



**ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES  
RAJAMPET**  
(An Autonomous Institution)

**ACADEMIC REGULATIONS (R20), COURSE STRUCTURE AND SYLLABI**

**For the students admitted to**

**B. Tech., Regular Four Year Undergraduate Degree Programme from the Academic  
Year 2020-21, B.Tech Honors and Minors**

**and**

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



## **VISION AND MISSION OF THE INSTITUTION**

### **Vision**

We impart futuristic technical education and instil high patterns of discipline through our dedicated staff who set global standards, making our students technologically superior and ethically strong, who in turn shall improve the quality of life of the human race.

### **Mission**

Our mission is to educate students from the local and rural areas and from other states so that they become enlightened individuals, improving the living standards of their families, industry and society. We provide individual attention, world-class quality of Technical education and take care of character building.



# **ACADEMIC RULES AND REGULATIONS OF FOUR-YEAR B. TECH REGULAR DEGREE PROGRAMME**

**APPLICABLE FOR THE STUDENT BATCHES ADMITTED FROM THE ACADEMIC YEAR 2020-21**

**APPLICABLE FOR THE STUDENTS (Lateral Entry) ADMITTED FROM THE ACADEMIC YEAR 2021-22**

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## 1. PREAMBLE

Annamacharya Institute of Technology and Sciences (Autonomous), Rajampet, relentlessly aims to achieve academic excellence by implementing new initiatives in teaching-learning and evaluation processes. Based on the directions of the University Grants Commission (UGC), New Delhi, All India Council for Technical Education (AICTE), New Delhi and Jawaharlal Nehru Technological University Anantapur (JNTUA) Anantapuramu, the institute adopted AICTE and APSCHE model curriculum, with minor modifications to match the needs, expectations, and skillsets of students of the region, in both the under-graduate and post-graduate programmes offered from the academic year 2020-21.

## 2. APPLICATION AND COMMENCEMENT

- The regulations are quite comprehensive and include definitions of key terms, semester system, credit system, grading system and other relevant details.
- The regulations detailed herein shall apply to all the regular under-graduate programmes offered by the Institute.
- The regulations shall be applicable and come into force to the student batches admitted from the academic year 2020-21 and Lateral Entry students admitted from the academic year 2021-22
- The Institute may revise, amend or change the regulations, scheme of examinations and syllabi, from time to time, if found necessary and on approval by the Academic Council of the Institute, keeping the recommendations of the BoS in view.
- Any or all such amendments shall be effective from such date and to such batches of students including those already undergoing the programme, as may be approved through Academic Council of the Institute.
- These regulations shall be called R20 Regulations.

## 3. ELIGIBILITY FOR ADMISSION

### 3.1 ADMISSION INTO ENGINEERING UNDER GRADUATION PROGRAMMES (REGULAR)

The eligibility criteria for admission into engineering under graduate programmes offered at AITS shall be as prescribed by the Government of Andhra Pradesh. The criteria are given below:

- The candidate shall be an Indian National / NRI.
- The candidate should have completed 16 years of age as on 31st December of the academic year for which the admissions are being conducted.
- The candidate should have passed the qualifying examination (10+2) or equivalent as on the date of admission recognized by Board of Intermediate, Andhra Pradesh.
- Seats in each programme in the Institute are classified into two categories i.e., **Category – A** and **Category – B** as per the GOs of Andhra Pradesh.

### **Category – A Seats**

These seats shall be filled through counselling as per the rank secured by a candidate in the Common Entrance Test (EAMCET) conducted by the Government of Andhra Pradesh and as per other admission criteria laid down in the GOs.

### **Category – B Seats**

These seats shall be filled by the Institute as per the GOs issued by the Government of Andhra Pradesh from time to time

### **3.2 ADMISSION INTO SECOND YEAR (Lateral Entry Scheme)**

A candidate shall be admitted into the third semester (II year I semester) based on the rank secured by the candidate in the Engineering Common Entrance Test (ECET) by the Government of Andhra Pradesh and as per other admission criteria laid down in the GOs.

### **4. Medium of Instruction**

The medium of instruction shall be **English** for all the courses including their content delivery and examinations, seminars, presentations and project evaluation as prescribed in the programme curriculum.

### **5. B.TECH. PROGRAMME STRUCTURE**

The structure of the B.Tech. Programmes on offer at AITS are based on the **Choice Based Credit System (CBCS)** as defined by the UGC and the curriculum / course structure as suggested by the AICTE and APSCHE in its Model Curriculum.

#### **Semester Scheme**

- The B. Tech Programmes offered at AITS follow **semester scheme** pattern.
- The duration of a B. Tech. Programme shall be of **4 academic** years for 4 year B. Tech programmes **and 3 academic years** for 3 year B. Tech programmes in lateral entry scheme.
- Each academic year shall have **2 semesters** i.e., odd and even semesters and shall be counted as first semester, second semester, and third semester and so on up to eighth semester.
- Each semester shall consist of **16 weeks** of academic work including internal examinations.
- Each semester is structured to provide credits totalling to **160 credits** for the entire B.Tech. Programme.
- Each semester shall have **Continuous Internal Evaluation (CIE)** and **Semester End Examination (SEE)** for both Theory and Lab courses.
- Each student is required to secure a total of **160 credits with a CGPA  $\geq 5$**  for the completion of the UG programme and the award of the B.Tech. Degree.
- A student after securing admission into a 4 year B.Tech Programme at AITS shall pursue and acquire the B.Tech. degree in a **minimum period of four academic years i.e., 8 semesters** and a **maximum period of eight academic years i.e., 16 semesters** starting from the date of commencement of I year I



semester, failing which the student shall forfeit the seat in B.Tech. Programme.

- A student after securing admission into a 3 year B. Tech Programme (Lateral Entry) at AITS shall pursue and acquire the B.Tech. Degree in a **minimum period of three academic years i.e., 6 semesters** and a **maximum period of six academic years i.e., 12 semesters** starting from the date of commencement of II year I semester, failing which the student shall forfeit the seat in B.Tech. programme

## 6. PROGRAMMES OFFERED BY THE INSTITUTE

The following B. Tech. programmes are offered as specializations by the Institute from 2020-2021.

SNo	Name of the Program	Programme Code
1	Civil Engineering	01
2	Electrical and Electronics Engineering	02
3	Mechanical Engineering	03
4	Electronics and Communication Engineering	04
5	Computer Sciences and Engineering	05
6	Artificial Intelligence and Data Science	30
7	Computer Science and Engineering (Artificial Intelligence)	31
8	Computer Science and Engineering (Artificial Data Science)	32
9	Artificial Intelligence and Machine Learning	33

## 7. COURSES AND CREDIT STRUCTURE

**Credit:** A credit is a unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (Lecture/Tutorial) or two hours of practical work/field work/project per week.

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

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

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

Type of Class	Semester	
	Periods per Week	Credits
Theory (Lecture/Tutorial)	01	01
	02	02
	03	03
	04	04
Practical	02	01
	03	1.5
	04	02
Project Work / Internship	-	16.5

Every course of the B. Tech. programme shall be offered by a specific section / department. The unique codes of the section / department offering the courses are given in the Table.

Course offering Department	Code
Basic Science Courses	C
Humanities and Social Science Courses including Management Courses	
Civil Engineering	1
Electrical and Electronics Engineering	2
Mechanical Engineering	3
Electronics & Communication Engineering	4
Computer Science & Engineering	5
Artificial Intelligence and Data Science	30
Computer Science and Engineering (Artificial Intelligence)	31
Computer Science and Engineering (Artificial Data Science)	32
Artificial Intelligence and Machine Learning	33

Every B. Tech. Programme of study shall be designed to have theory and laboratory courses. In addition, a student shall carry out internship, project, socially relevant project, and other mandatory courses as prescribed in the curriculum of the Programmes.

### 7.1 Types of Courses:

TYPE OF COURSES	COURSE CATEGORY	CODE	Credit Distribution
Foundation	Engineering Sciences	ESC	24
	Basic Sciences	BSC	21
	Humanities & Social Sciences and Management	HSMC	10.5
Core	Professional Core	PCC	51
Project	Project (12)	PROJ	16.5
	Internship (4.5)		
Elective courses	Professional Elective	PEC	15
	Open Elective (including two MOOCs)	OEC	12
Mandatory Courses	Mandatory	MC	-
Skill Oriented Courses		SC	10
Total Credits			160

### **7.1.1 Foundation Courses**

Engineering Science courses, Basic Science Courses and Humanities courses are termed as Foundation Courses and are mostly offered at I and II Year.

### **7.1.2 Professional Core Courses**

Professional Core Course is to be completed by all students of respective programme before they can move on to the next semester.

### **7.1.3 Professional Core Electives**

University Grants Commission has come up with the Choice Based Credit System (CBCS) in which the students have a choice to choose from the prescribed courses, which are referred as Professional elective and Open Elective courses. All the Professional and Open elective courses shall be offered for 3 credits. Students have to register for a total of 5 professional core electives courses (PEC-1 to PEC-5) from the list of track-wise professional elective course as prescribed in the course structure of the programme. The following points are considered for a Professional Elective Course.

- Maximum strength of a class /section for each semester shall be 72.
- A course may be offered to the students, only if a minimum of 24 students (1/3 of the section strength) opt for it.
- The selection of course based on the choice for students shall be on 'first come first serve' through on line and off line registration.
- The Head of the department or concerned shall decide, whether or not to offer such course keeping in view the resources available in the department offering the course.

### **7.1.4 Open Electives**

Choice Based Credit System (CBCS) is promoted in such a way that different open elective courses should be offered by every department in engineering to other departments. This interdisciplinary of learning open elective courses by other department students will have learning awareness and job-oriented benefits. Students require the opportunity to choose any open elective course from different departments and apply their knowledge to acquire jobs in that field of course. Learning and employment benefits are not only through their own course subjects but also through open elective courses.

Every student shall earn prescribed credits by choosing one of the open elective courses from the list of Open Electives given in the Curriculum. Further students from a particular program/branch can opt for one Open Elective (OEC1) offered by their concerned department. However, one Open Electives (OEC2) is inter-disciplinary and shall be offered by other branches.

Two Open electives (OEC3 & OEC4) are to be chosen from the repository of **inter-disciplinary MOOCs** courses offered by NPTEL or any other recognized Institutions/Organization. Students shall consult their

class mentors before opting for an open elective course (MOOCs)

The following guidelines are pertaining to Open Elective Courses.

- Maximum strength of a class /section for each semester shall be 72.
- A course may be offered to the students, only if a minimum of 24 students (1/3 of the section strength) opt for it. The minimum number of students is required to register the course to offer opted course in the department.
- The selection of course based on the choice for students shall be on 'first come first serve' through on line and off line registration.
- The Head of the department or concerned shall decide, whether or not to offer such course keeping in view the resources available in the department offering the course.

#### **7.1.5 Massive Open Online Courses as Open Elective**

- MOOCs (Massive Open Online Courses) are introduced to meet with the global requirements and to inculcate the habit of self-learning and in compliance with the UGC guidelines
- A student shall be permitted to pursue up to a maximum of two electives courses under MOOCs during programme. Each of courses must be of minimum 12 weeks in duration.
- Concerned departments **shall declare the list of inter-disciplinary** courses that a student can pursue through MOOCs at the beginning of the corresponding semester.
- Students interested in pursuing MOOCs shall register for the course and submit this information at their department office at the start of the corresponding semester.
- Course content for the selected MOOCs shall be drawn from the respective MOOCs offering Portal.
- Course progress shall be monitored by the Mentors designated by the HoD.
- Grade obtained through the evaluation of the MOOC shall be considered for the CGPA calculation.
- Three credits shall be awarded to the student upon successful completion of MOOC.
- In case a student fails to complete the MOOCs he/she shall re-register for the same with the same provider, already offered that course. In case that provider discontinues to offer the course, Institution shall conduct an offline examination in the same format, which student already appeared in online examination, as per the MOOC syllabus.

#### **7.1.6 Skill Oriented Courses**

- There shall be 5 skill oriented course offered during 3<sup>rd</sup> to 7<sup>th</sup> semester. Among the 5 skill oriented courses, 4 courses shall focus on the basic advanced skills related to the domain courses and remaining 1 shall be a soft skills course.
- Skill oriented / skill advanced courses carry 2 credits
- For skill oriented/skill advanced course, 1 theory and 2 practical hours may be allotted as per the

decision of concerned BOS.

- Out of the 5 skill courses 2 shall be skill-oriented courses from the same domain and shall be completed in 2<sup>nd</sup> year. Of the remaining 3 skills course, 1 shall be necessarily be a soft skill course and the remaining 2 shall be skill advanced courses either from the same domain or job oriented skill course, which can be of inter-disciplinary nature.
- A pool of interdisciplinary job-oriented skill course shall be designed by a common Board of studies by the participating departments and the syllabus along with the pre-requisites shall be prepared for each of the laboratory infrastructure requirements,
- The student shall be given an option to choose either the skill courses being offered by the institute or to choose a certificate course being offered by Industries/Professional Bodies/ APSSDC or any other accredited bodies as approved by the concerned BOS.
- 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 advanced course offered by the department, the credits shall be awarded to the student upon producing the course completion certificate from Industries/Professional Bodies/ APSSDC as approved by the concerned BOS.
- 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 oriented course in all the calculations of mandatory attendance requirements upon producing a valid certificate as approved by the concerned BOS, the student is deemed to have fulfilled the attendance requirements of the course and acquire the credits assigned to the course.
- A committee shall be formed at the level of the institute to evaluate the grades/marks given for a course by external agencies and convert to the equivalent marks/grades. The recommended conversions and appropriate grades/marks are to be approved by the Academic Council

#### 7.1.7 Mandatory Courses

- A student shall pursue mandatory courses as specified in the course structure of the B.Tech. Programme.
- These courses are among the compulsory courses and do not carry any credits.
- A student has to secure 40 marks out of 100 in the Internal Examination, shall be necessary requirement for the student to qualify for the **award of Degree**.
- Result of mandatory courses shall be declared with “**Pass**” or “**Fail**” performance in the Comprehensive Marks Memo.
- No marks or letter grade shall be allotted.
- Attendance in the mandatory course shall be considered while calculating aggregate attendance.

### 7.1.8 Universal Human Values (UHV) Courses

- Universal Human Values-I shall be offered during the Student Induction Programme with no credits.
- Universal Human Values-II course carries 3 credits. The assessment is to provide a fair state of development of the student, so participation in classroom discussions, self-assessment, peer assessment etc. will be used in evaluation.
- A student has to secure 40% marks out of 100 in the CIE and SEE together to qualify for the award of the degree. The distribution shall be 50 marks for continuous internal assessment and 50 marks for semester end examination.
- Internal evaluation shall be conducted for the course during semester and shall be evaluated for 50 marks and distributions of marks as follows:
  - Assessment by faculty mentor: 10 marks
  - Self-assessment: 10 marks
  - Assessment by peers: 10 marks
  - Socially relevant project/Group Activities/Assignments: 20 marks

## 8. Evaluation Process

The performance of a student in each semester shall be evaluated course-wise with a maximum of 100 marks for both Theory and Lab Course.

- For a Theory course, the distribution shall be 30 marks for Internal Evaluation and 70 marks for End-Examinations. The distribution is detailed in 8.1.1.
- For a Lab course, the distribution shall be 30 marks for Internal Evaluation and 70 marks End-Examinations. The distribution is detailed in 8.1.3
- Project Work shall be evaluated for 200 marks. Mandatory courses with no credits shall be evaluated for 100 marks.

### 8.1 Internal Evaluation

For a Theory Course, 30 marks are allotted for Internal Evaluation. Two Internal examinations (Theory Internal Examinations) shall be conducted for a Theory Course during a semester and they shall be evaluated for 30 marks of which 25 marks are given for Internal Examination and 5 marks for assignment.

For Lab Course, there shall be a continuous internal evaluation during the semester for 30 marks.

#### 8.1.1 Theory Internal Examinations

Theory internal examination shall have Part A & Part B. In Part A, which is compulsory, five short answer questions each of which carries one mark. There shall be no sub-questions or bits or fill-up the blanks. The examination shall be conducted for 2 hours.

Part B shall contain three either type questions (Total six questions from 1 to 6). Each question shall carry 10 marks. 30 marks allotted for Part B shall finally be scaled down to 20 marks. The questions shall be set/moderated such that the student can comfortably answer each question within the stipulated time.

**Question paper pattern** for Internal Examination (25 Marks) shall be as follows:

**PART A:** Five short answer questions -  $5 \times 1 = 5$  Marks

**PART B:** 30 Marks (will be scaled to 20 marks)

- (i) There shall be three questions with internal Choice i.e., 'either' or 'choice'
- (ii) The student shall answer three questions

First Theory Internal examination shall be conducted as per the syllabus of I & II units. The second internal examination shall be conducted as per the syllabus of III, IV and V units. 80 % weightage for the best performance and 20 % the other shall be considered.

For Example:

Marks obtained in I Internal examination: 19

Marks obtained in II Internal examination: 10

Final Internal Marks:  $(19 \times 0.8) + (10 \times 0.2) = 17.2$

If the student is absent for any one Internal examination, the final internal marks shall be arrived at by considering 80% weight age to the marks secured by the student in the appeared examination and zero to the other.

For Example:

Marks obtained in first Internal: 0 (Absent); Marks obtained in second Internal: 18

Final Internal Marks:  $(18 \times 0.8) + (0 \times 0.2) = 14.4$

**Note:** For some courses namely, Engineering Graphics and Engineering Graphics & Design, the distribution of internal evaluation and external evaluation marks shall be 30 and 70 respectively.

Of the 30 internal evaluation marks, day-to-day performance of the student shall be evaluated for 20 marks and internal examination carries 10 marks. Day-to-day work shall be evaluated by the teacher concerned based on the exercises/submissions/assignments prepared in the class. Two internal examinations shall be conducted in a semester for duration of 2 hours each for 10 marks with a weightage of 80% for better of the two and 20% for the other. The sum of day-to-day work and the internal examination marks will be the final internal evaluation for 30 marks for the subject. End examination shall be for 70 marks and is of 3 hours

duration. The question paper shall be with 5 questions, one question from each unit with internal choice. All questions carry 14 marks each.

### **8.1.2 Assignment (Theory)**

The assignment shall contain essay type questions/numerical problems etc., the assignments is given by the concerned class teacher for five marks from first two units. The second assignments shall give from rest of the syllabus. The first assignment should be submitted before the conduct of the first internal examination, and the second assignment should be submitted before the conduct of the second internal examination. There shall be at least two assignments in a semester and performance of one best out of two assignments to be considered.

### **8.1.3 Lab Internal Evaluation**

Out of the 30 marks allotted for Lab Internal Evaluation, day-to-day performance of the student in the laboratory shall be evaluated for 20 marks by the concerned laboratory teacher based on experimental evaluation/record/viva. Two Lab Internal examinations shall be conducted for 10 marks by the concerned teacher. Performance of one best out of two tests to be considered.

### **8.1.4 Internal Evaluation of Mandatory Courses**

Mandatory courses are offered with no credits. However, a student has to complete Mandatory Courses in order to be eligible for the award of the Degree. There shall be an Internal Examination for 100 marks. A student shall be declared to have passed the mandatory course only when he/she secures 40% or more in the internal examination. In case, the student fails, a supplementary examination shall be conducted.

### **8.1.5 Make-up Internal Evaluation**

The student who has missed both the Theory Internal examinations will be permitted to appear for a Make-up Internal examination in the event of his/her producing satisfactory evidences of medical ailment. One Make-up internal test shall be conducted immediately after the II Internal examination in the same semester, covering the total syllabus of FIVE Units in the respective course.

This Make-up examination will be given a weightage of 80%. Make-up tests shall be conducted outside the working hours and there can be even two such examinations on a day.

Student absent for I Internal examinations with valid reasons he/ she should produce a supporting document to the department within a week after completion of last internal examination. And the same student absent for same subject in II Internal examination, he/ she should produce a supporting document to the department immediately in order to giving the provision for makeup examination.

Make-up internal examinations are not for improvement of marks in Theory Internal examinations. There shall be no make-up internal examinations for a Lab course.



**8.1.6 Evaluation of Skill oriented / Skill advanced / Soft Skills course**

Course type: Laboratory

Distribution of marks: 30:70

Evaluation Type: Internal Evaluation

A student is evaluated for a maximum of 100 marks with respect to skill oriented course / Skill advanced courses / Soft skill course. The distribution of marks shall be 30 for internal evaluation and 70 for external evaluation. For Internal Evaluation, day-to-day performance of the student in the laboratory shall be evaluated for 30 marks by the concerned skill oriented course / Skill advanced courses / Soft skill course class teacher based on experimental evaluation / discussions / results / reports. External evaluation is done for 70 marks in a laboratory end semester examination conducted for 3 hours.

**Note:** Each skill oriented course / Skill advanced courses / Soft skill course will have its own evaluation procedure and weightage.

**8.2 End Evaluation****8.2.1 Theory End Evaluation**

As specified in 8.0, Theory End Evaluation is done for 70 marks. End examination of theory subjects shall be conducted at the end of semester. There shall be Regular and Supplementary End Examinations. Theory End Examination shall be conducted for 70 marks and is of 3 hours duration.

Theory end examination shall have Part A & Part B. In Part A, which is compulsory, five short answer questions each unit of which carries two marks shall be given. There shall be no sub-questions or bits or fill-up the blanks.

Part B shall contain five either type questions (Total 10 questions with internal choice). 60 marks allotted for Part B and each question shall carry 12 marks. There will be one question from each unit. The examination shall be conducted for 3 hours.

**Question paper pattern** for Semester End Examination (70 Marks) shall be as follows:

**PART A:** 5 x 2 = 10 Marks

- (i) There shall be one question from each unit
- (ii) Part A is compulsory.

**PART B:** 5 x 12 = 60 Marks

- (i) Five questions with internal choice will be given
- (ii) There shall be one question from each unit with Internal Choice i.e., 'either' or 'choice'
- (iii) Sub questions may also be given.

### 8.2.2 Lab End Examination

As specified in 8.0, Lab End Evaluation is done for 70 marks, in the form a Lab End Examination that shall be conducted for 3 hours in respective Laboratory. Each lab course will have its own evaluation procedure and weightage.

### 8.2.3 Supplementary Theory/Lab End Examinations

- Supplementary examination shall be conducted along with regular semester end examinations.
- During Semester End Examinations of even semester, supplementary examinations of odd semester shall be conducted and during semester end examinations of odd semester, supplementary examinations of even semester shall be conducted.
- The same schedule is applicable to Supplementary Lab End Examinations. Supplementary examination shall be conducted along with the next batch of students or separately.
- Advanced supplementary shall be conducted only for Final Year II semester Students in view of their higher education pursuits and placement opportunities.
- In case of seminars and comprehensive viva-voce examinations, supplementary seminar / comprehensive viva-voce will be conducted along with the next batch of students. If the next batch of students is not available, a separate supplementary examination will be conducted.

### 8.2.4 Challenge Evaluation, Revaluation and Recounting

Students may visit Examination Section Webpage for Norms and Procedures for Challenge Evaluation, Revaluation and Recounting of Answer Scripts. (Refer to Appendix II).

## 9.0 Internship and Project Evaluation

### 9.1 Summer Internship / Research Internship (Industry / Govt. / NGO / MSME / Online)

- A student shall carry a mandatory Internship for 2 months for 1.5 credits in 2<sup>nd</sup> year 2<sup>nd</sup> semester during summer vacation and it is evaluated during 3<sup>rd</sup> year 1<sup>st</sup> semester. A student shall carry a mandatory Industrial / Research Internship for 2 months for 3 credits in 3<sup>rd</sup> year 2<sup>nd</sup> semester during summer vacation and it is evaluated during 4<sup>th</sup> year 1<sup>st</sup> semester.
- Two summer internships each with a minimum of 6 weeks duration. Done at the end of 2<sup>nd</sup> and 3<sup>rd</sup> year, respectively are mandatory. The internship can be done by the students at local industries, Govt. Organizations, construction agencies, Industries, Hydel and thermal power projects and also in software MNCs
- 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 departments and appear for an oral presentation before the departmental committee. The report and the oral presentation shall carry 40% and 60% weightages respectively.

- In the final semester, the student should mandatorily undergo internships and parallelly he/she should work on a project with well-defined objectives. At the end of the semester the candidates shall submit an internship completion certificate and a project report. A student shall also be permitted to submit project report on the work carried out during the internship. The project report shall be evaluated with an external examiner.
- The institute 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.
- There shall also be mandatory full internship in the final semester of the programme along with the project work.
- For other details, please refer to Appendix I.

## 9.2 Project Work

Project work consists of a presentation of **Abstract of the main project** in the beginning of 8<sup>th</sup> Semester. After selecting specific topic, the student shall collect the information and prepare a report, showing his/her understanding of the topic and submit the same to the department before presentation. Project shall be evaluated for a total of 200 marks. The technical presentation/report shall be evaluated by a committee consisting of Head of the Department along with two senior faculty members of the Department. A student shall acquire 12 credits assigned, if her/his report is declared Satisfactory by the committee based on Rubrics set by the Department for evaluation.

Out of a total of 200 marks for the **Project work**, The internal evaluation shall be carried for 50 marks done by a committee consisting of HOD, Project Supervisor and senior faculty member of the department and the remaining 150 marks shall be awarded by a committee consisting of HOD, project Supervisor and an External Examiner nominated by the Principal or Dean Academics. The internal evaluation shall be done on the basis of two seminars conducted in a semester as per the academic calendar and stipulated rubrics. In case, if a student fails in Project work, a re-examination shall be conducted within a month. In case he/she fails in the re-examination also, he/she shall not be permitted register for viva voce examination. Further such students shall re-appear as and when next year 8<sup>th</sup> semester supplementary examinations are conducted.

## 10. Curricular Framework for Honors Programme

- Students of a Department/ Discipline are eligible to opt for Honors Programme offered by the same Department/Discipline
- A student shall be permitted to register for Honors program at the beginning of 4<sup>th</sup> semester provided that the student must have acquired a minimum of 8.0 SGPA up to the end of 2<sup>nd</sup>

semester without any backlogs. In case of the declaration of the 3<sup>rd</sup> semester results after the commencement of the 4th semester and if a student fails to score the required minimum of 8 SGPA, his/her registration for Honors Programme stands cancelled and he/she shall continue with the regular Programme.

- 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. e.g. If a Mechanical Engineering student completes the selected advanced courses from same branch under this scheme, he/ she will be awarded B.Tech (honors) in Mechanical Engineering.
- In addition to fulfilling all the requisites of a Regular B.Tech Programme, 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).
- 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 8/12 weeks as recommended by the Board of studies.
- It is the responsibility of the student to acquire/complete prerequisite before taking the respective course. The courses offered in each pool shall be domain specific courses and advanced courses.
- The concerned BoS shall decide on the minimum enrolments for offering Honors program by the department. If minimum enrolments criteria are not met then the students shall be permitted to register for the equivalent MOOC courses as approved by the concerned Head of the department in consultation with BoS.
- Each pool can have theory as well as laboratory courses. If a course comes with a lab component, that component has to be cleared separately. The concerned BoS shall explore the possibility of introducing virtual labs for such courses with lab component. (Model pool list is enclosed in the end of the syllabus)
- MOOC courses must be of minimum 8 weeks in duration. Attendance will not be monitored for MOOC Courses. Students have to acquire a certificate from the agencies approved by the BOS with grading or marks or pass/fail in order to earn 4 credits. If the MOOC course is a pass/fail course without any grades, the grade to be assigned will be as decided by the Academies Council.

- The concerned BoS shall also consider courses listed under professional electives of the respective B. Tech Programmes for the requirement of B.Tech (Honors). However, a student shall be permitted to choose only those courses that he/she has not studied in any form during the Programme.
- If a student drops or is terminated from the Honors programme, the additional credits so far earned cannot be converted into free or core electives; they 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 for 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.
- In case student fails to meet the CGPA requirement for Degree with Honors at any point after registration, he/she 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.
- Honors must be completed simultaneously with a major degree Programme. A student cannot earn Honors after he/she has already earned bachelor's degree.

#### **11. Curricular Framework for Minor Programme**

- a) 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 Mechanical Engineering student select subjects from Civil Engineering under this scheme, he/she will get Major degree of Mechanical Engineering with minor degree of Civil Engineering.
- b) Student can also opt for Industry relevant tracks of any branch to obtain the Minor Degree, for example, a B.Tech Mechanical student can opt for the industry relevant tracks like Data Mining track, IOT track, Machine Learning track etc.
- The BOS concerned shall identify as many tracks as possible in the areas of emerging technologies and industrial relevance/demand. For example, the minor tracks can be the fundamental courses in CSE, ECE, EEE, CE, ME etc., or industry tracks such as Artificial Intelligence (AI), Machine Learning (ML), Data Science (DS), Robotics, Electric Vehicles, and VLSI etc.,
- The list of disciplines / branches eligible to opt for a particular industry relevant minor specialization shall be clearly mentioned by the respective BoS.

- There shall be no limit on the number of programs offered under Minor. The Institute can offer minor programs in emerging technologies based on expertise in the respective departments or can explore the possibility of collaborating with the relevant industries/agencies in offering the Programme.
- The concerned BoS shall decide on the minimum enrolments for offering Minor program by the department. 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 in consultation with BoS.
- A student shall be permitted to register for Minors Programme at the beginning of 4<sup>th</sup> semester subject to a maximum of two additional courses per semester, provided that the student must have acquired 8 SGPA up to the end of 2<sup>nd</sup> semester without any history of backlogs. It is expected that the 3<sup>rd</sup> semester results may be announced after the commencement of the 4<sup>th</sup> semester. If a student fails to acquire 8 SGPA up to 3<sup>rd</sup> semester or failed in any of the courses, his/her registration for Minors program shall stand cancelled. An SGPA of 8 has to be maintained in the subsequent semesters without any backlog in order to keep the Minors registration active.
- 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).
- Out of the 20 credits, 16 credits shall be earned by undergoing specified course listed by the concerned BoS along with prerequisites. It is the responsibility of the student to acquire/complete prerequisite before taking the respective course. If a course comes with a lab component, that component has to be cleared separately. A student shall be permitted to choose only those courses that he/she has not studied in any form during the Programme.
- In addition to the 16 credits, students must pursue at least 2 courses through MOOCs. The courses must be of minimum 8 weeks in duration. Attendance will not be monitored for MOOC courses. Student has to acquire a certificate from the agencies approved by the BOS with grading or marks or pass/fail in order to earn 4 credits. If the MOOC course is pass/fail course without any grades, the grade to be assigned as decided by the Academic Council.
- Student can opt for the Industry relevant minor specialization as approved by the concerned departmental BoS. Student can opt the courses from Skill Development Corporation (APSSDC) or can opt the courses from an external agency recommended and approved by concerned BOS and should produce course completion certificate. The Board of studies of the concerned discipline of Engineering shall review such courses being offered by eligible external agencies and prepare a fresh list every year incorporating latest skills based on industrial demand.

- A committee should be formed at the level of Institute / Department to evaluate the grades/marks given by external agencies to a student which are approved by concerned BoS. Upon completion of courses the departmental committees should convert the obtained grades/marks to the maximum marks assigned to that course. The controller of examinations can take a decision on such conversions and may give appropriate grades.
- If a student drops (or terminated) from the Minor Programme, they cannot convert the earned credits into free or core electives, they 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 for the following:
  - All the courses done under the dropped Minors will be shown in the transcript. None of the courses done under the dropped Miner will be shown in the transcript.
- In case a student fails to meet the CGPA requirement for B.Tech degree with Minor at any point after registration, he/ she will be dropped from the list of students eligible for 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.
- Minor must be completed simultaneously with a major degree Programme. A student cannot earn the Minor after he/she has already earned bachelor's degree.

## 12. Attendance Requirements and Detention Policy

- A student shall maintain a minimum required attendance of 40 % in each subject and 75 % in AGGREGATE of all the subjects in a semester.
- Shortage of attendance up to 10 % i.e., attendance between 65 % to 75 % in aggregate, may be condoned by the Institute Academic Committee based on the rules prescribed by the Academic Council of the Institute from time to time.
- A stipulated fee shall be payable towards condonation of shortage of attendance.
- Shortage of attendance below 65 % shall in no case be condoned. A stipulated fee shall be payable towards condonation of shortage of attendance to the Institute as per following slab system
  - 1<sup>st</sup>Slab:** Less than 75 % attendance but equal to or greater than 70 % a normal condonation fee can be collected from the student.
  - 2<sup>nd</sup>Slab:** Less than 70 % but equal to or greater than 65 %, double the condonation fee can be collected from the student.
- Students whose shortage of attendance is not condoned OR who have not paid the stipulated fee OR who have not cleared any other due to the Institute in any semester are not eligible to write the Semester End Examination (SEE).

- Students, who do not meet the minimum required attendance of 65% in a semester, shall be detained in that semester and their registration for that semester shall stand cancelled. They shall not be promoted to the next semester.
  - Students detained in a semester shall seek re-admission into that semester as and when offered.
  - Academic regulations applicable to the semester in which re-admission is sought shall be applicable to the re-admitted student.
  - In case, there are any professional electives and /or open electives, the same may also be re-registered, if offered. However, if those electives are not offered in the later semesters, then alternate electives may be chosen from the same set of elective courses offered under that category.
- Any student against whom any disciplinary action is pending shall not be permitted to attend semester end examination (SEE) in that semester.

### **13. Minimum Academic Requirements and Award of the Degree**

The following Academic Requirements have to be satisfied in addition to the attendance requirements mentioned in section 10.

**13.1** A student shall be deemed to have satisfied the minimum academic requirements and earned the credits allotted to each theory and lab courses, and project if he secures not less than 35% of marks in the end examination and a minimum of 40% of marks in the total of the internal and end examination marks taken together. In case of mandatory courses, he/she shall secure 40% of the total marks.

**13.2** A student admitted in 4 year B. Tech programme, shall be promoted from 4<sup>th</sup> to 5<sup>th</sup> Semester only if he/she fulfills the academic requirements of securing a minimum of 50% credits from I year I and II-Semesters, II year I and II-Semesters examinations conducted till that time. A student admitted in 3 year B. Tech programme, shall be promoted from 4<sup>th</sup> to 5<sup>th</sup> Semester only if he/she fulfills the academic requirements of securing a minimum of 50% credits from II year I and II-Semesters examinations conducted till that time.

**13.3.** A student admitted in 4 year B. Tech programme, shall be promoted from 6<sup>th</sup> to 7<sup>th</sup> Semester only if he/she fulfills the academic requirements of securing a minimum of 50% credits from I year I & II-Semesters, II year I & II-Semesters and III year I & II-Semesters examinations conducted till that time.

A student admitted in 3 year B. Tech programme, shall be promoted from 6<sup>th</sup> to 7<sup>th</sup> Semester only if he/she fulfills the academic requirements of securing a minimum of 50% credits from II year I & II-Semesters and III year I & II-Semesters examinations conducted till that time. And in case a student is detained for want of credits for particular academic year by sections 11.2 and 11.3 above, the student may make up the credits through supplementary examinations and only after securing the required credits he/she shall be permitted to join in the 5<sup>th</sup> semester or 7<sup>th</sup> semester as the case may be.



**13.4** A student shall register and put up minimum academic requirement of all 160 credits and earn all 160 credits for the award of B. Tech degree

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

#### **14. Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):**

The performances of students in each of the courses in the Programme are expressed in terms of letter grades based on an absolute grading system. We use 10-point grading system with letter grades. They are given in the following table.

<b>Marks Obtained</b>	<b>Letter Grade</b>	<b>Description</b>	<b>Grade Points (GP)</b>
≥90	A+	Outstanding	10
≥80 and ≤89.99	A	Excellent	9
≥70 and ≤79.99	B	Very Good	8
≥60 and ≤69.99	C	Good	7
≥50 and ≤59.99	D	Average	6
≥40 and ≤49.99	E	Pass	5
<40	F	Fail	--
Absent in the exam(s)	Ab	Absent	--

A student is eligible for the award of the B.Tech. Degree with the class as mentioned in the following table

<b>CGPA</b>	<b>Class</b>
≥7.5	First class with Distinction
≥6.5 and <7.5	First Class
≥5.5 and <6.5	Second Class
≥5.0 and <5.5	Pass

For mandatory courses, student shall be awarded “pass” or “fail “without any credit. This shall not be counted for the computation of SGPA/CGPA

#### **14.1 Computation of SGPA**

The performance of each student at the end of each semester shall be indicated in terms of SGPA. The SGPA shall be calculated as follows:

$$SGPA = \frac{\text{Total earned weighted grade points in a semester}}{\text{Total credits in a semester}}$$

$$SGPA = \frac{\sum_{i=1}^p C_i \cdot G_i}{\sum_{i=1}^p C_i}$$

Where

$C_i$  = Number of credits allotted to a particular course 'i'

$G_i$  = Grade point corresponding to the letter grade awarded to the course i

$i = 1, 2, \dots, p$  represent the number of courses in a particular semester.

Note: SGPA is calculated and awarded to those students who pass all the courses in a semester.

### 14.2 Computation of CGPA

The performance of a student shall be obtained by calculating Cumulative Grade Point Average (CGPA), which is weighted average of the grade points obtained on all courses during the course of study

$$CGPA = \frac{\text{Total earned weighted grade points for the entire programme}}{\text{Total credits for the entire program}}$$

$$CGPA = \frac{\sum_{j=1}^m C_j \cdot G_j}{\sum_{j=1}^m C_j}$$

Where

$C_j$  = Number of credits allotted to a particular semester 'j'

$G_j$  = Grade point corresponding to the letter grade awarded to the semester j

$j = 1, 2, \dots, m$  represent the number of semester of the entire programme.

### 14.3 Grade Card

The grade card issued shall contain the following

- The credits for each course offered in that semester
- The letter grade and grade point awarded in each course
- The SGPA and CGPA
- Total number of credits earned by the student up to the end of that semester

Example: - Computation /calculation of SGPA

Course name	Credits (C)	Letter grade	Grade point (GP)	Credit point (CP=C*GP)
Course 1	4	A	9	4x9=36
Course 2	3	A+	10	3*10=30
Course 3	2.5	A+	10	2.5*10=25
Course 4	1.5	C	6	1.5*6=9
Course 5	1	D	5	1*5=5
Total	12			105

Therefore, SGPA =  $\frac{105}{12}$  8.75

## Example Illustration of CGPA

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5
Credit: 20	Credit : 20	Credit : 22	Credit: 23	Credit : 22
SGPA : 8.75	SGPA : 8.25	SGPA : 7.89	SGPA : 8.21	SGPA : 7.86

$$\text{Thus, CGPA} = \frac{20 \times 8.75 + 20 \times 8.25 + 22 \times 7.89 + 23 \times 8.21 + 22 \times 7.86}{107} = 8.34$$

Similarly, compute CGPA obtained at the end of 8th semester shall be the final CGPA secured by the student for the entire programme.

**14.4 Conversion of SGPA into percentage**

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 CGPA into percentage.

$$\text{Percentage} = (\text{CGPA} - 0.50) * 10$$

**14. Transcripts**

After successful completion of the entire programme of study, a transcript containing performance of all academic years will be issued as a final record. Duplicate transcripts will also be issued, if required, after payment of requisite fee. Partial transcript will also be issued up to any point of study to a student on request.

**16. Transitory Regulations**

Discontinued, detained, or failed candidates are eligible for readmission as and when the semester is offered after fulfilment of academic regulations. Candidates who have been detained for want of attendance or not fulfilled academic requirements or who have failed after having undergone the course in earlier regulations or have discontinued and wish to continue the course are eligible for admission into the unfinished semester from the date of commencement of class work with the same or equivalent subjects as and when subjects are offered, subject to Section 2 and they will follow the academic regulations into which they are readmitted. Candidates who are permitted to avail gap year shall be eligible for re-joining into the succeeding year of their B. Tech from the date of commencement of class work, subject to Section 2 and they will follow the academic regulations into which they are readmitted.

**17. Readmission of Students**

A student who has satisfied the minimum attendance requirement in any semester may repeat that semester, after obtaining written permission from the Principal and cancelling the previous record of attendance and academic performance (viz; internal evaluation and external evaluation marks) of the semester or year. This facility may be availed by any student at the maximum twice for a 4 year B. Tech, and only once by Lateral Entry student & PG student during the entire course of study.

### **18. Minimum Instruction Days for a Semester**

The minimum instruction days including exams for each semester shall be 16 weeks.

### **19. Student transfers**

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

### **20. Announcement of results**

- Results review committee comprising of University nominee, Principal, Dean Academics, Chairmen of various boards of studies, Controller of Examinations and Deputy Controller of Examinations will monitor the results and gives the permission for announcement of results.
- After review meeting results are loaded in to Institution website from which students can access their results by entering Hall Ticket number. And also results in form of hard copy are available with respective Heads of the departments.

### **21. General Instructions:**

- The academic regulations should be read as a whole for purpose of any interpretation.
- Malpractices rules-nature and punishments are appended.
- Where the words "he", "him", "his", occur in the regulations, they also include "she", "her", "hers", respectively.
- In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Principal/ Governing body is final.
- Any legal issues are to be resolved in Rajampet Jurisdiction.
- The Institute may change or amend the academic regulations or syllabi at any time and the changes or amendments shall be made applicable to all the students on rolls with effect from the dates notified by the Institute.

### **Appendix-I: Internship Guidelines**

The Head of the Department will arrange internship for students in industries/organization after fifth semester or as per AICTE/ affiliating University guidelines. Institutions may also device online system for arranging & managing internships. The general procedure for arranging internship is given below:

Step 1: Request Letter/ Email from the office of HOD of the department should go to industry to allot various slots of 4-6 weeks during summer vacation as internship periods for the students. Students request letter/profile/ interest areas may be submitted to industries for their willingness for providing the training.

Step 2: Industry will confirm the training slots and the number of seats allocated for internships via Confirmation Letter/ Email. In case the students arrange the training themselves the confirmation letter will be submitted by the students in the office of Training & Placement through concerned department. Based on the number of slots agreed to by the Industry.

Step 3: Students on joining Training at the concerned Industry / Organization, submit the Joining Report/ Letters / Email.

Step 4: Students undergo industrial training at the concerned Industry / Organization. In-between Faculty Member(s) evaluate(s) the performance of students once/twice by visiting the Industry/Organization and Evaluation Report of the students is submitted in department office/TPO with the consent of Industry persons/ Trainers.

Step 5: Students will submit training report after completion of internship.

Step 6: Training Certificate to be obtained from industry.

Step 7: List of students who have completed their internship successfully will be issued by concerned Department.

For more details refer:

<https://www.aicte-india.org/sites/default/files/AICTE%20Internship%20Policy.pdf>

## **Appendix II: Norms and Procedures for Challenge Evaluation/Revaluation/Recounting**

### **Revaluation / Recounting:**

- The students who wishes to apply for Revaluation/Recounting of his/her answer-books(s) must submit his/her application on the prescribed form together with the requisite fee to the Controller of Examinations before expiry of 15 days excluding the date of the declaration of his/her examination result. Application not received in the prescribed form or by the due date or without the requisite fee shall be rejected.
- After Recounting / Revaluation, records are updated with changes if any and the student will be issued a revised memorandum of marks. If there are no changes, the student shall be intimated the same through a notice.
- No Revaluation / Recounting for Laboratory Examination.
- The students are informed to be more careful in furnishing the information while applying for Recounting / Revaluation. The applications with insufficient information will be summarily rejected and the student has to forfeit the amount paid in this connection.

### **Challenge valuation:**

- Applications are invited from the students, who wish to apply for Challenge Valuation in the subjects of the B.Tech Regular and Supplementary examinations
- The student will apply for Challenge valuation in a specified application and should be routed through the HOD concerned.
- The students who have applied for the revaluation for a paper(s) of an examination are only eligible for the Challenge Valuation of that paper(s) of that examination.
- A Fee of Rs. 10000/- (Ten Thousand Rupees Only) for each paper is to be paid within the last date for challenge valuation.
- A Xerox copy of the answer script will be provided to the student on receipt of the payment of fee and date and time of the valuation will be informed to the student, so that valuation will be done in the presence of the teacher attended in support of the student nominated by the HOD concerned.
- The HOD concerned will nominate a teacher of the concerned subject to observe the valuation in support of the student. This will be done on the request of the student.
- If the marks obtained in the challenge valuation are more than or equal to 15% of the maximum marks with respect to the original marks obtained in the first valuation, then the marks obtained in the Challenge valuation will be awarded to the student and the institute will pay back Rs 9,000 (Nine thousands rupees only) to the student. If the student status changes from fail to pass, an amount of Rs. 5000 will be refunded to the student. Otherwise there will not be any change in the result of the student and original marks will be retained and the student will forfeit the fee paid.
- No Challenge valuation for Laboratory Examination

**APPENDIX III: Rules for Disciplinary Action for Malpractices / Improper Conduct in Examinations****Malpractices identified by squad or special invigilators or invigilators**

Punishments shall be given to the students as per the above guidelines. The case is to be referred to the malpractice committee.

**Malpractice committee**

1. The Principal, Chairman
2. Dean, Academics, Member
3. Invigilator, Member
4. Subject expert, Member
5. Concerned Head of the Department, Member
6. Controller of Examinations, Member Secretary

**Note:**

**Whenever the performance of a student is cancelled in any subject/subjects due to Malpractice, he has to register for End Examinations in that subject/subjects consequently and has to fill all the norms required for the award of Degree.**

	<b>Nature of Malpractices/Improper conduct</b>	<b>Punishment</b>
	<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 or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The Hall Ticket of the candidate is to be cancelled and sent to the University.
7.	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 University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. The performance of the original candidate who has been impersonated, shall be cancelled in all the subjects of the examination (including practical's and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for four consecutive semesters from class work and

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		all University examinations, if his involvement is established. Otherwise, the candidate is 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 imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject only.
6.	Refuses to obey the orders of the Chief Superintendent/Assistant — Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	In case of student of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. If the candidate physically assaults the invigilator/officer-in-charge of the Examinations, then the candidate is also debarred and forfeits his/her seat. In case of outsiders, they will be handed over to the police and a police case is registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
10.	Possess any lethal weapon or firearm in the	Expulsion from the examination hall and cancellation of the



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	examination hall.	performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat.
9.	If students 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 class 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person (s) who does not belong to the College will be handed over to police and, a police case will be registered against them.
11.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
12.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject only or in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester / year examinations, depending on the recommendation of the committee.
13.	If any malpractice is detected which is not covered in the above clauses 1 to 12 shall be reported to the University for further action to award suitable punishment.	

## Activities (Non-Credit) as per AICTE Guidelines List of Activities

### 1. Physical and Health

- 1.1 Physical Activities: (a) Games and Sports, (b) Gardening (c) Tree Plantation (d) Yoga:
- 1.2 NCC/NSS: Standard procedure

### 2. Culture

- 2.1 Learning an art form: music, dance, theatre, painting, and other art forms
- 2.2 Heritage: Visit to museum, archaeology sites, cultural walks, tours, local traditions
- 2.3 Intangible Cultural Heritage: Festivals, Food ways, Local Games

### 3. Literature & Media

- 3.1 Literature, Cinema and Media: workshop, reading multiple news sources, analyse ads
- 3.2 Group reading: Group sits and each person reads aloud (if possible, with proper modulation) taking turns.  
This if done properly for an hour one may complete 30-40 pages in an hour

### 4. Social Service

- 4.1 Social Awareness: Artisans-relates to engg., visit to hospitals, orphanages, police station, courts, trauma centres, consumer forums
- 4.2 Social Service: teach in neighbourhood, adopt an underprivileged school, village stay / visit (NSS), cleanliness drive, and skill transfer

### 5. Self-Development

- 5.1 Spiritual, Mindfulness & Meditation
- 5.2 Religion and Inter-faith: Reading of books on religious texts of different faiths by famous authors, organizing lecture on interfaith issues covering philosophies and chronology and contemporary situations world over at a given time
- 5.3 Human Values
- 5.4 Behavioural and Interpersonal skills: Motivational lectures, Group Discussions/activities, Case Study, Games/Stimulation Exercises, Role-Playing, Mindfulness training.
- 5.5 Lectures: Areas could be from science, engineering, social sciences, arts or even politics.

### 6. Nature

- 6.1 Nature Club: bird watching, recognizing plants at institute/at home, recognizing local animals, appreciating biodiversity
- 6.2 Environment Protection (non-credit course)

### 7. Innovation

- 7.1 Project based – Sc. Tech., Social, Design & Innovation: (a) Exposure to social problems (which are amenable to technological solutions) (b) Design & Innovation (to address above problems)

**First 3-weeks – Induction Program** will have Physical activities (\*), Learning an art form (\*), Literature & Cinema, Social Awareness (\*) Lectures, Visits to local areas, Universal Human Values (\*)

(\*) It is the core part of Induction Program (Besides Familiarization to the College, Department and Branch career opportunities)

#### **After first 3 weeks (1<sup>st</sup> semester)**

Based on student interest – the above may be continued

Universal Human Values Groups – Meet once a week with 1st year students with the same faculty mentor & senior student guide.

#### **Semester 2 to 4**

Every student should register for some activity mentioned above in every semester. Spend 3-5 hours per week on the activity.

- 1. Environment Science (mandatory non-credit course prescribed at 1/2 semester)
- 2. Life Sciences for Engineers (mandatory non-credit course prescribed at 3/4 semester)
- 3. Constitution of India (mandatory non-credit course prescribed at 5/6 semester)
- 4. Essence of Indian Traditional Knowledge (mandatory non-credit course prescribed at 5/6 semester)

For mandatory non-credit courses, these will be graded as Pass or Fail (P/F). Thus, the grades obtained will not affect the grade point average. However, they will appear on the grade sheet.

#### **Semester 5 to 8**

Every student should register for some activity mentioned above in every semester. Spend 3-5 hours per week on the activity. For activities, suitable registration system in case of the semesters will be developed.

**STUDENT INDUCTION PROGRAMME (Zero Semester)**

Induction programme for newly admitted students is conducted in line with AICTE/UGC Induction programme policy, every year before the commencement of the first semester classes. The objective of the Induction programme is to demystify what is expected of students in Intermediate level and to provide adequate foundation in the core applied science subjects and English limited to moderate level so that students do not face any difficulty when the classes commence.

The syllabus for the course is framed in such a way that equal importance is given to both Engineering discipline and personality development which includes soft skills, sports and cultural Activities. The duration of the induction programme is **THREE** weeks. The students are trained in Foundation courses, basics of programming and English apart from other co-curricular and extra-curricular activities.

The objective of the Induction Programme is to work closely with the newly joined students in order to facilitate the following:

- Make the students feel comfortable in the new environment
- Allow them to explore their academic interests and activities
- Reduce competition and make them work for excellence
- Promote bonding within them
- Build relations between teachers and students
- Give a broader view of life
- Build character

Phase	Course Code	Name of the course	Lecture	Practical
Regular Phase	20A501	Proficiency classes: Familiarity with a computer	2	2
Regular Phase	20AC01	Proficiency classes: English Communication Skills	2	2
Regular Phase	20A502	Basics of Programming and Lab	3	2
Regular Phase	20AC02	Foundation classes in Mathematics	3	0
Regular Phase	20AC03	Foundation classes in Physics	3	2
Regular Phase	20AC04	Foundation classes in Chemistry	3	2
Regular Phase	20AC05	Universal Human Values I	2	0
Regular Phase	20A301	Fundamentals of Engineering Drawing	1	0
Regular Phase	-	Physical education activities – Sports and Games	0	1
Non daily	-	Creative Arts		
Non daily	-	Lectures by eminent personalities		
Non daily	-	Visits to local area		
Non daily	-	Extra-curricular activities		