branches shall undergo bridge courses in English and Mathematics.
- 3.7 All undergraduate students shall register for NCC/NSS/ activities. A student will be required to participate in an activity for two hours in a week during third and fourth semesters. Grade shall be awarded as Satisfactory (Pass-“P”) or Unsatisfactory (Fail-“F”) in the mark sheet based on participation, attendance, performance, and behaviour. If a student gets an “F” grade, he/she shall repeat the above activity in the subsequent years, to complete the degree requirements..
- 3.8 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 fulfillment of academic regulations. In such case, he/she shall be in the academic regulations into which he/she is readmitted.
- 3.9 The curriculum of B.Tech. Programme is designed to have a total of 160 credits for the award of B.Tech. Degree.
- 3.10 Each course is assigned certain number of credits which will depend upon the number of lecture per week. In general, credits are assigned to the courses based on the following contact hours per week per semester.
  - a. For Theory Courses: One credit for each Lecture hour or Tutorial hour
  - b. For Practical Courses: One credit for two hours of Practical.

#### **4. Award of B.Tech. Degree**

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

- 4.1 Pursue a programme of study for not less than four academic years and in not more than eight academic years.
- 4.2 Register for 160 credits and secure all 160 credits.
- 4.3 Student should clear all the Mandatory courses (Non-Credited).
- 4.4 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.

#### **5. Attendance Requirements**

- 5.1 A student shall be eligible to appear for End Semester Examinations if he/she acquires a minimum of 40% attendance in each course and 75% of attendance in aggregate of all the courses in a semester.
- 5.2 Shortage of Attendance below 65% in aggregate shall in NO case be condoned.
- 5.3 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.
- 5.4 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.
- 5.5 A student will not be promoted to the next semester unless he/she satisfies the attendance requirements of the present semester, as applicable. They may seek readmission for that semester when offered next.
- 5.6 A stipulated fee shall be payable towards Condonation of shortage of attendance to the Institution provided a student has a minimum of 40% attendance in each course.

#### **6. Weightage for Internal Evaluation and End Semester Examination**

- a. The performance of a student in each semester shall be evaluated course-wise.
- b. Performance evaluation in each course (theory/ practical) shall be based on a total of 100 marks, of which the relative weightage for internal evaluation and end semester examination shall be 40% and 60% respectively.
- c. However, Mandatory courses shall be evaluated entirely on the basis of internal evaluation.

##### **6.1 Internal Evaluation**

- 6.1.1 The total internal weightage for theory courses is 40 marks with the following distribution.
  - a. 30 marks for Mid-term tests.
  - b. 10 marks for Assignments.

For all theory courses including mandatory courses there shall be two mid-term tests in each semester. The duration of mid-term test shall be 1 hour and 30 minutes. Student shall answer six short answer questions of one mark each and three (out of five) long answer questions of 8 marks each. First mid-term test shall be conducted for I, II units of syllabus and second mid-term shall be conducted for III, IV & V units. Final Mid-term marks shall be arrived by considering 80% weightage for the best mid-term test and 20% weightage for the other. In case any student is unable to appear for both mid-term tests for genuine reasons (for example; medical grounds, tragedy in his/her family), the Principal at his discretion on the recommendation of Head of the department and concerned faculty may permit to re-conduct only the 2nd mid-term test.

- 6.1.2 The 10 marks allotted to assignments in each theory course shall be based on evaluation of two assignments (5marks each), on topics relevant to that particular course. The first assignment is to be submitted before I mid-term test and the second assignment is to be submitted before II mid-term test.
- 6.1.3 The 10 marks allotted to assignments in each theory course shall be based on evaluation of two assignments (5marks each), on topics relevant to that particular course. The first assignment is to be submitted before I mid-term test and the second assignment is to be submitted before II mid-term test.

## **6.2 End Semester Examination**

- 6.2.1 End semester examination of theory courses shall have the following pattern:
- 6.2.2 There shall be 6 questions and all questions shall be compulsory.
- 6.2.3 Question “1” shall contain 10 compulsory short answer questions, one mark each. There shall be two short answer questions from each unit.
- 6.2.4 In each of the questions from 2 to 6, there shall be either-or type questions of 10 marks each. Student shall answer any one of them. Each of these questions from 2 to 6 shall cover one unit of the syllabus.
- 6.2.5 The duration of Theory/practical end semester examination is 3 hours.
- 6.2.6 Minimum two question papers shall be collected for each theory course, generally set by an external expert.
- 6.2.7 The answer scripts shall be double valued by an External and Internal Examiner.
- 6.2.8 Under exceptional cases the answer scripts shall be double valued by only internal/external examiners.
- 6.2.9 For each candidate the difference in the total marks awarded by each examiner shall be computed.
- 6.2.10 If the obtained difference is less than or equal to 15% of the maximum marks, the final mark shall be arrived by considering 80% of the higher mark and 20% of the lower mark.
- 6.2.11 In case, the obtained difference of the marks awarded by the two examiners exceeds 15% of the total external marks for a given course; the Chief examiner shall request the two examiners to Re-examine the relevant answer script. If the difference in marks awarded by the two examiners after re-examination still exceeds 15% of the total external marks, the Controller of Examinations in consultation with the Principal shall appoint the third examiner for re-evaluating the script. Of the three marks available thereafter, the highest two shall be considered for the application of the above stated 80% -20% formula.
- 6.2.12 End examination of theory courses consisting of two parts of different courses, for ex: Electrical & Mechanical Technology shall have the following pattern:
  - a. Question paper shall be in two parts viz., Part A and Part B with equal weightage.
  - b. In each part there shall be 3 either-or type questions for 10 marks each.

## **6.3 Practical Courses**

- 6.3.1 The internal evaluation for practical courses shall be 40 marks for day to day work based on conduction of experiment/prerequisite work/ record/ Viva.
- 6.3.2 The end semester examination shall be conducted by the laboratory teacher concerned and one senior teacher of the same department nominated by the Principal.
- 6.3.3 In a practical course consisting of two parts (ex: Electrical & Mechanical Lab), the end semester examination shall be conducted for 30 marks in each part and final marks shall be arrived by cumulating the marks obtained in the two parts. Continuous Internal evaluation shall be arrived by considering the average of marks obtained from the two parts.

## **6.4 Regulations for Mandatory Courses:**

- 6.4.1 Mandatory courses shall bear no credits.
- 6.4.2 The details of mandatory courses shall be reflected in Grade card.
- 6.4.3 Attendance for mandatory courses is compulsory and shall be considered while calculating the aggregate attendance.
- 6.4.4 There shall be only internal assessment/evaluation for mandatory courses. The student shall be declared passed in mandatory courses when he/she secures 40% marks or above in the internal evaluation. If any student does not attain the required pass percentage, the student needs to reappear for the mid-term tests, as and when the college conducts them in subsequent semesters.
- 6.4.5 If a student is desirous of pursuing the same through MOOC's, he/she will be encouraged to do so if the course is available.

## **6.5 Curricular Framework for Skill oriented Courses**

- 6.5.1 There shall be five skill-oriented courses of 2 credits each offered during III to VII semesters.
- 6.5.2 Out of the five skill courses, one shall be a soft skill course and the remaining four shall be Domain/Interdisciplinary/Job oriented courses. The skill oriented courses shall be theory/practical.
- 6.5.3 For all skill oriented courses in One theory lecture and Two practical hours type the assessment shall be as follows;  
Internal assessment shall be for 40 marks with the following distribution;
- a. 20 marks: There shall be two Mid-Term Tests of 20 marks each. Mid-Term Test-I shall be conducted for Units I & II. Mid-Term Test-II shall be conducted for Units III, IV & V. Question paper shall be set for three questions of 10 marks each. Out of these three questions, a student needs to answer any two. The final Mid-Term Test mark shall be arrived by taking 80% of the better one and 20% of the other.
  - b. 10 marks: Two assignments evaluated for 5 marks each.
  - c. 10 marks: Record & Observation.
- 6.5.4 The End Semester Examination shall be purely in practical mode. The weightage is for 60 marks and it shall be jointly conducted and evaluated by two internal examiners who are appointed by the Principal. End Semester Examination Question paper shall comprise of 3 questions of either-or choice, each weighing 20 marks. The distribution of the questions across the syllabus is as follows;
- i) Question-1 shall have one question each from Unit I & II respectively.
  - ii) Question-2 shall have both questions from Unit-III
  - iii) Question-3 shall have one question each from Unit IV & V respectively.
- 6.5.5 The student shall be given an option to choose either the skill courses being offered by the college or to choose a certificate course being offered by industries, professional bodies and 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 only upon producing the course completion certificate along with percentage/grades from the agency. Minimum course duration if offered by external agencies shall be either 6 weeks or 30 Hrs.
- 6.5.6 Student registration for the certificate courses offered by external agencies shall be approved by the Head of the Department and the Principal, it will be mandatory for the student to share necessary information with the institution. The institution shall also ensure that the student has to complete the course and produce the course completion certificate as per the academic schedule given for the regular courses in that semester.
- 6.5.7 If a student prefers to take a certificate course offered by external agency, the department shall mark attendance of the student for the remaining courses in that semester excluding the skill course in all the calculations of mandatory attendance requirements upon producing a valid certificate.

## **6.6 Mandatory Internships**

### **a) Summer Internships:**

Two summer internships either onsite or virtual each with a minimum of six weeks duration, done at the end of second and third years, respectively are mandatory. It shall be completed in collaboration with local industries, Govt. Organizations, construction agencies, Hydel and thermal power projects, software MNCs or any industries in the areas of concerned specialization of the Undergraduate program. One of the two summer internships may be society oriented and shall be preferably completed in collaboration with government

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

Evaluation of the summer internships shall be through the departmental committee. A student will be required to submit a summer internship report to the concerned department and appear for an oral presentation before the departmental committee comprising of Head of the Department, supervisor of the internship and a senior faculty member of the department. A certificate from industry shall be included in the report. The report and the oral presentation shall carry 40% and 60% weightages, respectively. It shall be evaluated for 100 marks. There shall be no internal marks for Summer Internship. A student shall secure minimum 40% of marks for successful completion. In case, if a student fails, he/she shall reappear as and when semester supplementary examinations are conducted by the Institution.

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

**6.7 Massive Open Online Courses (MOOCs)**

The college in line with the developments in Learning Management Systems (LMS) intends to encourage the students to do online courses in MOOCs. The main intension to introduce MOOCs is to obtain enough exposure through online tutorials, self-learning at one's own pace, attempt quizzes, discuss with professors from various universities and finally to obtain certificate of completion of the course from the MOOCs providers.

**Regulations for MOOCs:**

- 6.7.1 Institution intends to encourage the students to do a minimum of two MOOCs, one each in discipline and open elective during third year. Also another MOOC in final year can be taken under open elective category.
- 6.7.2 The respective departments shall give a list of standard MOOCs providers including SWAYAM whose credentials are endorsed by the HoD.
- 6.7.3 In general, MOOCs providers provide the result in percentage. In such case, the departments shall follow the grade table given below, while allotting letter grade for the MOOCs. If MOOCs provider declares a student as passed, the institution shall consider the same.

Letter Grade	Grade points	Percentage/Absolute Marks
O (Outstanding)	10	90 - 100
A+ (Excellent)	9	80 - 89
A (Very Good)	8	70 - 79
B+ (Good)	7	60 - 69
B (Above Average)	6	50 - 59
C (Average)	5	45 - 49
P (Pass)	4	40 - 44
F (Fail)	0	< 40
Ab (Absent)	0	

- 6.7.4 In case of any deviation in the above clause, the committee appointed by the Principal shall take a decision for converting MOOC results in to the relevant grade points.
- 6.7.5 The Credits for MOOC(s) shall be transferred same as given for the respective discipline or open electives.
- 6.7.6 Each department shall appoint Coordinators/Mentors and allot the students to them who shall be responsible to guide students in selecting online courses and provide guidance for the registration, progress and completion of the same.
- 6.7.7 In case a student fails to complete the MOOCs he/she shall re-register for the same with any of the providers from the list provided by the department. Still if a student fails to clear the course/s, the Institution shall evaluate for the said course/s for 60 marks (scaled up to 100 marks), as per the MOOCs syllabi during the final year.
- 6.7.8 In case a provider fails to offer a MOOC in any semester, then in all such cases the college shall conduct the end semester examinations for the same as per the college end semester examination pattern. The syllabi for the supplementary examinations shall be same as that of MOOCs. There shall be no internal assessment however the marks obtained out of 60 shall be scaled upto 100 marks and the respective letter grade shall be allotted.
- 6.7.9 In case any provider discontinues to offer the course, Institution shall allow the student to opt for any other provider from the list provided by the department, for completion of the same course.
- 6.7.10 The details of MOOC(s) shall be displayed in Grade card of a student, provided he/she submits the proof of completion of it or them to the department concerned through the Coordinator/Mentor, before the end semester examination of the particular semester.

## **6.8 Choice Based Credit System (CBCS)**

The CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses). The CBCS provides a 'cafeteria' type approach in which students can take courses of their choice, learn at their own pace and adopt an interdisciplinary approach to learning.

### **Regulations for CBCS:**

- 6.8.1 The CBCS, also called as Open Electives (OEs) will be implemented in the college.
- 6.8.2 It is mandatory for Under Graduate (UG) students to study CBCS courses as per the curriculum structure.
- 6.8.3 In any given semester, a CBCS course shall be offered by a department, only when there are a minimum number of students opting for that course, as defined by that department.
- 6.8.4 A student, pursuing or has already completed a course under core/discipline elective is not eligible to pursue the same under CBCS / Open Electives category.

## **6.9 Special clauses for certain courses**

### **6.9.1 Design and/or drawing, Building Drawing**

- 6.9.1.1 Related software tools like Autocad shall be used for drawing
- 6.9.1.2 For courses such as Engineering Drawing, Machine Drawing, Building Drawing and Estimation, the relative weightage for internal evaluation and end semester examination shall be 40% and 60% respectively.
- 6.9.1.3 For internal evaluation day to day work shall be evaluated for 20 marks by the course teacher concerned based on the reports/submissions prepared in the class. The remaining 20 marks shall be awarded on the basis of two mid-term tests of duration 2hours each with equal weightage.
- 6.9.1.4 In the end semester examination pattern for Engineering Drawing/ Engineering Graphics& Building Drawing, there shall be 5 questions, either-or type, of 12 marks each. There shall be no short answer type questions.



### 6.9.2 Programming for Problem Solving (Python) - 20CSE101

The above course is more of practical oriented and is need to be augmented with essential theoretical foundations. Hence the students shall be effectively evaluated through the below assessment methods:

6.9.2.1 Internal assessment shall be for 40 marks with the following distribution;

- d. 20 marks: There shall be two Mid-Term Tests of 20 marks each. Mid-Term Test-I shall be conducted for Units I & II. Mid-Term Test-II shall be conducted for Units III, IV & V. Question paper shall be set for three questions of 10 marks each. Out of these three questions, a student needs to answer any two. The final Mid-Term Test mark shall be arrived by taking 80% of the better one and 20% of the other.
- e. 10 marks: Two assignments evaluated for 5 marks each.
- f. 10 marks: Record & Observation.

6.9.2.2 The weightage for End Semester Examination is for 60 marks and it shall be jointly conducted and evaluated by two internal examiners who are appointed by the Principal. End Semester Examination Question paper shall comprise of 3 questions of either-or choice, each weighing 20 marks. The distribution of the questions across the syllabus is as follows;

Question-1 shall have one question each from Unit I & II respectively.

Question-2 shall have both questions from Unit-III

Question-3 shall have one question each from Unit IV & V respectively.

### 6.10 Full Internship and Project work (12 credits)

6.10.1 In the final semester, every student should mandatorily register and undergo internship (onsite/virtual) and in parallel should complete the project work. At the end of the semester every student has to submit an internship completion certificate and a project report. The student is permitted to submit project report on the work carried out during Internship.

6.10.2 Every student shall be required to undertake a suitable project in Department / Industry / Research organization in consultation with Head of the department and faculty guide and submit the project report thereon at the end of the semester in which the student is registered on dates announced by the college/department.

6.10.3 Students shall submit documentary evidences regarding their attendance, towards regularity of their project work at Industry/research organization.

6.10.4 The project work submitted to the department shall be evaluated for 200 marks, out of which 80 marks are for internal evaluation and 120 marks for external viva-voce. The internal evaluation shall be made by the internal departmental committee (IDC), on the basis of two reviews given by each student on the topic of his/her project. Student shall submit 5 hard copies of the project report.

6.10.5 The viva-voce shall be conducted by a committee consisting of HOD, Project Supervisor and an External Examiner nominated by the Principal at the end of the Semester.

S.No	Mode of Evaluation	Period of Submission/ Presentation	Marks	
			Int. Guide	External
1	Review-1: Presentation & Report submission on status of Project work.	Between 5 <sup>th</sup> & 6 <sup>th</sup> week	30	--
2	Review-2 - Presentation & Report submission on complete Project work.	Between 11 <sup>th</sup> & 12 <sup>th</sup> week	30	--
3	Submission Project Report	Between 14 <sup>th</sup> & 15 <sup>th</sup> week	20	--
4	Final Presentation - Viva Voce	As per Academic Calendar Schedule	--	120
<b>Total</b>			<b>200</b>	

- 6.10.6 The total marks obtained by the students shall be scaled down to 100 marks and the Award of Letter grade as per academic regulations shall be followed. Further, the letter grade obtained by the student shall be included for the CGPA computation.
- 6.10.7 In case a student fails in viva voce he /she shall reappear as and when B.Tech. IV Year II Semester supplementary examinations are conducted.

## **7. Minor and Honors Degree**

### **7.1 Guidelines for offering a Minor**

The main objective of Minor in a discipline is to provide additional learning opportunities for academically motivated students and it is an optional feature of the B. Tech. programme. 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. Minor in any other branch for improving knowledge and employability.

- 7.1.1 Minor 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.
- 7.1.2 Minor programs shall be offered in emerging technologies by the respective departments or in collaboration with the relevant industries/agencies.
- 7.1.3 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 Undergraduate Degree in Major Discipline (i.e., 160 credits).
- 7.1.4 A student is permitted to register for a Minor offered by a department other than the parent department and as specified in the respective Minor programme.
- 7.1.5 A student is permitted to register for Minor in IV semester after the results of III Semester are declared and students may be allowed to take maximum two subjects per semester pertaining to their Minor from V Semester onwards.
- 7.1.6 The courses offered under Minor can have theory/practical/project based component. If a course comes with a lab component, that component is to be cleared separately
- 7.1.7 The Concerned Principal of the college shall arrange separate class work and timetable of the courses offered under various Minor programs.
- 7.1.8 Courses that are used to fulfil the student's primary major may not be double counted towards the Minor. Courses with content substantially equivalent, more than 20%, to courses in the student's primary major may not be counted towards the Minor.
- 7.1.9 Students can complete the courses offered under Minor either in the college or in online platforms like SWAYAM /NPTEL. If the courses under Minor are offered in conventional mode, then the teaching and evaluation procedure shall be similar to regular B. Tech courses
- 7.1.10 The attendance for the registered courses under Minor and regular courses offered for Major degree in a semester are to be considered separately.
- 7.1.11 A student shall maintain an attendance of 75% in all registered courses of Minor to be eligible for attending semester end examinations. However, condonation for shortage of attendance between 65-75% may be given as per the College norms.
- 7.1.12 A student detained due to lack of attendance in regular B. Tech program shall not be permitted to continue Minor
- 7.1.13 A student registered for Minor in a discipline shall pass in all subjects that constitute the requirement for the Minor degree programme. No class/division (i.e., second class, first class and distinction, etc.) shall be awarded for Minor degree programme. There won't be any supplementary examination for the courses chosen for Minor.
- 7.1.14 If a student drops or is terminated from the Minor 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.

- 7.1.15 The Minor in a discipline will be mentioned in the degree certificate as Bachelor of Technology in XXX with Minor in YYY. For example, Bachelor of Technology in Mechanical Engineering with Minor in Machine Learning.

### **7.2 Enrolment into a Minor:**

- 7.2.1 The enrolment of student into a Minor is based on the CGPA obtained in the major degree program.
- 7.2.2 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 a CGPA of 7.5 (for SC/ST students CGPA of 7.0) without any backlog subjects will be permitted to register for a Minor.
- 7.2.3 For applicability of Minor, specified SGPA/CGPA in the subsequent semesters is to be maintained without any backlogs otherwise registration for Minor shall be cancelled. In such case, student will receive B.Tech. degree only. However, such students will receive a separate grade sheet mentioning the additional courses completed by them.
- 7.2.4 If a student is detained due to lack of attendance in either Major or Minor program, registration shall be cancelled
- 7.2.5 Minimum strength required for offering a Minor offline in a discipline is considered as 20% of the class intake. If a minimum enrolments criterion is not met, then the students may be permitted to register for the equivalent MOOC courses as approved by the concerned Head of the department
- 7.2.6 Transfer of credits from a particular Minor to regular B. Tech. and vice-versa shall not be permitted
- 7.2.7 Minor is to be completed simultaneously with Major degree program.

### **7.3 Registration for Minor:**

- 7.3.1 The institution will announce specialization and courses offered by the departments under Minor and seek registrations in IV Semester, after the results of III Semester are announced.
- 7.3.2 The eligible and interested students shall apply through the HOD of his/her parent department. The whole process should be completed prior to the commencement of every semester. Selected students shall be permitted to register the courses under Minor.
- 7.3.3 The selected students shall submit their willingness to the principal through his/her parent department which shall be forwarded to the concerned departments offering Minor. Both parent department and department offering minor shall maintain the record of student pursuing the Minor.
- 7.3.4 The students enrolled in the minor courses will be monitored continuously. An advisor/mentor from parent department shall be assigned to a group of students to monitor the progress.

### **7.4 Guidelines for offering Honours**

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.

- 7.4.1 Honours 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.

- 7.4.2 A student shall earn additional 20 credits for award of B.Tech.(Honours) 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).
- 7.4.3 A student is permitted to register for Honours offered by the parent department only
- 7.4.4 A student is permitted to register for Honours in IV semester after the results of III Semester are declared and students may be allowed to take maximum two subjects per semester pertaining to the Honours from V Semester onwards.
- 7.4.5 The Concerned Principal of the college shall arrange separate class work and timetable of the courses offered under Honours program.
- 7.4.6 Courses that are used to fulfil the student's primary major may not be double counted towards the Honours. Courses with content substantially equivalent, more than 20%, to courses in the student's primary Major may not be counted towards the Honours.
- 7.4.7 Students can complete the courses offered under Honours either in the college or in online platforms like SWAYAM/NPTEL. If the courses under Honours are offered in conventional mode, then the teaching and evaluation procedure shall be similar to regular B. Tech courses
- 7.4.8 The attendance for the registered courses under Honours and regular courses offered for Major degree in a semester are to be considered separately.
- 7.4.9 A student shall maintain an attendance of 75% in all registered courses under Honours to be eligible for attending semester end examinations. However, condonation for shortage of attendance between 65-75% may be given as per the College norms.
- 7.4.10 A student detained due to lack of attendance in regular B. Tech program shall not be permitted to continue Honours
- 7.4.11 A student registered for Honours shall pass in all subjects that constitute the requirement for the Honours degree program. No class/division (i.e., second class, first class and distinction, etc.) shall be awarded for Honours degree programme. There won't be any supplementary examination for the courses chosen for Honours.
- 7.4.12 If a student drops or is terminated from the Honours 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.
- 7.4.13 The Honours will be mentioned in the degree certificate as Bachelor of Technology (Honours) in XXX. For example, B.Tech. (Honours) in Mechanical Engineering

### **7.5 Enrolment into Honours:**

- 7.5.1 Students of a Department/Discipline are eligible to opt for Honours program offered by the same Department/Discipline.
- 7.5.2 The enrolment of student into Honours 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 a CGPA of 8 (for SC/ST students CGPA of 7.5) without any backlog subjects will be permitted to register for Honours.
- 7.5.3 For applicability of Honours, specified SGPA/CGPA in the subsequent semesters is to be maintained without any backlogs otherwise registration for Honours shall be cancelled. In such case, student will receive B. Tech degree only. However, such students will receive a separate grade sheet mentioning the additional courses completed by them
- 7.5.4 If a student is detained due to lack of attendance either in Major or in Honours, registration shall be cancelled

- 7.5.5 Minimum strength required for offering Honours offline is considered as 20% of the class intake. If a minimum enrolments criterion is not met, then the students may be permitted to register for the equivalent MOOC courses as approved by the concerned Head of the department
- 7.5.6 Transfer of credits from Honours to regular B. Tech degree and vice-versa shall not be permitted
- 7.5.7 Honours is to be completed simultaneously with a Major degree program.

### **7.6 Registration for Honours:**

The institution will announce courses offered by the departments under Honours before the start of the semester.

- 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 Honours.
- ii) The selected students shall submit their willingness to the Principal through his/her parent department offering Honours. The parent department shall maintain the record of student pursuing the Honours.
- iii) The students enrolled in the Honours courses will be monitored continuously. An advisor/mentor from parent department shall be assigned to a group of students to

## **8. Supplementary Examinations**

8.1 At the end of each Semester there will be regular examinations for the current Semester. Those students who could not clear their courses in their previous attempt can appear for the examinations under supplementary category along with the regular students after registering themselves at the examination section. Supplementary examinations for all other Semesters, other than the current one will be conducted during the same period.

8.2 Advance Supplementary Exams shall be conducted for students who failed to clear theory/practical courses of IV Year II Semester Regular End Semester Examinations. Students can appear for advanced supplementary examination conducted within one month after declaration of the recounting results. However, those candidates who fail in the advanced supplementary examinations shall appear for subsequent examination along with regular candidates in the examinations conducted at the end of the respective academic year.

## **9. Minimum Academic Requirements**

Students need to acquire necessary credits to get promoted to the subsequent academic year in addition to the attendance requirements mentioned in section no.5.

- 9.1 The minimum letter grade required for pass in each theory/practical/Seminar/Project work is “P” (internal evaluation + End Semester Examination). However a minimum of 40% marks in each theory/practical in the end semester examination have to be secured.
- 9.2 If a student found to be guilty due to malpractice in the end semester examinations, he/she shall be awarded a letter grade “F”.
- 9.3 A student shall be promoted from II to III year only if he/she acquires 40% of the credits from the courses that have been studied up to II year I semester from the following examinations, irrespective of whether the candidate takes the end semester examination or not as per the normal course of study.
  - a. One regular and two supplementary examinations of I Year I Semester.
  - b. One regular and one supplementary examinations of I Year II Semester.
  - c. One regular examination of II year I semester

9.4 A student shall be promoted from III to IV year only if he/she acquires 40% of the credits from the courses that have been studied up to III year I semester from the following examinations, irrespective of whether the candidate takes the end semester examination or not as per the normal course of study.

- a. One regular and four supplementary examinations of I year I semester.
- b. One regular and three supplementary examinations of I year II semester.
- c. One regular and two supplementary examinations of II year I semester.
- d. One regular and one supplementary examinations of II year II semester.
- e. One regular examination of III year I semester.

9.5 In case a student is detained due to lack of required credits for promotion to the next academic year, he/she needs to obtain the same by taking the supplementary examinations.

9.6 Students, who fail to earn 160 credits as indicated in the course structure within eight academic years from the year of their admission, shall forfeit their seat in B.Tech. Programme and their admission shall stand cancelled.

## 10. Transitory Regulations

Discontinued, detained or failed candidates are eligible for readmission as and when the semester is offered after fulfillment of academic regulations. Candidates who are detained due to shortage of attendance or for not fulfilling academic requirements or failed after having undergone the programme in earlier regulations or have discontinued and wish to continue the programme are eligible for admission into unfinished Semester from the date of commencement of class work with the same or equivalent courses as and when such courses are offered, subject to section 4.3 and they will be in the academic regulations into which they get readmitted.

## 11. Withholding of Results

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

## 12. Grading System

### 12.1 Award of Letter Grade

12.1.1 Based on the student's performance during a given Semester, the students are awarded a final letter grade at the end of the Semester in each course. The letter grades and the corresponding grade points are as follows:

Letter Grade	Grade points	Absolute marks
O (Outstanding)	10	90 - 100
A+ (Excellent)	9	80 - 89
A (Very Good)	8	70 - 79
B+ (Good)	7	60 - 69
B (Above Average)	6	50 - 59
C (Average)	5	45 - 49
P (Pass)	4	40 - 44
F (Fail)	0	< 40
Ab (Absent)	0	

- 12.1.2 A student is considered to have completed a course successfully and earned the credits if he/she secures a letter grade other than F and Ab in that course. A letter grade F or Ab in any course implies that the candidate is yet to clear that course.
- 12.1.3 A course successfully completed cannot be repeated.
- 12.1.4 A Semester Grade Point Average (SGPA) will be computed for each semester. The SGPA shall be calculated as follows:

$$SGPA = \frac{\sum_{i=1}^n c_i g_i}{\sum_{i=1}^n c_i}$$

Where 'n' is the number of courses registered for the semester, 'ci' is the number of Credits allotted to a particular course, and 'gi' is the grade points carried by the letter corresponding to the grade awarded to the student for the course. SGPA will be rounded off to the second place of decimal and recorded as such. The SGPA would indicate the performance of the student in the semester to which it refers.

Starting from the second semester at the end of each semester S, a Cumulative Grade Point Average (CGPA) will be computed for every student as follows:

$$CGPA = \frac{\sum_{i=1}^m c_i g_i}{\sum_{i=1}^m c_i}$$

Where 'm' is the total number of courses the student has registered from the first semester onwards up to and including the semester S, 'ci' is the number of Credits allotted to a particular course 'si' and 'gi' is the grade-point carried by the letter corresponding to the grade awarded to the student for the course 'si'. CGPA will be rounded off to the second place of decimal and recorded as such.

The CGPA would indicate the cumulative performance of the student from the first semester up to the end of the semester to which it refers.

The CGPA, SGPA and the grades obtained in all the courses in a semester will be communicated to every student at the end of every semester.

When a student gets the grade 'F' in any course during a semester, the SGPA and the CGPA from that semester onwards will be tentatively calculated, taking only 'zero point' for each such 'F' grade. After the 'F' grade(s) has/have been substituted by better grades during a subsequent semester, the SGPA and the CGPA of all the semesters, starting from the earliest semester in which the 'F' grade has been updated, will be recomputed and recorded to take this change of grade into account.

- 12.1.5 Cumulative grade point average [CGPA] averaged over all the courses are calculated for the award of class.

## 12.2 Award of Class

The following Class is awarded to the student on successful completion of the B.Tech. Degree Programme depending upon the CGPA obtained;

Class Awarded	CGPA	Based on the aggregate of grades secured from the total Credits.
First Class with Distinction	$\geq 7.50$ & $\leq 10.0$	
First Class	$\geq 6.50$ & $< 7.50$	
Second Class	$\geq 5.50$ & $< 6.50$	
Pass Class	$\geq 4.00$ & $< 5.50$	

12.2.1 In case of a specific query by students/employers regarding Semester Grade Point Average (SGPA)/ Cumulative Grade Point Average (CGPA) into percentage, the following formulae will be adopted for **notional conversion of SGPA/CGPA** into percentage.

$$\text{SGPA to Percentage} = (\text{SGPA} - 0.5) \times 10$$

$$\text{CGPA to Percentage} = (\text{CGPA} - 0.5) \times 10$$

## 13. Award of Ranks

**13.1** Ranks are awarded based on the CGPA secured by the candidates for all the courses from first to final year,

Provided the candidate has:

- Passed all the courses in first attempt only.
- Not discontinued the programme for any period during the course of study.
- Not been awarded any punishment for being involved in malpractice or indiscipline during the course of study in the Institute.

**13.2** In case, more than one student secures same CGPA, then first rank shall be awarded based on:

- Student who secured more number of letter grade "O", "A+" and so on in decrementing order of grades.
- After applying the above clause, if a tie still exists, then all such students shall be awarded the same rank.

**13.3** Certificate and medal/award shall be given to such students as an appreciation for their achievement.

## 14. Student transfers

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

## 15. Gap Year Concept

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



## 16. Malpractice cases consideration committee

Whenever, the Chief Superintendent receives a report from the concerned authorized persons regarding student malpractice cases, he/she shall call for meeting with malpractice committee for necessary action. The malpractice committee shall be constituted by the following members:

S.No	Faculty	Designation
1.	Principal	Chairman
2.	Dean-Academics/ Vice Principal -Academics	Member
3.	Controller of Examinations	Member
4.	Concerned HoD	Member
5.	Course Expert	Member

## 17. Declaration of Results

The results shall be declared after approval by the Results Declaration Committee, comprising of the below members;

S.No	Faculty	Designation
1	Principal	Chair Person
2	Affiliating University Nominee	Member
3	Dean/Vice Principal -Academics	Member
4	Controller of Examinations	Member
5	Asst. Controller of Examinations	Member
6	Concerned HoD's	Member

## 18. Post-Examination Moderation:

After conduction of End semester examination, if any discrepancies like out of syllabus, mistakes in given questions are represented by the concerned HoD within three days, a committee appointed by the Principal, shall look into the issue.

## 19. Re-Totaling / Re Counting

The facility of re-totaling of the answer scripts shall be followed for both theory/practical examinations.

**19.1** Students can apply for re-totaling of marks for any number of theory/practical courses.

**19.2** A candidate shall submit an application for re-totaling with the prescribed fee within the specified date as per the notification.

**19.3** A candidate shall be awarded corrected grade after the re-totaling. However, if the candidate secure lesser grade than the awarded grade, the original grade shall be retained.

## 20. General

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

**20.2** Malpractice rules nature and punishments are appended.

**20.3** Where the words “he”, “him”, “his” occur in the regulations, they also include “she”, “her”, “hers”, respectively.

**20.4** In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Principal is final.

**20.5** The Institute, with the approval of the Academic Council, may change or amend the academic regulations / structure / credits / syllabi at any time and the changes or amendments shall be made applicable to all the students on rolls with effect from the dates notified by the Institute.

## **Applicable for students admitted to B.Tech. (Lateral Entry Scheme) from 2021-22 batch onwards**

### **1. Admission Procedure**

- 1.1 Candidates qualified in ECET and admitted by the Convener, ECET.
- 1.2 Sanctioned intake strength shall be as per APSHCE guidelines and shall be filled by the Convener, ECET as lateral entry students.

### **2. Programme Pattern**

- 2.1 The entire programme of study is for three academic years. All three academic years shall be on semester pattern.
- 2.2 The minimum instruction days including examinations for each Semester shall be 90.
- 2.3 A student eligible to appear for the end examination in a course, but absent or has failed in the end examination may appear for that course at the next supplementary examination when offered.
- 2.4 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 fulfillment of academic regulations. In such case, he/she shall be in the academic regulations into which he/she is readmitted.
- 2.5 The curriculum of B.Tech. Programme is designed to have a total of 121 credits for the award of B.Tech. Degree.  
Each course is assigned certain number of credits which will depend upon the number of contact hours (lectures & tutorials) per week. In general, credits are assigned to the courses based on the following contact hours per week per semester.
  - a. One credit for each Lecture / Tutorial hour.
  - b. One credit for two hours of Practicals.

### **3. Award of B.Tech. Degree**

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

- 3.1 Pursue a course of study for not less than three academic years and in not more than six academic years.
- 3.2 Register for 121 credits and secure all 121 credits.
- 3.3 Student should clear all the Mandatory courses (Non-Credited).
- 3.4 Students, who fail to fulfill all the academic requirements for the award of the degree within six academic years from the year of their admission, shall forfeit their seat in B.Tech. Programme and their admission stands cancelled.

### **4. Minimum Academic Requirements**

Students need to acquire necessary credits to get promoted to the subsequent academic year in addition to the attendance requirements mentioned in section no.5 of B.Tech regular stream.

- 4.1 The minimum letter grade required for pass in each theory/practical course is P grade (internal evaluation + End Semester Examination). However a minimum of 40% (theory/practical) in end semester examination have to be secured.
  - 4.2 A student shall be promoted from III to IV year only if he/she acquires 40% of the credits from the courses that have been studied up to III year I semester from the following examinations, irrespective of whether the candidate takes the end semester examination or not as per the normal course of study.
    - a. One regular and two supplementary examinations of II year I semester.
    - b. One regular and one supplementary examinations of II year II semester.
    - c. One regular examination of III year I semester.
  - 4.3 In case a student is detained due to lack of required credits for promotion to the next academic year, he/she needs to obtain the same by taking the supplementary examinations.
  - 4.4 Students, who fail to earn 121 credits as indicated in the course structure within six academic years from the year of their admission, shall forfeit their seat in B.Tech. Programme and their admission shall stand cancelled.
- 5. All other regulations remain the same as that of B.Tech. Regular stream.**

## Disciplinary Action for Malpractices / Improper Conduct in Examinations

	Nature of Malpractices/Improper conduct	Punishment
	<i>If the candidate:</i>	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers, blue tooth or any other form of material concerned with or related to the course of the examination (theory or practical) in which he/she 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/she 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/year. The Hall Ticket of the candidate is to be cancelled.
3.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred for four consecutive semesters from class work and all end examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. The performance of the original candidate, who has been impersonated, shall be cancelled in all the courses of the examination (including practicals 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 four consecutive Semesters from class work and all Semester end examinations if his involvement is established. Otherwise the candidate is debarred for two consecutive semesters from class work and all end examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of

		seat. However the final decision shall be taken by the Chief Superintendent based on the recommendations of a committee nominated by the Principal. If the imposter is an outsider, he/she will be handed over to the police and a case is registered against him.
4.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that course and all the 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 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.	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.
6.	Refuses to obey the orders of the any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that 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. If candidate physically assaults the invigilator or/ officer in charge of the examination, then the candidate is also barred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.
7.	Leaves the examination 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 performance in that course and all the 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 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.
<b>8.</b>	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/year. The candidate is also debarred and forfeits the seat.
<b>9.</b>	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges 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. Person(s) who do not belong to the College will be handed over to police and, a police case will be registered against them.
<b>10.</b>	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 for the remaining examinations of the courses of that Semester/year.
<b>11.</b>	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 Semester examinations depending on the recommendation of the committee.
<b>12.</b>	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the Principal for further action to award suitable punishment.	

**Note:** Whenever the performance of a student is cancelled in any course/ courses due to Malpractice, he/she has to register for the End semester examination in that particular course/s consequently and has to fulfill all the norms required for award of Degree.