VELAGAPUDI RAMAKRISHNA SIDDHARTHA ENGINEERING COLLEGE

DEEMED TO BE UNIVERSITY

(Under Section 3 of UGC Act, 1956)

Kanuru, Vijayawada - 520 007, AP. www.vrsiddhartha.ac.in

(Sponsored by Siddhartha Academy of General & Technical Education)

ACADEMIC REGULATIONS

B.TECH DEGREE PROGRAMS – VR SIDDHARTHA SCHOOL OF ENGINEERING

VRSEC- B.Tech - SU24

(2024-25 admitted batch)

CONTENTS

PREAMBLE

Velagapudi Ramakrishna Siddhartha Engineering College, a Deemed to be University, (VRSEC) emphasizes the transformative power of education and the pivotal role of higher learning in fostering an enlightened, equitable, and prosperous society. Established with a commitment to academic excellence, innovative research, and holistic development, VRSEC provides a supportive and inclusive environment where diverse ideas thrive, empowering every member to achieve their fullest potential. Guided by principles of integrity, respect, and social responsibility, VRSEC aims to contribute meaningfully to the global community for the common good. The University, with its experienced faculty, offers a top-notch education integrating theory and practical skills, preparing students for success in a rapidly evolving world through engaging lectures, hands-on learning, and advanced research opportunities. This document outlines the academic culture, procedures, and regulations of the courses taught at SAHE, specifically for all undergraduate engineering degree programs (B. Tech.), effective from the academic year 2024-25.

1. ABOUT UNIVERSITY

1.1. Introduction

Velagapudi Ramakrishna Siddhartha Engineering College (VRSEC), is the first Private Engineering College in the combined state of Andhra Pradesh, established in 1977. Sponsored by the Siddhartha Academy of General and Technical Education, formed in 1975 by 250 philanthropists, the University aims to promote educational excellence with a holistic approach. Catering to the educational needs of the region, 15 academic institutions have been established, offering education from kindergarten to postgraduate levels. VRSEC provides a comprehensive experience to its students, promoting research, skill development, real-life problem-solving, and entrepreneurship.

1.2. Vision

“To be a centre of excellence in education, innovation, and research with a global presence in arts, science, technology, medicine, management, legal studies, and social studies, enriching the frontier areas of national and international importance”.

1.3. Mission

- To create a transformative educational experience for students focused on problem-solving skills, communication abilities, interpersonal relations, and leadership.
- To cultivate a vibrant university community that attracts and retains diverse, world-class talent, creating a collaborative environment open to the free exchange of ideas where research, creativity, innovation, and entrepreneurship can flourish, and ensuring individuals achieve their full potential.
- To impact society pragmatically - regionally, nationally, and globally - by engaging with industry, outstanding national and international universities, and research organizations.
- To be a global university that nurtures excellence in education and innovation, fostering a knowledgeable society.

1.4. Quality Policy

The University strives to impart knowledge, skills, and attitudes through continuous improvement to meet the ever-changing needs of industry and promote the sustainable development of society.

2. PURPOSE & SCOPE OF THE REGULATIONS

VRSEC's academic regulations provide a framework for the functioning of all engineering programs. These regulations include procedures and practices to ensure academic standards, are approved by the Academic Council (AC), and are subject to amendments to meet evolving conditions. These regulations will come into effect from the academic year 2024-25 and apply to all VRSEC undergraduate engineering students.

2.1. Academic Regulations

The Academic Regulations provide a framework for academic progress and rules for obtaining a degree from VRSEC. The academic administration such as the Registrar, Dean, Controller of Examinations, HoD's of the departments are responsible for the implementation of the regulations. All registered students must agree and abide by these regulations as a condition of enrolment.

2.2. Revision of Regulations

Regulations are published at the start of the academic year and remain in force until a subsequent version is published. Revisions are communicated through circulars and the University website. The Dean of Academics maintains the revised version and the archives of all previous versions.

3. ADMISSION

The admission policy and procedure are revised based on notifications from statutory bodies and government regulations. The number of seats in each degree program is decided based on the approval by regulatory bodies such as AICTE/UGC and government regulations.

To be eligible for undergraduate programs at VRSEC, applicants must meet the prescribed eligibility criteria and entrance requirements. Students must undertake the Siddhartha Engineering Entrance Examination (SEEE) or qualify from Andhra Pradesh state or national-level entrance exam. Admission is based on merit and availability of seats. VRSEC reserves the right to admit any candidate based on specified criteria without discrimination.

3.1. Eligibility for Admission

i. Minimum of 50% marks in Pre-University/Higher Secondary/10+2/Intermediate examination or equivalent from a recognized board with Maths, Physics, and Chemistry as compulsory courses.
ii. A qualifying rank in the Siddhartha Engineering Entrance Examination (SEEE) / JEE / AP EAPCET / TG EAPCET.

3.2. Classification of Admission

3.2.1. Regular Admission

Admission is considered regular if a student of Indian nationality is admitted in the programme's first semester through the SAHE admission test or through any approved entrance exam.

3.2.2. Lateral Admission

Students with a diploma from recognized institutes can join the third semester of the undergraduate program. They must meet the admission criteria for the specific program at VRSEC.

3.2.3. Transfer

Students from recognized Higher Education Institutes (HEIs) can be admitted to VRSEC without an entrance exam depending on the availability of seats and earning minimum credits as per regulations of SAHE. They must provide transcripts, syllabus copies, educational certificates, and other relevant documents. The Board of Studies (BoS) establishes course equivalency. At least 50% of the program credits must be completed at SAHE to earn the degree from SAHE.

3.3 Scholarships

VRSEC offers scholarships based on marks/ranks obtained in entrance exams and other common entrance tests. Scholarships also recognize achievements in academics, sports, culture, and diversity criteria decided by the University.

3.3.1. Scholarship Regulations

i. Scholarships are awarded to recognize achievements and diversity.
ii. The scholarship amount is adjusted towards the tuition fee.
iii. Scholarships are extended subject to a CGPA of 7.5 or above every year in the first attempt of all exams. The Vice-Chancellor may relax this requirement for diversity or extenuating circumstances.
iv. Recipients should actively participate in societies and clubs and serve as role models.
v. Scholarships will be forfeited in cases of attendance shortage, leave of absence, academic break, academic probation, academic dishonesty, or pending disciplinary action.
vi. Scholarship amounts must be refunded in case of withdrawal from the program.
vii. The University scholarship committee reserves the right to modify policies.

4. ACADEMIC PROGRAMS

4.1. Nomenclature of Programs

The table lists the B.Tech degree programs offered by the University, along with their abbreviations.

Table 1. Abbreviations

Name of the Program	Abbreviation
Artificial Intelligence (AI) and Data Science (DS)	AI&DS
Civil Engineering	CE
Computer Science and Engineering	CSE
Computer Science and Engineering (Artificial Intelligence and Machine Learning)	CSE(AI&ML)
Electronics and Communication Engineering	ECE
Electrical and Electronics Engineering	EEE
Electronics and Instrumentation Engineering	EIE
Information Technology	IT
Mechanical Engineering	ME

4.2. Academic Activities

The Academic Council, chaired by the Vice-Chancellor and comprising Deans, HoDs, selected faculty members, external experts, and special invitees, governs the academic activities of VRSEC Deemed to be University. The Council oversees teaching, learning, and evaluation, while academic administrators handle curriculum revision, assessment procedures, and introduction of new programs. The University monitors academic progress, faculty performance, and student discipline, providing guidelines for teaching and learning processes, and framing rules for program implementation, leading to degrees and certificates.

4.3. Semester System

The academic year consists of two semesters: Odd (I, III, V, VII) and Even (II, IV, VI, VIII). The odd semester runs normally from June to November, and the even semester from December to April. The University can accommodate deviations in schedule due to unforeseen circumstances. Students must register for courses each semester, meeting prerequisites. Course syllabi are available on the website and lesson plans and assessment methods are available on the Learning Management System (LMS). Continuous and Summative assessments are conducted, and grades are communicated through the student information system.

4.4. Curriculum

The curriculum is developed with input from faculty, students, alumni, parents, industry, and regulatory bodies, ensuring alignment with Vision, Mission, Program Educational Objectives (PEOs) and Program Outcomes (POs).

4.4.1. Program Specifications

- Vision and Mission Statements of the Department
- Program Educational Objectives (PEO)
- Program Outcomes (PO)
- Curriculum/Program Structure: includes various categories of courses and credits

4.4.2. Course Specifications

- Course Information
- Course Description
- Course Aims and Objectives

- Course Structure
- Course Outcomes (CO)
- Mapping of Course Outcomes to Program Outcomes
- List of Text, Reference Books, and Web Resources

4.4.3. Curriculum Preparation:

Faculty members at the Department level shall initiate the discussions on the Programmes to be offered for the ensuing Academic Year based on the stakeholder feedback and market trends. The Program Coordinator consolidates suggestions, and the Department Advisory Board (DAB) reviews Program Educational Objectives and Program Outcomes. The Board of Studies (BoS) and the Academic Council (AC) approve the curriculum structure and syllabi, with the Head of the Department serving as the Chairperson of the BoS.

4.5. Duration of the Program

4.5.1. Normal Duration

The duration of an academic program shall be four years consisting of eight semesters. The duration of the program for lateral entry students who are admitted in the III semester shall be three years consisting of six semesters.

4.5.2. Maximum Duration

The maximum period that a student can take to complete a full-time academic program shall be double the normal duration of the program, i.e., for regular students, it is eight years, and for lateral entry students, it is six years.

4.5.3. Minimum Duration of a Semester

Each semester consists of a minimum of 90 instruction days excluding examination days.

4.6. Academic Calendar:

The University issues an annual Academic Calendar, considering specific departmental requirements and synchronizing with admission notifications.

5. CURRICULUM FRAMEWORK

The curriculum framework defines the knowledge required for a degree, assigns courses and credits, sequence of courses, and determines the total credits needed for graduation. Each theory course consists of five units.

5.1. Curriculum Structure & Course Categories

The curriculum includes courses that ensure students acquire the necessary knowledge, skills, and attitudes by graduation, aligned with regulatory bodies recommendations. It encompasses various course categories to provide the required depth and breadth for the program, ensuring the attainment of the program's outcomes. There shall be Professional and Open Elective courses to give flexibility to choose courses based on the choice of students. There shall be a limit on the minimum and maximum number of student registrations for these elective courses.

5.1.1. Institutional Core

The Institutional Core comprises courses required for all undergraduate Engineering programs offered by the university. These courses ensure foundational knowledge in the following areas:

a) Basic Sciences and Mathematics (BS)

- This category includes courses in Physics, Chemistry, Biology for Engineers and Mathematics, tailored to the specializations of different departments. Additional courses required by specific departments may also be included.

b) Engineering Sciences (ES)

- This category includes basic courses required from Engineering such as Problem Solving and Programming, Engineering Drawing and Engineering Workshop, etc.

c) Humanities and Social Sciences (HS)

- This includes Communicative English Skills, Engineering Economics & Finance, Universal human values, Elective Courses related to Soft skills, other management courses, etc.

d) Non-Credit Mandatory Courses

- These mandatory courses include an Induction Program, Sports and Yoga or NSS/NCC, Essence of Indian Knowledge Tradition, Constitution of India, Professional Ethics, and Environmental Science, etc.

5.1.2. Professional Core

The Professional core consists of a set of courses considered necessary for the students of the specific program. The courses under this category satisfy the Program Specific Criteria prescribed by the appropriate professional societies/bodies.

5.1.3. Professional Electives

Professional electives are a set of courses offered in the program that cover depth and breadth to further broaden the student's knowledge. The students may register for appropriate electives offered in the program based on their area of interest.

5.1.4. Interdisciplinary Electives

These Electives are offered across the programs to enhance the breadth of knowledge and professional competency of students. Courses offered under this category cover knowledge in emerging areas/technologies. Each department/program shall offer a minimum of two courses. The student can have the flexibility to register for elective courses offered by other Engineering Departments.

5.1.5. Open Electives

Open Electives are offered at the University level. Open Electives include courses from arts, science, humanities, law, and technology streams. These courses enhance the knowledge of the students in other non-engineering and science streams.

5.1.6. Self-Learning Courses

- Self-learning courses refer to educational resources that students can pursue independently, without formal classroom instruction. These courses are typically available online and cover a wide range of topics. Some of the Professional Electives, Interdisciplinary Electives or Open Electives are offered as self-learning courses.

- The self-learning courses can be registered and completed in any one of the approved Massive Open Online Courses(MOOCs) such as NPTEL/Swayam etc. Students have to submit the certificate before the last Instruction Day of the respective Semester in which it is offered.
- Students can also opt for the Self-Learning courses offered by the school and they have to appear in both continuous and summative assessments conducted by the university.

5.1.7. Engineering Project in Community Services (EPICS), Mini Project, and Major Project

- **Engineering Project in Community Services (EPICS):** The Engineering Project for community services will be carried out during summer vacation for a period of six weeks after the IV Semester and the report shall be submitted in the V Semester. Students will go to the society (Villages/ Hospitals/Towns, etc..) to identify the problem, survey the literature and discuss with the community for a feasible solution. The students are encouraged to solve real-life problems.
- **Mini Project**: The Mini Project is carried out during the VII semester. Students have to carry out feasibility studies, and literature surveys, and prepare a detailed project report.
- **Major Project:** The Major Project is carried out in the VIII semester and the student can carry out his/her project work in an industry/R&D organization/in the college with well-defined objectives. At the end of the semester, the student shall submit a detailed project report. It involves the preparation and presentation of a report and students are encouraged to publish their work in any research journal/conference. The project report shall be evaluated by a committee appointed by HoD.

5.1.8. Industry Interaction (Internship)

- Students shall undergo a mandatory summer internship for a minimum of six weeks duration at the end of the six semester of the Program.

- The internship can be done by students at industries, research labs, construction sites, hydel and thermal power projects, and software companies approved by the school.

- Evaluation of the summer internship shall be through the departmental committee. Students will be required to submit a summer internship report to the concerned department and appear for an oral presentation before the departmental committee.

5.1.9. Personality Development Courses – Soft Skills

The courses offered under this category are aimed to improve the employability skills of the students.

5.1.10. Skill-Oriented Laboratory Courses

Skill-oriented courses, emphasize the development of specific, practical skills rather than the acquisition of theoretical knowledge. Every student shall be given the option to choose

either the skill courses being offered by the school/university or a certificate course being offered by industries / Professional bodies or any other accredited bodies as approved by the concerned BoS.

5.2. Additional Degree

Students can pursue additional credits for a MINOR or HONORS program along with the major degree to enhance their knowledge.

5.2.1. Honors Program

- Students of a Department/ Discipline are eligible to opt for Honors Program offered by the same Department /Discipline.
- A student shall be permitted to register for Honors program at the beginning of IV semester provided that the student must have acquired ≥8.0 CGPA without backlogs up to the end of the II semester.
- In addition to fulfilling all the requisites of a regular B.Tech Program, a student shall earn 18-20 additional credits to be eligible for the award of B.Tech (Honors) degree. This is in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline (i.e.160 credits).
- If a student fails to score the required ≥ 8.0 CGPA without backlogs in subsequent semesters, his/her registration for Honors Program stands cancelled and he/she shall continue with the regular Program.
- Honors must be completed simultaneously with major degree program without exceeding two courses per semester.

5.2.2. Minor Program

- Undergraduate students can earn a minor specialization in a different department/ discipline by securing an additional 18-20 credits. For example, a Mechanical Engineering student can pursue a Minor degree in Computer Science and receive a degree as B.Tech. Mechanical Engineering with a Minor in Computer Science.
- A student shall be permitted to register for the Minor program at the beginning of IV semester, provided that the student must have acquired ≥ 7.0 CGPA up to the end of II semester without any history of backlogs.

- If a student fails to score the required ≥ 7.0 CGPA without backlogs in subsequent semesters, his/her registration for Minors Program stands cancelled and he/she shall continue with the regular Program.
- Minors must be completed simultaneously with major degree program without exceeding two courses per semester.

5.3. Course Numbering Scheme

The course numbering scheme consists of seven alphanumeric places. The scheme is as follows:

First two digits: Regulation year

Third and fourth places: Department

Fifth digit: Level of the course (1-8, where 1-4 for undergraduate years, 5-6 for PG years, and 7-8 for research level)

Sixth and Seventh digits: Course number (for theory courses up to 80, and above 80 for Lab courses)

Example: **24CE105**

- Year of Regulation: 24
- Department: Civil Engineering (CE)
- Level of the Course: 1 (First-year B.Tech)
- Serial Number of the Course: 05, five indicates theory course.

Table 2. Nomenclature for course number

Year of Regulation	**Department Offering the Course**	**Level of the Course**	**Serial No. of the Course**
24	CE (Civil Engineering)	1	**05**
2 digits	2 places	1 digit	2 digits
The first two digits indicate the year of regulation	Course Domain: AI - Artificial Intelligence (AI) and Data Science(DS), CE - Civil Engineering, CS - Computer Science and Engineering, EC - Electronics and Communication Engineering, EE - Electrical and Electronics Engineering, EI - Electronics and Instrumentation Engineering, IT - Information Technology, ME - Mechanical Engineering, MA - Maths, PH - Physics, CY - Chemistry, EN – English, HS - Humanities and Social Science, SM - Business School, SL - Law, ED – Education. CA – Computer Applications BY -Biology EO- Economics CO – Commerce TL -Telugu HI – Hindi UC- University Common	1-- I-year UG, 2--II-year UG, 3--III-year UG, 4--IV-year UG, 5-- I- year PG, 6-- II-year PG, 7,8- Research level	01 02 : : 80 For theory courses, ------- 81 : : 99 For Lab or project courses

5.4. Scheme of Instruction and Examination

The scheme of instruction and examination for all B.Tech programs is provided separately in the curriculum books.

5.5. Medium of Instruction and Examination

The medium of instruction and examination is English.

5.6. Fast Track System

- Flexibility is extended to the fast-learning students to take the courses of higher semesters in advance as per their interest.
- Regular students in a 4-year program, with no backlog courses and a CGPA of at least 7.0 up to the $(n-2)^{th}$ semester, are eligible to opt for this flexibility upon entering the n^{th} semester.
- Lateral entry students (3-year duration) with 70% Marks in their Diploma are eligible to opt for this flexibility during IV semester. These students, entering into V/ VI /VII semester with no backlog courses and a CGPA of at least 7.0 up to the $(n-2)^{th}$ semester, are eligible to opt for this flexibility upon entering the n^{th} semester.
- List of additional courses offered in the even and odd semesters and the registration dates will be notified by the respective departments well in advance.
- Minimum number of students required to register for an additional course shall be decided by the Departments.
- The registered additional courses will be dealt separately as individual courses for the calculation of attendance and continuous assessment marks for assessing the eligibility to write the summative assessment for these courses.
- The rules and regulations for continuous assessment and summative assessment for these courses are similar to the other regular courses.

6. CREDIT SYSTEM AND GRADE POINTS

6.1. Credit Definition

Credits represent quantified and recognized learning, measured in contact periods per week in a semester. Typically, one credit is assigned to:

- A theory or tutorial course conducted for one contact period per week.
- A laboratory course conducted for two contact periods per week.

6.2. Credit Structure

A typical credit structure for B.Tech. coursework, based on the above definitions, is as follows:

Table 3. Credit Definition

Course Component	Credits
1 Hr. Lecture (L) per Week	1 credit
1 Hr. Tutorial (T) per Week	1 credit
1 Hr. Practical (P) per Week	0.5 credit

6.3. Semester Course Load

The average course load is 20 credits per semester, with a minimum of 12 and a maximum of 24 credits.

6.4. Grade Points and Letter Grades for a Course

Grading is based on the evaluation of each course for 100 marks. Marks obtained are converted to a corresponding letter grade as shown in Table 4.

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

Letter Grade: An index of student performance in a course is denoted by alphabets.

Grading System for B.Tech Theory / Lab / Project:

Table 4. Marks, Grade points, and Grades

Marks (Theory)	Marks (Lab/Project)	Grade Points	Letter Grade	Grade Description
90% and above	90% and above	10	Ex	Excellent
80 to < 90%	80 to < 90%	9	A+	Very Good
70 to < 80%	70 to < 80%	8	A	Good
60 to < 70%	60 to < 70%	7	B+	Above Average
50 to < 60%	55 to < 60%	6	B	Average
40 to < 50%	50 to < 55%	5	C	Below Average
< 40%	< 50%	0	F (Fail)	Fail
ABSENT	ABSENT	0	AB	--
--	--	NA	S	Satisfactory (Non-Credit courses)
--	--	NA	U	Unsatisfactory (Non-Credit courses)

6.5. Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

i. Semester Grade Point Average (SGPA): The Semester Grade Point Average (SGPA) is calculated as the ratio of the sum of the product of the number of credits and the grade points scored in all the courses taken by a student to the sum of the number of credits of all the courses undertaken by the student in that semester. It is expressed as:

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

where $\mathbf{C_i}$ is the number of credits of the $\mathbf{i^{th}}$ course and $\mathbf{G_i}$ is the grade point scored in the $\mathbf{i^{th}}$ course.

ii. Cumulative Grade Point Average (CGPA): The Cumulative Grade Point Average (CGPA) is computed similarly, considering all the courses taken by a student across all semesters of a program. It is expressed as:

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

where $\mathbf{S_i}$ is the SGPA of the $\mathbf{i^{th}}$ semester and $\mathbf{C_i}$ is the total number of credits in that semester.

- Both SGPA and CGPA shall be rounded off to two decimal points and reported in transcripts.
- Courses in which a student is awarded zero grade points will be included in the SGPA/ CGPA calculations.

6.6. Conversion Formula for CGPA to Percentage of Marks

The approximate equivalence of marks to a given CGPA is calculated using the formula:

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

7. EXAMINATIONS & SCHEME OF EVALUATION

7.1. Description of Evaluation

Continuous Assessment (CA): Students' performance is evaluated continuously throughout the semester by the faculty or course coordinator using various methods including class tests, sessional examinations, project reviews, viva voce, laboratory assessments, and other activities covering the entire syllabus of the course.

Summative Assessment (SA): SA is conducted by controller of examinations at the end of each semester, as per the academic calendar and with a written examination for theory courses and practical/project examination with oral component for laboratory/project courses.

7.2 Theory Courses

Assessment of a student's performance in theory courses consists of two components.

a) Continuous Assessment: 40% weightage.
b) Summative Assessment: 60% weightage.

a) Continuous Assessment: 40 Marks

- Two class tests each for 10 marks will be conducted for 45-minute duration. The class test marks shall be awarded with 2/3 weightage for the higher-scoring test and 1/3 for the lower-scoring test.
- Two Sessional examinations each for 20 marks, will be conducted for 75-minute duration. Sessional Marks are awarded with 2/3 weightage for the higher-scoring sessional test and 1/3 for the lower-scoring sessional test.
- 10 marks are allotted for Home Assignments, Quizzes, Presentations and any other mode specified for the course providing exposure to broader course concepts.

b) Summative Assessment: 100 Marks

- The Summative Assessment shall be conducted for a 3-hour duration for 100 marks with a weightage of 60%, at the end of the semester. The question paper consists of Part A with a weightage of 20 marks (short answer questions) and Part B with a weightage of 80 marks.

7.3 Non-Credit Mandatory Courses

These courses carry 100% weightage in Continuous Assessment. No Summative Assessment will be conducted for these courses.

Continuous Assessment: 100 Marks

a) Two sessional examinations each for 40 marks will be conducted for 120 minutes duration.
b) 20 marks are allotted for home assignments/seminars.

7.4 Skill-Oriented Laboratory Courses

a) Skill-oriented courses offered by external agencies:

- Students shall register for courses offered by external agencies (such as Industry, Professional Bodies, or other accredited bodies) for a period of 8 weeks or 30 contact hours.
- No continuous assessment will be conducted for these courses. A departmental committee will evaluate the grades or marks given by external agencies for skill-oriented courses and convert them to equivalent marks or grades.

b) Skill-oriented courses offered by the college:

- These courses are considered as Laboratory Courses.
- Students can choose skill-oriented courses offered by the college. Attendance for these courses will be included in the calculation of mandatory attendance requirements.
- Continuous assessment will be conducted during the semester, accounting for 60 marks.
- A summative assessment will be conducted by the respective department at the end of the semester for 100 marks with a weightage of 40%.

7.5 Laboratory Courses

a) **Continuous Assessment**: 60% weightage.

- The Laboratory courses are assessed under Continuous Assessment for a maximum of 60 marks. Assessment in laboratory courses comprises of components such as day to day work, record/ drawing sheets submission and viva voce/ quiz on the experiment.

b) **Summative Assessment**: 40% weightage.

- The Summative Assessment for laboratory courses shall be conducted for three-hour duration at the end of semester for 100 marks with 40% weightage.
- Assessment in laboratory courses comprises of components such as procedure, execution, result and viva voce on the experiment.
- Summative Assessment of Laboratory courses shall be conducted by examiners recommended by the HoD and appointed by Dean of School.

7.6 Integrated Course

An Integrated Course, comprising both theory and laboratory components, undergoes a specific method of evaluation:

- The theory part is evaluated similar to any other course without a laboratory. The laboratory part is evaluated similar to any only lab course. The marks scored in theory and laboratory are taken in proportion to the respective credits in theory and laboratory. The total marks are calculated for 100 together. Grades are given as per the marks scored in the subject.
- Ex: A course that has 2L + 1T +2P hours per week will have 4 credits (3 theory credits and 1 lab credit). The theory is evaluated for 100 marks (40% continuous assessment and 60% summative assessment). The laboratory is evaluated for 100 marks (60% continuous assessment and 40% summative assessment).
- The theory part reduced as 100*3/4 = 75
- Lab part reduced as 100*1/4 =25
- The course total marks are now 100. Grades are given as per the norms for any other course.

7.7 EPICS, Mini Project & Major Project

a) **Continuous Assessment**: 60% weightage.

- Students can perform EPICS, Mini Project & Major Project individually or in a group (not exceeding five members). These works are assessed under continuous evaluation for 60 marks. Continuous Assessment includes weightages for day-to-day work and periodic reviews by a committee appointed by HoD.

b) **Summative Assessment**: 40% weightage.

- The Summative Assessment for EPICS, Mini Project & Major Project shall be conducted at the end of semester for 100 marks with a weightage of 40%. Summative assessment includes weightage for report preparation, oral presentation and final viva voce.
- Summative Assessment of EPICS and Mini Project shall be conducted and evaluated by the internal committee nominated by the HoD.
- However, the summative assessment for Major Project shall be evaluated by an external examiner nominated by Dean of School.

7.8 Internship

a) **Continuous Assessment**: 60% weightage.

- For internships, the student shall submit individual internship report on the successful completion of the training.
- Internships are assessed under continuous evaluation for 60 marks. Periodic reviews are conducted under continuous assessment by coordinator in the industry/laboratory and a committee appointed by the HoD .

b) **Summative Assessment**: 40% weightage.

- The Summative Assessment for Internship shall be conducted at the end of semester for 100 marks with a weightage of 40%. Summative assessment includes weightage for report and final viva voce.
- Summative Assessment of Internship shall be conducted and evaluated by the committee nominated by the HoD.

7.9 Self-Learning Courses

a) MOOCs Courses

Students can register and complete the opted course in any one of the approved MOOCs platforms. These courses can be chosen from the list of approved MOOCs providers (SWAYAM / NPTEL).

While choosing the courses, the following norms are to be observed.

- Minimum duration of the course shall be 12 weeks for a 3 credit course and can be a combination of related courses with a total duration of 12 weeks.
- The courses shall not be a part of the curriculum and must be approved by the respective Boards of Studies.
- Students who have qualified in the examination conducted by the MOOC providers are exempted from appearing in the continuous and summative assessment conducted by the University in that category.
- In case a student fails to complete the MOOCs course, he/she may be allowed to register again for the same/ alternative course from the list approved by the department. However, the students have to register with the examination section for submitting the completed MOOCs certificates.

b) Self-Learning courses provided by University

- For the courses under this category, those students who have not registered under MOOCs platform and are able to learn by self-study shall appear for Continuous assessment with 40% weightage and summative assessment with 60% weightage conducted by the University.
- Attendance is not considered for self-learning courses.

7.10. Requirement for Pass

- A student shall be declared to have passed in a theory course if he/she secures a minimum of 40% aggregate marks (Continuous assessment & summative assessment marks put together), subject to a minimum of 35% marks in summative assessment.
- A student shall be declared to have passed in a laboratory course/ EPICS/Internship/Mini Project/Major Project if he/she secures a minimum of 50% aggregate marks (Continuous assessment & Summative assessment marks put together), subject to a minimum of 40% marks in summative assessment.
- A student shall be declared to have passed in a mandatory course if he/she secures a minimum of 50% aggregate marks in the Continuous assessment. Summative assessment is not done for mandatory courses.
- A student has to pass the failed course by appearing in the supplementary examination as per the requirement for the award of a degree.
- On passing a course of a program, the student shall earn assigned credits for that Course.

7.11. Announcement of Results

The Controller of Examinations (CoE) will announce the results at the end of each semester. Students will be able to access their grades in the Student Information System.

7.12. Revaluation

- **Continuous Assessment**
    - The Continuous Assessment scripts shall be shown to the students before finalizing the marks. If any student has a grievance, not addressed before the finalization of marks, he/she may apply for revaluation to the concerned head of the department.
    - The Head of the Department may constitute a two-member committee for re-evaluating the script. The evaluation of the committee is final and binding.

- **Summative Assessment**
    - Students can submit applications for revaluation, along with the requisite fee receipt for revaluation of his/her answer script(s) of theory course(s), as per the notification issued by the Controller of Examinations, if he/she is not satisfied with marks obtained.
    - The Controller of Examinations shall arrange for re-evaluation of those answer script(s).
    - A new external examiner, other than the first examiner, shall re-evaluate the answer script(s).

7.13. Malpractices

- The Dean of school shall refer the cases of malpractices in summative assessment to a Malpractice Enquiry Committee, constituted by him/her for the purpose. Such committee shall follow the approved scales of punishment. The Dean shall take necessary action, against the erring students based on the recommendations of the committee.
- The cases of malpractices in Continuous assessment tests (both Theory and Practical) shall be resolved by the Head of the Department.
- If the Student have any grievance on the decision of the Head of the Department, he/she may appeal to the Dean of the school in the case of Continuous assessment tests.
- Any action on the part of a student at an examination trying to get undue advantage in the performance or trying to help another, or derive the same through unfair means is punishable according to the provisions contained hereunder.
- The involvement of the Staff, who are in charge of conducting examinations, valuing examination papers and preparing/keeping records of documents relating to the examinations, in such acts (inclusive of providing incorrect or misleading information) that infringe upon the course of natural justice to one and all concerned at the examination shall be viewed seriously and recommended for award of appropriate punishment after thorough inquiry.
- The complete information regarding offense and punishment is available with Controller of Examination.

7.14. Compensatory class tests and sessional examinations in Continuous Assessment

A Compensatory Class Test/Sessional examination will be conducted for those students who remained absent for the TEST due to valid/ unavoidable circumstances.

- Student seeking permission on account of accident or severe illness, which disables the student from writing the examination should inform the respective department authorities (Proctor/HoD) immediately through email or mobile message and submit a permission request. Afterwards, he/she should submit a medical certificate from a recognized doctor.
- Student seeking permission on account of a calamity in the family (first relation only- Parents, Grandparents, and Siblings) barring the student from writing the examination should inform the respective department authorities (Proctor/ HoD) immediately through email or mobile message and submit a permission request.
- Students seeking permission on account of their participation in important curricular/ co-curricular/ extra-curricular activities/Off-Campus Placements should obtain prior approval from the respective department authorities (Proctor/ HoD). After such an event, the student must submit the participation certificate from the competent authority at the time of reporting to the College.
- All the above requests shall be verified and approved by a committee constituted by Dean of school and then only permitted to write the compensatory test.

7.15. Grant of Attendance Benefit

7.15.1. Attendance benefit for participation in Curricular/ Co-Curricular & Extracurricular activities

- The students shall get a minimum attendance of 75% from all the courses put together offered during a semester to become eligible for appearing in summative assessment.
- However, the cases of students who participate in various important Curricular/ Co-Curricular/ Extra-curricular activities organized at University/ State/ National/ International levels/Off-Campus Placements representing the college shall be considered and given due consideration for attendance benefit.
- The benefit of attendance may be allowed only based on the production of a certificate from the organizer of the event. However, the total period of absence in the case of state/national level sports events is 30 days and the period of absence in international sports events is 45 days including the Journey period in an academic year as per the UGC letter dated 18-08-1994.
- The committee headed by the Dean of school and two professors as members will scrutinize the request of a student for grant of attendance.

7.15.2. Attendance benefit for Entrepreneurship at College level

A committee with the Dean of school as the chairman, an external member (preferably from industry), two internal members, and the respective HoD as the member secretary will evaluate the students who are involved in entrepreneurship activities and decide on awarding 5% grace marks and 20% attendance.

7.16. Improvement of Continuous Assessment Marks

- A student, who failed in a course due to lack of minimum continuous assessment marks, is eligible for improvement of continuous assessment marks. The Controller of Examination will issue a notification in each semester regarding the eligible student's list.
- However, the improvement in continuous assessment marks in a course is restricted to a maximum of 60%.
- Students can improve their continuous assessment marks by self-study and by attending all the continuous assessments of a course. They have to pay the requisite fee.
- The improved continuous assessment marks will be considered for subsequent supplementary summative assessments when conducted.

8. ACADEMIC PROGRESSION

8.1. Criteria to Attend Summative Assessment and Promotion to Higher Semester

8.1.1. Eligibility for Summative Assessment

a) **Attendance (Minimum: 75%)**

- A student shall be eligible to appear for Summative Assessment if he/she acquires a minimum of 75% attendance in aggregate of all the courses (Theory, Drawing, Laboratory, EPICS, Mini & Major project) in a semester.
- Condonation of shortage in attendance may be recommended by respective Heads of Departments on genuine medical grounds, provided the students put in at least 65% attendance and the Dean of school is satisfied with the genuineness of the reasons and conduct of the student.
- A student will not be promoted to the next semester unless he/she satisfies the attendance requirements of the present semester, as applicable. They may seek readmission for that semester when offered next.

- A stipulated fee shall be payable towards condonation of shortage of attendance to the school/ university.

b) **Marks (Minimum: 50%)**

- A minimum of 50% aggregate marks from all courses in that semester (except self-leaning, and internship) is required by a student in continuous assessment to be eligible to appear for semester end examinations.
- However, a shortage of continuous assessment marks up to a maximum of 10% may be condoned by the Dean of school based on the recommendations of the respective Heads of the Departments, if he/she fulfils the attendance criteria.
- Students having a shortage of continuous assessment marks up to a maximum of 10% shall have to pay the requisite fee towards condonation.

8.1.2. Requirements for Promotion

- A student shall be eligible for promotion to the next Semester of the B.Tech program, if he/she satisfies the requirements as stipulated in Regulations 9.1.1.
- Further, a student shall be eligible for promotion to V / VII Semester of the B.Tech program, if he/she acquires the minimum number of credits as given in Table 5.

Table5: Promotion Criteria

For Admission into	Minimum Credits Required	
	Regular Students	**Lateral Entry Students**
V Semester	50% of credits up to IV semester	-
VII Semester	50% of credits up to VI semester	50% of credits up to VI semester

Students detained for lack of Credits

- Students detained for not earning minimum credits as per Table 5 shall be promoted to V/VII Semesters if he/she fulfils the credit requirements from all the regular and supplementary examinations held up to IV/VI Semesters till the commencement of the next academic year.

8.2 Supplementary Examinations

- A Student has to pass the failed course by appearing in the Supplementary Summative Assessment. In every semester Supplementary Summative Assessment of even & odd semesters will be conducted.
- Supplementary Summative examinations shall be conducted in courses of each semester four times after the new regulations come into force. There after student has to appear for Supplementary examinations in the equivalent courses as prescribed by the concerned BoS.

Advanced Supplementary Exams

- Students who fail in Theory or Laboratory courses of the VII/VIII semester, can appear for an advanced supplementary examination conducted within one month after the declaration of the revaluation results at the end of 8^{th} semester.
- To appear for the advanced supplementary examinations, one should have no backlogs till VI^{th} semester.
- Students who fail in the advanced supplementary examinations in the VII/VIII semester shall appear for subsequent examinations when they are conducted in regular manner.

8.3 Readmission Criteria

8.3.1 Readmission after Detention

Detention due to lack of attendance/marks

- A student detained in a semester due to lack of attendance/marks, has to obtain written permission from the Dean of school for readmission into the same semester after duly fulfilling all the required norms stipulated by the University in addition to paying a requisite readmission fee.

Detention due to lack of credits

- A student who is not promoted to the next semester due to lack of credits has to fulfil the minimum requirement of 50% credits by passing the required courses in subsequent summative assessments for admission into the next semester.

8.3.2 Readmission after Break in Study

- Students, who discontinue their studies for any approved reason, can get readmission into an appropriate semester of the B.Tech program after break-in study, with the prior permission of the principal/ Dean and following the transitory regulations applicable to such batch in which he/she joins.
- A requisite readmission fee per each year of break in study in addition to the prescribed tuition and special fee has to be paid by the student to condone his/her break in study.

8.3.3 Gap Year Concept for Student Entrepreneurship in Residence

- The Gap Year facility is extended by the committee chaired by the Dean of school to the outstanding students who wish to pursue entrepreneurship during their course of study with a break of one or two years.
- This is extended to two years at the most and these two years shall not be counted for the calculation of the maximum period of graduation.
- Students who avail of gap year facilities should follow transitory regulations.
- Students who have availed gap year facility to pursue entrepreneurship are eligible for the award of first class with distinction, subject to fulfilment of all conditions stipulated in academic regulations.

8.3.4 Calculation of attendance for readmitted students

- Students should submit a written request to the Dean of school, along with a challan paid towards tuition and other fees, for readmission one week before the commencement of the class work.
- Students can obtain the information regarding the date of commencement of class work for each semester on the University notice boards/website.
- Number of classes will be counted from the commencement of class work of the semester and not the date of payment of tuition fee, if he/she has paid the tuition fee after the commencement of class work.

8.4 Transitory Regulations

- A student, detained or discontinued in a semester, on re-admission shall be required to pass all the courses prescribed to the readmitted batch of students. The academic regulations which are in force at the time of his/her admission shall be applicable to them.
- However, the exemption will be given to the students who have already passed courses in the earlier semester(s) as per the regulation he/she was admitted and substitute courses are to be studied under transitory regulation as approved by the Academic Council.

9. AWARD OF DEGREE

9.1 Eligibility for Award of B.Tech. Degree

The B.Tech Degree shall be conferred on a student satisfying the following requirements.

Regular student

- A Regular student (four-year program) should register for **160 credits as** prescribed and earn all Credits from the categories 6.1.1 to 6.1.10.
- Student shall earn a satisfactory grade from the category 6.1.1(d)

Lateral Entry student

- A Lateral Entry student (three-year program) should register **for 120 credits** and earn all Credits from the categories 6.1.1 to 6.1.10.
- Student shall earn a satisfactory grade from the category 6.1.1(d)

9.2 Award of Division

The criteria for the award of division, after successful completion of the program as per Section 10.1 is given in Table 6

Table6: Criteria for Award of Division

CGPA	DIVISION
≥ 8.0	*First Class with distinction
≥ 6.75	First Class
≥ 5.75 - < 6.75	Second Class
≥ 5.00 - < 5.75	Pass Class
< 5	Fail

★ First Class with Distinction is awarded only if all courses registered are passed in the first attempt within four years for regular students and three years for lateral entry students.

- ★ Detained and later continued students and break-in study students are not eligible for the award of First Class with Distinction
- ★ However, the students permitted for a break in study under the entrepreneurship/start-ups provision will be considered for the award of first class with distinction
- ★ The students who are absent for the summative assessment only once in his/her duration of the B.Tech program on valid medical grounds/humanitarian grounds will be considered for the award of First class with Distinction subject to the recommendations of the committee constituted by the Dean of School.
- ★ The student failing to pass in the mandatory learning courses in the first attempt and pass later as supplementary candidate, may also be awarded "Distinction" akin to other students who pass all the courses at first attempt and fulfil the required conditions for the award of "Distinction". (But not given for MOOCs courses)

9.3 Consolidated Grade Card

- A consolidated grade card containing credits & grades obtained will be issued after successful completion of the four-year B.Tech Program.

9.4 Improvement of Cumulative Grade Point Average

- A student, after becoming eligible for the award of Degree, may reappear for the summative assessment to a maximum of three theory courses in a single attempt in one-year duration when conducted, to improve the CGPA and the division.
- But this reappearance shall be within a period of two academic years after becoming eligible for the award of the degree subject to fulfilment of current regulation.
- Students shall not be permitted to reappear for continuous assessment of either theory or laboratory courses.
- This facility shall not be available for students who have taken the Provisional Certificate.
- Modified Grade Cards & Consolidated Grade Card will be issued after incorporating new Grades & Credits and on return of previously issued Grade Cards.

10. ACADEMIC BANK OF CREDITS (ABC)

The Academic Bank of Credits (ABC) is a digital repository of academic credits earned by students throughout their learning journey. It is a centralized system that allows students to transfer credits between institutions and programs, and to accumulate credits over time at their own pace.

The University has implemented Academic Bank of Credits (ABC) to promote flexibility in curriculum as per NEP 2020 to

- provide option of mobility for learners across the universities of their choice
- provide option to gain the credits through MOOCs from approved digital platforms.
- facilitate award of certificate/diploma/degree in line with the accumulated credits in ABC
- execute multiple Entry /Exit option with credit count, credit transfer and credit acceptance from students' account.

11. MULTIPLE ENTRY /EXIT OPTION

- Multiple Entry /Exit Option is a major reform in higher education, introduced in the National Education Policy (NEP) 2020.
- It allows students to exit a program after 1, 2, and 3rd years of study with a relevant certificate, diploma, or degree, and re-enter the same program or a different program at a later time.
- **UG Certificate:** Students who opt to exit after completion of the first year and have secured 40 credits will be awarded a UG certificate if, in addition, they complete one vocational course of 4 credits during the summer vacation of the first year. These students are allowed to re-enter the degree programme within three years and complete the degree programme within the stipulated maximum period.
- **UG Diploma:** Students who opt to exit after completion of the second year and have secured 80 credits will be awarded the UG diploma if, in addition, they complete one vocational course of 4 credits during the summer vacation of the second year. These students are allowed to re-enter within a period of three years and complete the degree programme within the maximum period.

12. OTHER MATTERS

- Scribe facility is extended to B Tech students strictly following the guidelines issued under F. No. 16-110/2003-DD.III dt. 26-02-2013 by the Ministry of Social Justice and Empowerment, Department of Disability Affairs, Govt. of India.
- Students suffering from contagious diseases are not allowed to appear for either continuous assessment or summative assessment.
- Students participated in coaching/tournaments held at State/National/International levels through the University / Indian Olympic Association during the summative assessment period will be promoted to subsequent semesters till the entire program is completed as per the guidelines of the University Grants Commission Letter No. F.1-5/88 (SPE/PES), dated18-08-1994.
- Based on recommendations of HoD & Dean of School, exemption from attending the class work is permitted to students who secured placement and intend to **join the job in VIII** semester of B.Tech. Special Continuous Evaluation (Class Tests, Sessional, etc.,) will be arranged for such candidates separately if necessary. However, they shall appear for summative assessment as per the Academic Calendar.
- The Dean of school shall deal with any academic problem, that is not covered under these rules and regulations, in consultation with the Heads of the Departments in an appropriate manner, and approval of Vice Chancellor is obtained and shall be placed before the academic council for ratification.

13. AMENDMENTS TO REGULATIONS

The Academic Council may, from time to time, revise, amend, or change the regulations, schemes of examination, and/or syllabi.

14. DEFINITIONS

- An Academic Program means any combination of courses and/ or requirements leading to the award of a degree.
- “Course” means a subject either theory or practical identified by its course number and course title which is normally studied in a semester.
- “Degree” means an academic degree conferred by the university upon completing the undergraduate curriculum.
- “MOOC” means Massive Open Online Course
- “Regular Students” means students enrolled into the four-year program in the first year.
- “Lateral Entry Students” means students enrolled into the four-year program in the second year.
- “Honors” is an undergraduate bachelor’s degree containing courses of higher standard in a specific domain offered by the same department.
- “Minors” is an undergraduate bachelor’s degree containing courses in a specific domain other than the parent department.

Dean, Academics **Dean, Examinations**