GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY
(AUTONOMOUS INSTITUTION)
ACCREDITED BY NAAC with 'A' Grade
Accredited by NBA (B.Tech.,-ECE,EEE &Mech: 2021-2024
(Approved by AICTE, New Delhi & Permanently Affiliated to JNTUA, Anantapur)
3rd Mile, Bombay Highway, Gangavaram (V), Kovur (M), SPSR Nellore Dt. Andhra Pradesh, India - 524 137.

VISION AND MISSION OF THE INSTITUTION

Vision

To emerge as a center of excellence, transforming engineering aspirants into dynamic and socially responsible technocrats

Mission

IM1   Implementing effective strategies for imparting quality education in a conducive academic ambience to upgrade the intellectual and professional dimensions of the learner's personality

IM2   Facilitating skill development and research to fulfil societal needs

IM3   Inculcating moral principles, environmental consciousness and social responsibility among students

IM4   Grooming the students to handle the career challenges successfully

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Academic Regulations (RG-22) of
4-year B.Tech., regular Degree Programme

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1. PREAMBLE

Geethanjali Institute of Science & Technology, Nellore, 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 suitable modifications to match the needs, expectations, and skill sets of students of the region, in the Under- Graduate Programmes offered by the Institution from the Academic Year 2022-23.

Mandatory Internship and Induction Program recommended by AICTE is incorporated. The Curriculum is organized by introducing Skill Development Ecosystem to suit the industry's needs and to ensure the graduates employability.

The Induction program in the curriculum is included to equip the students with communication skills and get them acquainted with the culture of institution. A student has to undergo this three-week Induction Program after joining the institute and before the commencement of classes. The Induction Program comprises of Physical activities; Learning an art form; Literature, Social Awareness, Lectures & Visits, Universal Human Values, familiarization to Departments, Laboratories, Library etc.,

The curriculum mandates students to take up five skill courses which are relevant to the industry from second year onwards, two basic level skill courses, one on soft skills and other two on advanced level skill courses. The students are also given the option of choosing between skill courses offered by the respective college and a certificate course offered by industry / a professional body / APSSDC or any other accredited body.

Mandatory Summer Internships of minimum of six weeks duration is introduced before completion of under graduation. This will equip the students with practical understanding and training about industry practices in a suitable industry or organization. Mandatory Internship, both industry and social, is included in the revised curriculum that aims at making engineering graduates connect with the needs of the industry and society at large. It will be mandatory for the students to intern in the industry/field during the summer vacation and also in the final semester to acquire the skills required for job.

A novel concept of Virtual Laboratories has also been introduced in the Model Curriculum through NPTEL/Amrita Virtual Labs etc., The Virtual Labs essentially comprise of a user-friendly graphical front. It would be a far enriching experience to use virtual labs and learn at one's own pace and time. A student can even learn the skills which are not part of the curriculum but required as professionals to take up new challenges.

Courses on Constitution of India, Environment Science / Engg., Essence of Indian Traditional Knowledge has also been included in the Curriculum. The course Universal Human Values-I&II: Understanding Harmony and Ethical Human Conduct added in the Humanities. The UHV-II is a compulsory subject for all UG Degree Course in Engineering & Technology, with 03 exclusive credits.

Another major change brought in the curriculum is the introduction of B.Tech., with Honors Degree or a B.Tech., with a Minor Degree. This is to give an opportunity for the fast learners to earn additional credits either in the same domain or in a related domain, making them more proficient in their chosen field of discipline or be a graduate with Multidisciplinary knowledge and job ready skills.

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2. APPLICATION AND COMMENCEMENT

- The Academic Regulations are quite comprehensive and include definitions of key terms, semester system, credit system, grading system and other relevant details.
- The Academic Regulations detailed herein shall apply to all the regular under-graduate Programmes offered by the Institute.
- The Academic Regulations shall be applicable and come into force to the student batches admitted from the academic year 2022-23 and Lateral Entry students admitted from the academic year2023-2024
- 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 RG-22 Regulations.

3. ELIGIBILITY FOR ADMISSION

Admission into Engineering Undergraduate Programmes (Regular)

A candidate seeking admission into First Year of B.Tech., Under Graduate Degree Course should have passed either Intermediate examination conducted by the Board of Intermediate Education, Andhra Pradesh, with Mathematics, Physics, and Chemistry as optional subjects (or any equivalent examination recognized by the Govt. of AP).The selection is based on the rank secured by the candidate at the APEAMCET / APEAPCET Examination conducted by APSCHE, Govt. of A.P. The candidate shall also satisfy any other eligibility requirements stipulated by the Institution and / or the Government of AP from time to time.

Admission into Second Year Engineering Undergraduate Programmes (Lateral Entry Scheme)

A candidate seeking admission into Second year (Third Semester) of B.Tech., Under Graduate Degree Course should have passed Diploma in Engineering in the relevant branch conducted by the State Board of Technical Education & Training of Andhra Pradesh (or equivalent Diploma recognized by Govt. of AP). 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 (APECET) 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.

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5. B.Tech., PROGRAM STRUCTURE

The structure of the B.Tech., Programmes offered at GIST are based on the Choice Based Credit System (CBCS) as defined by the UGC and the curriculum / course structure as suggested by the AICTE & APSCHE in its Model Curriculum. The B.Tech., Programmes offered at GIST follows Semester scheme pattern.

B.Tech., - Regular

- The duration of the Programme shall be of **4 Academic years**
- 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 **15 weeks** of academic work excluding Internal Examinations.
- Each semester shall consist of a minimum number of 90 days of instruction excluding the days allotted for tests, examinations and preparation holidays.
- Each semester is structured to provide credits totaling to **163 credits** for the entire B.Tech., Programme. The student should register for 163 credits and must secure all the 163 credits.
- Each semester shall have **Continuous Internal Evaluation (CIE) and Semester End Examination (SEE)** for both Theory and Laboratory courses.
- Each student is required to secure a total of **163 credits with a CGPA ≥** 5 for the completion of the Programme and the award of the B.Tech., Degree.
- A student after securing admission into a 4-year B.Tech., Programme at GIST 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. After eight academic years from the year of their admission, he/she shall forfeit their seat in B.Tech., course and their admission stand cancelled.

B.Tech., - Lateral Entry

- The duration of the Programme shall be of **3 Academic years**
- Each Academic year shall have 2 semesters i.e., Odd and Even semesters and shall be counted as third semester, fourth semester and fifth semester and so on up to eighth semester.
- Each semester shall consist of **15 weeks** of academic work excluding internal examinations.
- Each semester shall consist of a minimum number of 90 days of instruction excluding the days allotted for tests, examinations and preparation holidays.
- Eachsemesterisstructuredtoprovidecreditstotalingto**124 credits** for the entire B.Tech., Programme. The student should register for 124 credits and must secure all the 124 credits.
- 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 **124 credits with a CGPA ≥** 5 for the completion of the UG Programme and the award of the B.Tech., Degree.
- A student after securing admission into B.Tech., Programme under Lateral Entry scheme at GIST 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. After six Academic years from the year of their admission, he/she shall forfeit their seat in B.Tech., course and their admission stand cancelled.

There shall be mandatory student induction program for freshers, with a three-week duration before the commencement of first semester. Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations etc., are included as per the guidelines issued by AICTE.

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All undergraduate students shall register for NCC/NSS/Community Project activities. A student will be required to participate in an activity for two hours in a week either in third or fourth semester. Grade shall be awarded as Satisfactory or Unsatisfactory in the mark sheet based on participation, attendance, performance, and behaviour. If a student gets an unsatisfactory grade, he/she shall repeat the above activity in the subsequent years, to complete the degree requirements.

Virtual Labs (https://www.vlab.co.in) are implemented which provide remote access to labs in various disciplines of Engineering and will help student in learning basic and advanced concept through remote experimentation. Student shall be made to work on virtual lab experiments during the regular labs.

Faculty advisor/Mentor shall be assigned after admission to a group of students from same Department to provide guidance in courses registration / career growth / placements / opportunities for higher studies / GATE / other competitive exams etc. Preferably 25% course work for the theory courses in every semester shall be conducted in the blended mode of learning.

Award of B.Tech., degree with Honours/Minor

A student will be declared eligible for the award of the B.Tech., with Honours / Minor if he/she fulfils the following:

  i) Student secures additional 20 credits fulfilling all the requisites of a B.Tech., program i.e., 163 credits

  ii) A student is permitted to register either for Honours or a Minor but not for both. Registering for Honours/Minor is optional.

  iii) Honours/Minor is to be completed simultaneously with B.Tech., Programme.

6. PROGRAMMES OFFERED BY THE INSTITUTION

  The B.Tech., Programmes are offered in the following branches of study by the Institution from the Academic Year 2022-23:

S. No.	Branch of Study	Programme Code
1	Civil Engineering	01
2	Computer Science and Engineering	05
3	Computer Science and Engineering – Artificial Intelligence and Machine Learning	33
4	Computer Science and Engineering – Data Science	32
5	Computer Science and Engineering – Cyber Security	37
6	Electricaland Electronics Engineering	02
7	Electronics and Communication Engineering	04
8	Mechanical Engineering	03

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 / fieldwork / project per week.

  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.

  Structure of Undergraduate Engineering program: Every B.Tech., Programme of study shall be designed to have theory and laboratory courses. In addition, a student shall carry out internship, project, community service project, and other mandatory courses as prescribed in the curriculum of the Programmes.

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Types and Categories of Courses

Type of Course	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

Foundation Courses

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

S. No.	Type of Course	Category	Code	Suggested Breakup of Credits (Total 163)
1	Foundation courses	Humanities and Social Sciences including Management courses	HSMC	13.5
2		Basic Science courses	BSC	21
3		Engineering Science courses including workshop drawing, basics of Electrical / Mechanical / Computer etc	ESC	24
4	Core courses	Professional core courses	PCC	51
5	Elective courses	Professional Elective courses relevant to chosen specialization / branch	PEC	15
6		Open subjects–Electives from other technical and/or emerging subjects including two (2) MOOCS	OEC	12
7	Project	Projectwork, Seminar & Comprehensive Viva	PROJ	12
8	Internship and Community Service Project	Internship in Industry (Regular or Virtual)	INTS	4.5
9	Mandatory Courses	Mandatory Courses [Environmental Sciences Induction training, Indian Constitution, Essence of Indian Knowledge Tradition]	MANC	(non-credit)
10	Skill Oriented Courses	Skill Oriented Courses	SOC	10
		Total		163

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. 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 can lead to students specializing in an emerging area within the chosen field of study. While choosing the electives, students shall ensure that they do not opt for the courses with syllabus contents similar to that of their Departmental core/elective courses. The student completes the course, credits should be considered. Students can be allowed to do 2 MOOCs for 6 credits from professional electives. In case, if student does not pass subject

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registered through SWAYAM/NPTEL, the Institute shall conduct the external examination for the MOOC subject for 100 marks based on the syllabi of the respective subject provided in the curriculum.

The following conditions shall be implied for offering 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 / 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.

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.

Students have to register for a total of 5 open elective courses (OEC-1 to OEC-5). Every student shall earn prescribed credits by choosing one of the open elective courses from the list of Open Electives given in the Curriculum. Two Open electives are to be chosen from the repository of MOOCs courses offered by SWAYAM/NPTEL or any other recognized Institutions/Organization. Students shall consult their class mentors before opting for an open elective course (MOOCs).

The student shall register for the course (Minimum of 8 weeks) offered by SWAYAM/NPTEL through online with the approval of Head of the Department. The Head of the Department shall appoint one mentor to monitor the student's assignment submissions given by SWAYAM/NPTEL. The student needs to earn a certificate by passing the exam. The student shall be awarded the credits assigned in the curriculum only by submission of the certificate. In case, if student does not pass subject registered through SWAYAM/NPTEL, the Institute shall conduct the external examination for the MOOC subject for 100 marks based on the syllabi of the respective subject provided in the curriculum.

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 concerned shall decide whether or not to offer such course keeping in view the resources available in the Department offering the course.

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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 8 weeks 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.

- Student must acquire compulsorily minimum three credits through MOOCs either in PEC / OEC, otherwise B.Tech degree will not be awarded

- If a student fails to acquire the required three credits through MOOCs up to seventh semester, he/she will be given a chance to acquire these three credits by applying a separate list of MOOCs courses provided in eight semesters by the parent department.

Skill Oriented Courses

A pool of interdisciplinary/job-oriented/domain skill courses which are relevant to the industry are integrated into the curriculum of all disciplines.

- There shall be 5 skill-oriented courses offered during 3rd to 7th semester. Among the five skill-oriented courses, four courses shall focus on the basic and advanced skills, Interdisciplinary/Job oriented related to the domain courses and remaining one shall be a soft skills course.

- Each 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 2nd 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 the respective 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.

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Mandatory Courses

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

● 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 grade shall be allotted.
● Attendance in the mandatory course shall be considered while calculating aggregate attendance.

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 Laboratory Courses.

● For a Theory course, the distribution shall be 30 marks for Internal Evaluation and 70 marks for End-Examinations.
● For a Laboratory course, the distribution shall be 30 marks for Internal Evaluation and 70 marks End-Examinations.
● Project Work shall be evaluated for 200 marks.
● Mandatory courses with no credits shall be evaluated for 100 marks.
● If any course contains two different branch subjects, the syllabus shall be written in two parts with 3 units each (Part-A and Part-B)
● If any subject is having both theory and practical components, they will be evaluated separately as theory subject and practical subject. However, they will be given same subject code with an extension of 'T' for theory subject and 'P' for practical subject.

Midterm Examination Evaluation:

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

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

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

*Note 3: The midterm examination shall be conducted first by distribution of the Objective paper, simultaneously marking the attendance, after 20 minutes the answered objective paper shall be collected back. The student is not allowed to leave the examination hall. Then the descriptive question paper and the answer booklet shall be distributed. After 90minutes the answered booklets are collected back.

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

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ii) If the student is absent for the internal examination, no re-exam shall be conducted and internal marks for that examination shall be considered as zero.

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

iv) Final midterm marks shall be arrived at by considering the marks secured by the student in both the mid examinations with 70% weightage given to the better mid exam and 30% to the other.

For Example:

        Marks obtained in first Mid: 25 Marks out of 30 Marks

        Marks obtained in second Mid: 20 Marks out of 30 Marks

        Final Internal Marks: (25x0.7) + (20x0.3) = 24

Note: Any fraction shall be rounded off to next higher marks.

If the student is absent for any one midterm examination, the final internal marks shall be arrived at by considering 70% weightage to the marks secured by the student in the appeared examination and zero to the other. For Example:

        Marks obtained in first mid: Absent Marks

        Marks obtained in second mid: 25 Marks out of 30 Marks

        Final Internal Marks: (25x0.7) + (0x0.3) =18

Note: Any fraction shall be rounded off to next higher marks.

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 15 marks and internal examination carries 15 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 15 marks. The sum of day-to-day work and the internal examination marks will be evaluated for a total of 30 marks. 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.

Assignment (Theory)

The assignment shall contain essay type questions / numerical problems / software development etc., First Assignment (5questions) is given by the concerned class teacher from first two units in the first phase with 5M. Total five questions will be given to students, each carries 10 Marks and total 50 marks will be rounded to 5Marks which shall be added to the first Theory Internal Assessment. Second Assignment (5questions) shall be given from the rest of the syllabus in the second phase with 5M. Total five questions will be given to students; each carry 10 Marks and total 50 marks will be rounded to 5Marks which shall be added to the first Theory Internal Assessment and added to the Second Internal Assessment. The first phase marks should be submitted before the conduct of the first internal examination and the second phase marks should be submitted before the conduct of the second internal examination. The assignments shall be continuous assessment throughout the semester.

Laboratory Internal Evaluation

For practical courses, there shall be a continuous evaluation during the semester for 30 sessional marks. 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 the rubrics defined by DAC of concerned department (experimental evaluation/record/viva etc.). Two Lab Internal examinations shall be conducted for 10 marks by the concerned teacher. Performance of the best out of two tests shall be considered.

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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 re-examination shall be conducted for failed candidates for 30 marks every six months/semester.

Semester End Examination Evaluation
Theory End Evaluation

As specified in 8.0, Theory End Examination 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 Examinations hall be conducted for 70 marks for a maximum duration of 3 hours.

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.

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

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

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

● Question paper shall be in two parts viz., Part A and Part B with equal weightage of 35 marks each.
● In each part, question 1 shall contain 5 compulsory short answer questions for a total of 5 marks such that each question carries 1mark.
● In each part, questions from 2 to 4, there shall be either/or type questions of 10 marks each. Student shall answer any one of them.
● The questions from 2 to 4 shall be set by covering one unit of the syllabus for each question.

Laboratory 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. The end examination shall be conducted by the concerned laboratory teacher and a senior expert in the subject from the same Department. Each lab course will have its own evaluation procedure and weight age.

In a practical subject consisting of two parts (Eg: Basic Electrical &Electronics Engineering Lab), the end examination shall be conducted for 35 marks in each part. Laboratory Mid semester examination shall be evaluated as above for 30 marks in each part and final mid semester marks shall be arrived by considering the average of marks obtained in two parts.

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For the subject having design and/or drawing, such as Engineering Drawing, the distribution of marks shall be 30 for mid semester evaluation and 70 for end examination. Day-to-day work shall be evaluated for 15 marks by the concerned subject teacher based on the reports/submissions prepared in the class. And there shall be two midterm examinations in a semester for duration of 2 hours each for 15 marks with weightage of 70% to better mid marks and 30% for the other. The subjective paper shall contain 3 either or type questions of equal weightage of 5 marks. There shall be no objective paper in mid semester examination. The sum of day-to-day evaluation and the mid semester marks will be the final sessional marks for the subject. The end examination pattern for Engineering Graphics, shall consists of 5 questions, either/or type, of 14 marks each. There shall be no objective type questions in the end examination. However, the end examination pattern for other subjects related to design/drawing is mentioned along with the syllabus.

The laboratory records and mid semester test papers shall be preserved for a minimum of 3 years in the respective institutions as per the Institution norms and shall be produced to the Committees of the Institution as and when the same are asked for.

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.

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. Internship and Project Evaluation

Summer Internship (Industry / Govt. / NGO / MSME / Online)

- A student shall carry a mandatory Internship (Community Service Internship) for minimum of 6 weeks for 1.5 credits in II year 2nd semester during summer vacation and it is evaluated during III year 1st semester. A student shall carry a mandatory Industrial / Research Internship for minimum of 6 weeks for 3 credits in III year 2nd semester during summer vacation and it is evaluated during IV year 1st semester.
- Two summer internships at the end of II and III 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. 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 Departments 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. The report and the oral presentation shall carry 40% and 60% weightage respectively. It shall be evaluated for 50 external marks. There shall be no internal marks for Summer Internship. A student shall secure minimum 40% of marks for successful completion. In case, if a student fails, he/she shall reappear as and when semester supplementary examinations are conducted by the Institution.

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- In the final semester, the student should mandatorily undergo internships (Project Internship) and simultaneously 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.

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.

Project work consists of a presentation of Abstract of the main project in the beginning of 8th 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 with an external examiner.

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 60 marks done by a committee consisting of HOD, Project Supervisor and senior faculty member of the Department and the remaining 140 marks shall be awarded by a committee consisting of HOD, project Supervisor and an External Examiner nominated by the Principal.

The supervisor assesses the student for 30 marks based on Motivation, Technical Knowledge and Awareness related to the Project. At the end of the semester, it is to be evaluated by the Departmental Project Review Committee consisting of supervisor, a senior faculty and HOD for 30 marks. The external evaluation of Project Work is a Viva-Voce Examination conducted in the presence of internal examiner and external examiner appointed by the Institution and is evaluated for 140 marks.

The internal evaluation shall be done on the basis of **Three (zeroth plus three reviews) reviews** conducted in a semester as per the academic calendar and stipulated rubrics. In case, if a student fails in Project work end examination shall be conducted within a month (along with Advanced Supplementary). In case he/she fails in there-examination also, such students shall re-appear during the next academic year (8th semester).

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.

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

- This concept is introduced in the curriculum of all conventional B.Tech. Programmes offering a major degree. The main objective of Minor in a discipline is to provide additional learning opportunities for academically motivated students and it is an optional feature of the B. Tech. Programme. A student can get a Minor degree in a discipline other than his/her parent discipline if he/she earns 20 extra credits from the discipline in which he/she wants to acquire Minor degree through professional core/professional elective or equivalent MOOC courses pertaining to the discipline in which Minor degree is needed, available under SWAYAM platform. The list of courses to be studied either in MOOCs or conventional type will be decided by the College at the time of registration for Minor degree.

a. **Students having a CGPA of 6 or above up to II year I semester and without any backlog subjects will be permitted to register for Minor degree. A CGPA of 6 has to be maintained in the subsequent semesters without any backlog subjects in order to keep the Minor discipline registration live or else it will be cancelled.**

b. The eligibility list of students for Minor degree will be given based on the 1st,2nd and 3rd semesters results in 4th semester. The choice for registrations will be allowed during 4th semester. In 5th semester the student choice for Minor degree will be fixed.

c. Students will not be allowed to register and pursue more than two subjects in any semester.

d. The Evaluation pattern of theory subjects will be similar to the regular Programme evaluation each subject for 4 credits.

e. Students may enlist their choice of Minor discipline Programmes, in order of preference, for which they wish to register. It will not be permissible to alter the choices after the application has been submitted. However, students are allowed to opt for only one Minor discipline Programme in the order of preference given by them.

f. Minimum strength required for offering a Minor in a discipline is considered as 30% of the class size and Maximum would be 80% of the class size.

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

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

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

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

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

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

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

n. Out of 20 credits, 16 credits should be gained through regular exams and remaining 4 credits should be gained through MOOCs through SWAYAM/Course era.

o. The MOOCs courses for 4 credits can be obtained through single / multiple courses.

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Honors degree in a discipline:

a. This concept is introduced in the curriculum for all conventional B.Tech. Programmes. The main objective of Honors degree in a discipline is to provide additional learning opportunities for academically motivated students and it is an optional feature of the B. Tech. Programme. In order to earn a Honors degree in his/her discipline, a student has to earn 20 extra credits by studying five advanced courses of (3-1-0) or (3-0-2) in the concerned branch of Engineering. In place of advanced courses, he/she can study equivalent MOOC courses available under SWAYAM / Course era platform, as decided by the College from time to time. The Evaluation pattern of theory subjects will be similar to the regular Programme evaluation each subject for 4 credits.

b. Minimum strength required for offering a Honor in a discipline is considered as 10% of the class size

c. Students having a CGPA of 7.0 or above up to II year I semester and without any backlog subjects will be permitted to register for degree with Honors. A CGPA of 7 has to be maintained in the subsequent semesters without any backlog subjects in order to keep the degree with Honors registration live or else it will be cancelled and degree will be given as B.Tech. (Regular).

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

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

f. The eligibility list of students for Honor degree will be given based on the 1st, 2nd and 3rd semesters results in 4th semester.

g. Out of 20 credits, 16 credits should be gained through regular exams and remaining 4 credits should be gained through MOOCs through SWAYAM/Course era.

h. The MOOCs courses for 4 credits can be obtained through single / multiple courses.

10. Attendance Requirements and Detention Policy

● A student shall maintain a minimum required attendance of 60 % 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 College 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.
  1st Slab: Less than 75 % attendance but equal to or greater than 70 % a normal condonation fee can be collected from the student.
  2nd 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.

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- 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.
- If the learning is carried out in blended mode (both offline & online), then the total attendance of the student shall be calculated considering the offline and online attendance of the student.
- Any student against whom any disciplinary action is pending shall not be permitted to attend semester end examination (SEE) in that semester.
- For induction Programme attendance shall be maintained as per AICTE norms.

11. 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 12.

- 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.

- **A student will be promoted from II to III year if he/she fulfils the academic requirement of securing 40% of the credits (any *decimal* fraction should be *rounded off* to *lower* digit)up to in the subjects that have been studied up to III semester from the following examinations, irrespective of whether the candidate takes the end examination or not as per the normal course of study.**
  One regular and two supplementary examinations of I Semester
  One regular and one supplementary examination of II Semester

- **A student shall be promoted from III year to IV year if he/shefulfils the academic requirements of securing 40% of the credits(any *decimal* fraction should be *rounded off* to *lower* digit)in the subjects that have been studied up to V semester from the following examinations, irrespective of whether the candidate takes the end examination or not as per the normal course of study.**
  One regular and four supplementary examinaions of I Semester.
  One regular and three supplementary examinaions of II Semester.
  One regular and two supplementary examinations of III Semester.
  One regular and one supplementary examination of IV Semester.
  One regular examination of V Semester.

- **For LES students, they shall be promoted from third year to fourth year only if the student fulfils the academic requirements of securing 40% of credits (any decimal fraction should be rounded off to lower digit) from the following examinations, irrespective of whether the candidate takes the end examination or not as per the normal course of study.**
  One regular and two supplementary examinations of III semester.
  One regular and one supplementary examination of IV semester.
  One regular examination of V semester.

- A student shall register and put up minimum academic requirement of all 163 credits and earn all 163 credits for the award of B.Tech., degree.
- Students admitted in 4th year B.Tech., Programme who fail to earn 163 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. Students admitted in 3rd year B.Tech., Programme (Lateral Entry) who fails to earn 124 credits as indicated in the course structure within six academic years from the year of their admission shall forfeit their seat in B.Tech., course and their admission shall stand cancelled.

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- When a student is detained due to lack of credits/shortage of attendance he/she may be re-admitted when the semester is offered after fulfilment of academic regulations. In such case, he/she shall be in the academic regulations into which he/she is readmitted.

12. 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.

Marks Obtained	Letter Grade	Description	Grade Points (GP)
≥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

CGPA	Class
≥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

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:

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

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, 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.

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

$$CGPA = \Sigma (C_j \times S_j)/ \Sigma C_j$$

Where C_j =Number of credits allotted to a particular semester 'j'
S_j = Grade point corresponding to the letter grade awarded to the semester 'j'

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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 $=\dfrac{105}{1}=8.75$

Example Illustration of CGPA

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

Therefore, CGPA $=\dfrac{20*8.75 + 20*8.25+22*7.89+23*8.21+22*7.86}{20+20+22+23+22} =8.34$

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

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13. 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.

14. Transitory Regulations

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

15. 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 4th year B.Tech., and only once by Lateral Entry student & PG student during the entire course of study

16. Minimum Instruction Days for a Semester

The minimum instruction days excluding exams for each semester shall be 16 weeks (90 working days).

17. Student transfers

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

18. Announcement of results
- Results review committee comprising of Institution 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.

19. 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 Nellore 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.

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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 Institution 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 for minimum of 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 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.

Formore details refer:
https://www.aicte-india.org/sites/default/files/AICTE%20Internship%20Policy.pdf

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Appendix II: Norms and Procedures for Challenge Evaluation/Recounting:

- The students who wishes to apply for Recounting of his/her answer-books(s) must submit his/her application on the prescribed from 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, 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. In such a case, the institute will refund the revaluation fees paid by the student. If there is no change in the result after the revaluation, the original marks will be retained and the student will forfeit the fee paid.
- No Challenge valuation for Laboratory Examination.

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

S. No.	Nature of Malpractices/Improper conduct	Punishment
	If the candidate:	
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.
1. (b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of 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.
3.	Impersonates any other candidate in connection withthe 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 Internal and Semester 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 all Institution examinations, if his involvement is established. Otherwise, the candidate is debarred for two consecutive semesters from class work and all Institution 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.

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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 afterthe 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 Internal and Semester 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 Institution examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.

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8.	Possess any lethal weapon or firearm in 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. 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 nay 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.
10.	Comes in a drunken condition to the examinationhall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during specialscrutiny.	Cancellation of the performance in that subject only or in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester / year examinations, depending on the recommendation of the committee.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 12 shall be reported to the Institution for further action to award suitable punishment.	

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Appendix-IV : Activities (Non-Credit) as per AICTE Guidelines

1. Physical and Health

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

2. Culture

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

3. Literature & Media

Literature, Cinema and Media: workshop, reading multiple news sources, analyse ads
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

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

5. Self-Development

Spiritual, Mindfulness & Meditation

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

Human Values

Behavioural and Interpersonal skills: Motivational lectures, Group Discussions/activities, Case Study, Games/Stimulation Exercises, Role-Playing, Mindfulness training.
Lectures: Areas could be from science, engineering, socialsciences, arts or even politics.

6. Nature

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

7. Innovation

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 (1st 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)

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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
Nondaily	-	Creative Arts		
Nondaily	-	Lectures by eminent personalities		
Nondaily	-	Visits to local area		
Nondaily	-	Extra-curricular activities		

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11. Credit Transfer Policy

a) As per Institution Grants Commission (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016, a 'Gazette Notification' issued on 19th July 2016 & 17th August 2016, respectively, the Institution shall allow up to 20% of the total courses being offered in a particular Programme in a semester through the Online Learning courses through SWAYAM.

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

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

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

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

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

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

vii) The 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

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

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

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

xi) Student pursuing courses under MOOCs shall acquire the required credits only after successful completion of the course and submitting a certificate issued by the competent authority along with the percentage of marks/grades.

xii) The institution shall submit the following to the examination section of the Institution:

a) List of students who have passed MOOC courses in the current semester along with the certificates of completion.

b) Undertaking form filled by the students for credit transfer.

xiii) The Institution shall resolve any issues that may arise in the implementation of this policy from time to time and shall review its credit transfer policy in the light of periodic changes brought by UGC, SWAYAM, NPTEL and state government.

xiv) Students shall also be permitted to take online courses through other MOOC platforms like Coursera, EdX, Udemy etc. as per the guidelines specified in a). Only the courses with evaluation specified in percentage/grades shall be considered. If not specified in the online platform, then following credit equivalence shall be considered:

Courses of 8 weeks duration: 2 Credits
Courses of 10 weeks duration: 3 Credits
Courses 12 weeks duration: 4 Credits

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Appendix-V : COMMUNITY SERVICE PROJECT

......Experiential learning through community engagement

• Community Service Project is an experiential learning strategy that integrates meaningful community service with instruction, participation, learning and community development

• Community Service Project involves students in community development and service activities and applies the experience to personal and academic development.

• Community Service Project is meant to link the community with the college for mutual benefit. The community will be benefited with the focused contribution of the college students for the village/ local development. The college finds an opportunity to develop social sensibility and responsibility among students and also emerge as a socially responsible institution.

Objective

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

• To sensitize the students to the living conditions of the people who are around them,

• To help students to realize the stark realities of the society.

• To bring about an attitudinal change in the students and help them to develop societal consciousness, sensibility, responsibility and accountability

• To make students aware of their inner strength and help them to find new /out of box solutions to the social problems.

• To make students socially responsible citizens who are sensitive to the needs of the disadvantaged sections.

• To help students to initiate developmental activities in the community in coordination with public and government authorities.

• To develop a holistic life perspective among the students by making them study culture, traditions, habits, lifestyles, resource utilization, wastages and its management, social problems, public administration system and the roles and responsibilities of different persons across different social systems.

Implementation of Community Service Project

• Every student should put in a 6 weeks for the Community Service Project during the summer vacation.

• Each class/section should be assigned with a mentor.

• Specific Departments could concentrate on their major areas of concern. For example, Dept. of Computer Science can take up activities related to Computer Literacy to different sections of people like

- youth, women, house-wives, etc

• A log book has to be maintained by each of the student, where the activities undertaken/involved to be recorded.

• The logbook has to be countersigned by the concerned mentor/faculty incharge.

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• Evaluation to be done based on the active participation of the student and grade could be awarded by the mentor/faculty member.

• The final evaluation to be reflected in the grade memo of the student.

• The Community Service Project should be different from the regular Programmes of NSS/NCC/Green Corps/Red Ribbon Club, etc.

• Minor project report should be submitted by each student. An internal Viva shall also be conducted by a committee constituted by the principal of the college.

• Award of marks shall be made as per the guidelines of Internship/apprentice/ on the job training

Procedure

• A group of students or even a single student could be assigned for a particular habitation or village or municipal ward, as far as possible, in the near vicinity of their place of stay, so as to enable them to commute from their residence and return back by evening or so.

• The Community Service Project is a twofold one – o First, the student/s could conduct a survey of the habitation, if necessary, in terms of their own domain or subject area. Or it can even be a general survey, incorporating all the different areas. A common survey format could be designed. This should not be viewed as a duplication of work by the Village or Ward volunteers, rather, it could be another primary source of data.

• Secondly, the student/s could take up a social activity, concerning their domain or subject area. The different areas, could be like – Agriculture, Health, Marketing and Cooperation, Animal Husbandry, Horticulture, Fisheries, Sericulture, Revenue and Survey, Natural Disaster Management, Irrigation, Law and Order, Excise and Prohibition, Mines and Geology, Energy, Internet, Free Electricity, Drinking Water.

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EXPECTED OUTCOMES
BENEFITS OF COMMUNITY SERVICE PROJECT TO STUDENTS

Learning Outcomes
• Positive impact on students' academic learning

• Improves students' ability to apply what they have learned in "the real world"

• Positive impact on academic outcomes such as demonstrated complexity of understanding, problem analysis, problem-solving, critical thinking, and cognitive development

• Improved ability to understand complexity and ambiguity

Personal Outcomes
• Greater sense of personal efficacy, personal identity, spiritual growth, and moral development

• Greater interpersonal development, particularly the ability to work well with others, and build leadership and communication skills

Social Outcomes
• Reduced stereotypes and greater inter-cultural understanding

• Improved social responsibility and citizenship skills

• Greater involvement in community service after graduation

Career Development
• Connections with professionals and community members for learning and career opportunities

• Greater academic learning, leadership skills, and personal efficacy can lead to greater opportunity

Relationship with the Institution
• Stronger relationships with faculty

• Greater satisfaction with college

• Improved graduation rates

BENEFITS OF COMMUNITY SERVICE PROJECT TO FACULTY MEMBERS
• Satisfaction with the quality of student learning

• New avenues for research and publication via new relationships between faculty and community

• Providing networking opportunities with engaged faculty in other disciplines or institutions

• A stronger commitment to one's research

BENEFITS OF COMMUNITY SERVICE PROJECT TO COLLEGES AND UNIVERSITIES
• Improved institutional commitment

• Improved student retention

• Enhanced community relations

BENEFITS OF COMMUNITY SERVICE PROJECT TO COMMUNITY
• Satisfaction with student participation

• Valuable human resources needed to achieve community goals

• New energy, enthusiasm and perspectives applied to community work

• Enhanced community-university relations.

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SUGGESTIVE LIST OF PROGRAMMES UNDER COMMUNITY SERVICE PROJECT

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

For Engineering Students
1. Water facilities and drinking water availability 2. Health and hygiene 3. Stress levels and coping mechanisms 4. Health intervention Programmes 5. Horticulture 6. Herbal plants 7. Botanical survey 8. Zoological survey 9. Marine products 10. Aqua culture 11. Inland fisheries 12. Animals and species 13. Nutrition 14. Traditional health care methods 15. Food habits 16. Air pollution 17. Water pollution 18. Plantation 19. Soil protection 20. Renewable energy 21. Plant diseases 22. Yoga awareness and practice 23. Health care awareness Programmes and their impact 24. Use of chemicals on fruits and vegetables 25. Organic farming 26. Crop rotation 27. Floury culture 28. Access to safe drinking water 29. Geographical survey 30. Geological survey 31. Sericulture 32. Study of species 33. Food adulteration 34. Incidence of Diabetes and other chronic diseases 35. Human genetics 36. Blood groups and blood levels 37. Internet Usage in Villages 38. Android Phone usage by different people 39. Utilisation of free electricity to farmers and related issues 40. Gender ration in schooling lvel- observation.

Complimenting the community service project the students may be involved to take up some awareness campaigns on social issues/special groups. The suggested list of Programmes are; Programmes for School Children

1. Reading Skill Programme (Reading Competition)

2. Preparation of Study Materials for the next class.

3. Personality / Leadership Development

4. Career Guidance for X class students

5. Screening Documentary and other educational films

6. Awareness Programme on Good Touch and Bad Touch (Sexual abuse)

7. Awareness Programme on Socially relevant themes.

Programmes for Women Empowerment
1. Government Guidelines and Policy Guidelines

2. Womens' Rights

3. Domestic Violence

4. Prevention and Control of Cancer

5. Promotion of Social Entrepreneurship

General Camps
1. General Medical camps

2. Eye Camps

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3. Dental Camps

4. Importance of protected drinking water

5. ODF awareness camp

6. Swatch Bharath

7. AIDS awareness camp

8. Anti Plastic Awareness

9. Programmes on Environment

10. Health and Hygiene

11. Hand wash Programmes

12. Commemoration and Celebration of important days

Programmes for Youth Empowerment
1. Leadership
2. Anti-alcoholism and Drug addiction
3. Anti-tobacco
4. Awareness on Competitive Examinations
5. Personality Development

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

Role of Students:
• Students may not have the expertise to conduct all the Programmes on their own. The students then can play a facilitator role.

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(Approved by AICTE, New Delhi & Permanently Affiliated to JNTUA, Anantapur)
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• For conducting special camps like Health related, they will be coordinating with the Governmental agencies.

• As and when required the College faculty themselves act as Resource Persons.

• Students can work in close association with Non-Governmental Organizations like Lions Club, Rotary Club, etc or with any NGO actively working in that habitation.

• And also with the Governmental Departments. If the Programme is rolled out, the District Administration could be roped in for the successful deployment of the Programme.

• An in-house training and induction Programme could be arranged for the faculty and participating students, to expose them to the methodology of Service Learning.

Timeline for the Community Service Project Activity - Duration: 6 weeks

1. Preliminary Survey (One Week)

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

2. Community Awareness Campaigns (One Week)

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

3. Community Immersion Programme (Three Weeks)

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

4. Community Exit Report (One Week)

During the last week of the Community Service Project, a detailed report of the outcome of the 8 weeks work to be drafted and a copy shall be submitted to the local administration. This report will be a basis for the next batch of students visiting that particular habitation. The same report submitted to the teacher-mentor will be evaluated by the mentor and suitable marks are awarded.

Throughout the Community Service Project, a daily log-book need to be maintained by the students batch, which should be countersigned by the governmental agency representative and the teacher-mentor, who is required to periodically visit the students and guide them.