

ACADEMIC REGULATIONS

For

B.Tech. Regular Four-Year Degree Program

(For the batches admitted from the academic Year 2021-2022)

&

B.Tech. Lateral Entry Scheme

(For the batches admitted from the academic Year 2022-2023)

Under CBCS

(Choice Based Credit System)

VBIT- R21



**VIGNANA BHARATHI INSTITUTE OF TECHNOLOGY
(AUTONOMOUS)**

Aushapur(V), Ghatkesar (M), Medchal Dist., Hyderabad, Telangana 501301

VIGNANA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

PRELIMINARY DEFINITIONS AND NOMENCLATURES

1. **AICTE:**

All India Council for Technical Education, New Delhi.

2. **Autonomous Institute:**

An institute designated as Autonomous by University Grants Commission (UGC), New Delhi in concurrence with affiliating University (Jawaharlal Nehru Technological University, Hyderabad)

3. **Academic Autonomy:**

Freedom given to an institute in all aspects of conducting its academic programs, granted by UGC for Promoting Excellence.

4. **Academic Council:**

The Academic Council is the highest academic body of the institute and is responsible for the maintenance of standards of instruction, education and examination within the institute. Academic Council is an authority as per UGC regulations and it has the right to take decisions on all academic matters including academic research.

5. **Academic Plan:**

A document defining the course contents and complete details of plan of delivery of the course viz. Course title, Course code, Pre-requisite, Credit structure, Team of instructors, Course objectives, Course outcomes, Mapping of course outcomes and programmes outcomes, relevant syllabus, textbook(s) and reference books, Course session plan and delivery plan, evaluation method, course notices and other course related aspects.

6. **Academic Year:**

It is the period necessary to complete an actual course of study within a year. It comprises two main semesters i.e., (one odd + one even) and one supplementary semester.

7. Admission Procedure:

As prescribed by the Government of Telangana.

8. Autonomous Institute:

An Institute designated as 'Autonomous' by University Grants Commission (UGC), New Delhi in concurrence with the affiliating University i.e., Jawaharlal Nehru Technological University, Hyderabad and Telangana State Government.

9. Backlog Course:

A course is considered to be a backlog course, if the student has obtained a failure grade (F) in that course.

10. Basic Sciences:

The courses offered in the areas of Mathematics, Physics, Chemistry etc., are considered to be foundational in nature.

11. Branch:

Means specialization in a program like B.Tech degree program in Electronics & Communication Engineering, B.Tech degree program in Computer Science and Engineering etc.

12. Board of Studies (BOS):

BOS is an authority as defined in UGC regulations, constituted by Head of the Institution for each of the departments separately. They are responsible for curriculum design and updation in respect of all the programs offered by a department.

13. Commission:

Means University Grants Commission (UGC), New Delhi.

14. Choice Based Credit System (CBCS):

The credit based semester system is one which provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching along with provision of choice for the student in the course selection.

15. Compulsory course:

Course required to be undertaken for the award of the degree as per the program.

16. Continuous Internal Examination (CIE):

It is an examination conducted towards internal assessment.

17. Core Courses:

The courses that are essential constituents of each engineering discipline are categorized as professional core courses for that discipline.

18. Course:

A course is a subject offered by a department for learning in a particular semester.

19. Course Outcomes (CO):

Statements describing essential skills that each and every student need to acquire at the end of a course. They can be from 3 to 5 for all the courses.

20. Course Registration:

Process of enrolling into a set of courses in a semester of the programme.

21. Credit:

A credit is a unit that gives weight to the value, level or time requirements of an academic course. The number of 'Contact Hours' in a week of a particular course determines its credit value. One credit is equivalent to one lecture/tutorial hour per week.

22. Credit Based Semester System (CBSS):

A system which prescribes the number of credits to be secured by the student for the requirement of award of degree.

23. Credit point:

It is the product of grade point and number of credits for a course.

24. Cumulative Grade Point Average (CGPA):

It is a measure of cumulative performance of a student over all the completed semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

25. Curriculum:

Curriculum incorporates the planned interaction of students with instructional content, materials, resources, and processes for evaluating the attainment of Program Educational Objectives.

26. Degree:

A student who fulfills all the programme requirements is eligible to receive a degree.

27. Department:

An academic entity that conducts relevant curricular and co- curricular activities, involving both teaching and non-teaching staff, and other resources in the process of study for a degree.

28. Detention in a Course:

Student who does not obtain minimum prescribed attendance in a course shall be detained in that particular course.

29. Elective Course:

A course that can be chosen from a set of courses. An elective can be Professional Elective and / or Open Elective.

30. Engineering Science Courses:

Courses belonging to the basic evolutionary aspects of engineering from Mechanical Engineering, Electrical Engineering, Computer Science etc. like Workshop Practices, Engineering Graphics, Engineering Drawing, Programming through C, Basics of Electrical Energy for Engineers, Engineering Mechanics, etc.

31. Evaluation:

Evaluation is the process of judging the academic performance of the student in her/his courses. It is done through a combination of continuous internal assessment and semester end examinations.

32. Grade:

It is an index of the performance of the students in a said course. Grades are indicated by alphabets.

33. Grade Point:

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

34. Grade Sheet:

Based on the grades earned, a grade sheet shall be issued to all the registered students after every semester. The grade sheet shall display the course details

(Course code, Course title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

35. Humanities & Social Sciences Courses:

Courses offered in the area of humanities and liberal arts.

36. Industrial Visit:

Visit to a company / firm as per the academic requirement.

37. Internship:

A period of training / work experience offered by an industry / research organization / academic institution for a limited period of time as specified in these regulations.

38. Institute:

Vignana Bharathi Institute of Technology, Hyderabad unless indicated otherwise by the context.

39. Mandatory Courses:

Compulsory non-credit courses that a student need to study as prescribed in the programme.

40. Massive Open Online Courses (MOOC):

Open access online courses aimed at providing ways to learn new skills.

41. Mini Project:

A credit-based course that a student has to undergo during a specified semester involving exploration in a discipline belonging to their research interest within their programme of study.

42. NEP-2020:

National Educational Policy- 2020

43. Open Elective Courses:

Courses of interdisciplinary nature offered to all the students of various programmes across the Institute.

44. Outcome Based Education:

An educational theory wherein each part of an educational system is based around goals (outcomes). Each student should have achieved the goal by the

end of the educational experience.

45. Pre-requisite:

A specific course or subject, the knowledge of which is required to complete before student register another course at the next grade level.

46. Professional Core Courses:

Courses that are fundamental constituents of the respective engineering discipline.

47. Professional Elective:

It indicates a course that is discipline centric. An appropriate choice of minimum number of such electives as specified in the program will lead to a degree with specialization.

48. Program:

Means, UG degree program: Bachelor of Technology (B.Tech); PG degree program: Master of Technology (M.Tech) / Master of Business Administration (MBA).

49. Programme:

A set of courses offered by the department leading to the award of degree in that programme.

50. Programme Outcomes (PO):

Statements describing the essential skill sets that each and every student need to possess at the time of graduation. These skill sets based on the graduate attributes as defined by the National Board of Accreditation (NBA) are in the areas of employability, entrepreneurial, social and behavioral aspects. They are 12 in number for a specific programme and are subjected to modification from time to time as defined by the NBA.

51. Programme Specific Outcomes (PSO):

Statements that describe what the graduates of a specific programme should be able to do. They can be 3 to 5 in number for a specific programme.

52. Project work:

It is a design or research based work to be taken up by a student during his/her

final year to achieve a particular aim. It is a credit based course and is to be planned carefully by the student.

53. Registration:

Process of enrolling into a set of courses in a semester of a program.

54. Regulations:

The regulations, common to all B.Tech programs offered by Institute, are designated as “**VBIT Regulations – R21**” and are binding on all the stakeholders.

55. Semester:

It is a period of study consisting of 15 to 18 weeks of academic work equivalent to normally 90 working days. Odd semester commences usually in July and even semester in December of every year.

56. Semester End Examinations:

It is an examination conducted for all courses offered in a semester at the end of the semester.

57. Semester Grade Point Average:

A measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.

58. Substitute Courses:

A course that is offered in place of another course that is already studied by the student and is repeated in the semester of study.

59. UBA:

Unnat Bharat Abhiyaan

60. UHV:

Universal Human Values

61. University:

Means Jawaharlal Nehru Technological University Hyderabad (JNTUH), Hyderabad, is an affiliating University.

Academic Regulations for B.Tech. Regular Students with effect from Academic Year 2021-22 (R21)

For pursuing four year under graduate Bachelor of Technology degree program of study in Engineering (B.Tech) offered by Vignana Bharathi Institute of Technology under Autonomous status and herein after referred to as VBIT.

1. Under-Graduate Degree Program in Engineering & Technology (UGP in E&T)

VBIT offers a 4-year (8 semesters) **Bachelor of Technology** (B.Tech.) degree program, under Choice Based Credit System (CBCS) with effect from the academic year 2021- 2022. Presently, the institute is offering Bachelor of Technology (B.Tech) degree programs in the following disciplines as shown in Table 1.

Table 1 B.Tech. Programmes of study

S.No	Name of the Program	Program Code
1	Civil Engineering-CE	01
2	Electrical and Electronics Engineering-EEE	02
3	Mechanical Engineering-ME	03
4	Electronics and Communication Engineering-ECE	04
5	Computer Science & Engineering-CSE	05
6	Information Technology-IT	12
7	Computer Science and Business System-CSB	32
8	Computer Science & Engineering(Cyber Security)-CSC	62
9	Computer Science & Engineering(AI&ML)-CSM	66
10	Computer Science & Engineering(Data Science)-CSD	67

2. Eligibility for admission

- Admission to the under graduate (UG) program shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (TS EAMCET) subject to reservations as prescribed by the government from time to time.
- The medium of instructions for the entire under graduate program in Engineering & Technology will be in **English** only.

3. B.Tech. Program structure

- A student after securing admission shall complete the B.Tech. program in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course. Each student shall secure 160 credits (with CGPA ≥ 5) required for the completion of the under graduate program and award of the B.Tech. degree.
- Every B.Tech. programme of study shall be designed to have theory and laboratory courses. In addition, a student shall carry out internship, industry oriented mini-project, project and other courses as prescribed in the curriculum of the programmes.
- Every course offered under a B.Tech. programme shall be placed in one of the course categories with minimum credits as listed in the Table 2.
- The course group / category along with their broad classification and description are listed in the Table 3.
- UGC/ AICTE specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.
- Semester scheme
- Each under graduate program is of 4 academic years (8 semesters) with the academic year divided into two semesters of 16-18 weeks (90 instructional days) each, each semester having- Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) under Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) indicated by UGC, and curriculum/course structure as suggested by AICTE are followed.
- **Credit courses**

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for theory/ lecture (L) courses or Tutorials.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses.

Courses like UHV-I, NSS, Environmental Science, Constitution of India and Gender Sensitization are mandatory courses. These courses will not carry any credits.

Table 2 Category of Courses, their Codes and Distribution of Credits

S.No	Course Category	Course Description	Percentage Credits		Typical Credits as per AICTE
			Min	Max	
1	HS- Humanities and Social Sciences including Management	Includes subjects related to humanities, social sciences and management	5	10	12
2	BS- Basic Sciences	Includes mathematics, physics and chemistry subjects	10	20	25
3	ES- Engineering Sciences	Includes fundamental engineering subjects	10	20	24
4	PC- Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.	30	40	48
5	PW- Project Work and Internship	B.Tech. project or UG project or UG major project. Summer Internship/Mini-project	7	20	18
6	PE- Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.	10	15	18
7	OE- Open Electives	Elective subjects which include inter- disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.	5	10	15

8	MC- Mandatory Courses (Non –Credit)	Mandatory courses (non- credit)	-	-	(Non- Credit)
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Table 3 Description of Courses

Broad Course category	Course Category	Group/ Course Description
Foundation	Humanities and Social Sciences including Management	Includes subjects related to humanities, social sciences and management
	Basic Sciences	Includes mathematics, physics and chemistry subjects
	Engineering Sciences	Includes fundamental engineering subjects
Core	Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
	Project Work and Internship	B.Tech. project or UG project or UG major project. Summer Internship/Mini-project
Elective	Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
	Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
Mandatory	-	Mandatory non-credit courses

• **Subject Course Classification**

All subjects/ courses offered for the under graduate program in E&T (B.Tech. degree programs) are broadly classified as follows.

i. **Core foundation (CF)** - Mandatory courses comprising of

- a. Humanities courses;
- b. Basic Sciences (BS) including Physics, Chemistry and Mathematics;
- c. Engineering Sciences (ES), including Basic Engineering courses such as Material Science, Basic Workshop, Engineering Drawing, Engineering Graphics, Digital systems, etc.

ii. **Compulsory Courses (CC) (Mandatory) consist of the following.**

- a) Professional Core (PC) courses: These courses expose the students

to the foundation of Engineering topics related to the chosen programme of study comprising of theory and Practical/ field work/ Design project/ Project.

- b) Professional Elective (PE): These courses enable the students to take up a group of courses of their interest in the area of specialization offered by the parent Department.
- c) Open Electives (OE): These courses are offered by Engineering and Non-Engineering departments (across the disciplines) other than their parent Department.
- d) Non-CGPA courses: These courses are offered in certain semesters are compulsory, but are not used for calculation of GPA and CGPA. However, the credits will be mentioned in the grade sheet.

- **Non-CGPA courses:**

- The student shall select any course /activity listed in Table 4 during the course of study. The student has to make his / her own efforts for earning the credits. The grades given will be Pass / Fail (P/F). The respective class teachers have to encourage, monitor and record the relevant activities of the students, based on the rules issued from time to time by the Institute and submit the End semester report to the Head of the Department.

Table 4. Non – CGPA Courses

S.No	Course /Activity	Credits
1	Leadership and Team Building Skills – (Consistent and active participation in organizing various events through professional bodies or any other clubs)	2
2	Innovative and Entrepreneurial Skills- i) Active participation in various programs like SHODH initiated by Institute ii) Achievement in Innovative activities like hackathons, establishing Startups, etc.	2
3	Research, Publication and Paper writing Skills- (Active participation in designing innovative projects and publication of papers in standard journals)	2

The Institute has followed almost all the guidelines prescribed by AICTE.

4 Course registration

- A faculty mentor shall be assigned to a group of 20 students, who will advise the students about the under graduate program, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.
- The academic section of the college invites registration forms from students before the beginning of the semester through on line registration, ensuring date and time stamping. The on-line registration requests for any current semester shall be completed before the commencement of SEEs (Semester End Examinations) of the 'preceding semester'.
- A student can apply for on-line registration, only after obtaining the written approval from faculty advisor/counselor, which should be submitted to the DAP office/Academic Section through the Head of the Department. A copy of it shall be retained with Head of the Department, faculty advisor/counselor and the student.
- A student may be permitted to register for all the subjects/ courses in a semester as specified in the course structure with maximum additional subject(s)/course(s) limited to 4 credits, based on **progress** and SGPA/ CGPA, and completion of the **pre-requisites** as indicated for various subjects/ courses, in the department course structure and syllabus contents.
- Choice for additional subjects/courses must be clearly indicated, which needs the specific approval and signature of the faculty advisor/counselor.
- If the student submits ambiguous choices or multiple options or erroneous entries during on-line registration for the subject(s) / course(s) under a given/ specified course group/category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.
- Subject/ course options exercised through on-line registration are final and cannot be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head of the department, with due notification and time-framed schedule, within the first week after the commencement of class-work for that semester.

- Dropping of subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor within a period of 15 days" from the beginning of the current semester.
- **Open electives:** The students have to choose three open electives (OE-I, II & III) from the list of open electives given. However, the student cannot opt for an open elective subject offered by his own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.
- **Professional electives:** The students have to choose six professional electives(PE-I to VI) from the list of professional electives given.

5.0 Subjects/ courses to be offered

- A typical section (or class) strength for each semester shall be 60.
- A subject/ course may be offered to the students, only if a minimum of 20 students ($\frac{1}{3}$ of the section strength) opt for it. The maximum strength of a section is limited to 80 ($60 + \frac{1}{3}$ of the section strength).
- More than one faculty member may offer the same subject (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - first come first serve basis and CGPA criterion (i.e. the first focus shall be on early on-line entry from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).
- If more entries for registration of a subject come into picture, then the Head of the Department concerned shall decide, whether or not to offer such a subject/ course for two (or multiple) sections.
- In case of options coming from students of other departments/ branches/ disciplines (not considering open electives), first priority shall be given to the student of the parent department.

6.0 Attendance requirements:

- A student shall be eligible to appear for the semester end examinations, if the student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (excluding attendance in mandatory courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab) for that semester. Two periods of attendance for each theory subject shall be considered, if the student appears for the mid-term examination of that subject.

- Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the students representation with supporting evidence.
- A stipulated fee shall be payable for condoning of shortage of attendance.
- Shortage of attendance below 65% in aggregate shall in no case be condoned.
- Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester. They may seek re-registration for all those subjects registered in that semester, in which the student is detained, by seeking re-admission into that semester as and when offered; if 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 later semesters, then alternate electives may be chosen from the same set of elective subjects offered under that category.
- A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

7.0 Academic requirements

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in item no.6.

- A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% (25 marks out of 70 marks) in the semester end examination, and a minimum of 40%(40 marks out of 100 marks) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing 'C' grade or above in that subject/course.
- A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Mini Project/Summer Internship, if the student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student is deemed to have failed, if he (i) does not submit a report on Mini Project /Summer Internship, or does not make a presentation of the

same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the IV year I Semester, or (iii) secures less than 40% marks in Mini Project/Summer Internship evaluations.

- A student may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such one re appearance evaluation also, the student has to reappear for the same in the next subsequent semester, as and when it is scheduled.
- **Promotion Rules**

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Second year first semester to second year second semester	Regular course of study of second year first semester.
4	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Third year first semester to third year second semester	Regular course of study of third year first semester.
6	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 60% Credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

- A student (i) shall register for all courses/subjects covering 160 credits as specified and listed in the course structure, (ii) fulfills all the attendance and academic requirements for 160 credits, (iii) earn all 160 credits by securing SGPA ≥ 5.0 (in each semester), and CGPA (at the end of each successive semester) ≥ 5.0 , (iv) **passes all the mandatory courses**, to successfully complete the under graduate program. The performance of the student in these 160 credits shall be taken into account for the calculation of the final CGPA (**at the end of under graduate program**), and shall be indicated in the grade card of IV year II semester.
- If a student registers for **extra subjects** (in the parent department or other departments/branches of Engg.) other than those listed subjects totaling to 160 credits as specified in the course structure of his department, the performances in those **extra subjects** (although evaluated and graded using the same procedure as that of the required 160 credits) will not be taken into account while calculating the SGPA and CGPA. For such **extra subjects** registered, percentage of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1 – 7.4 above.
- A student is eligible to appear in the semester end examination for any subject/course, but absent from it or failed (thereby failing to secure 'C' grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- A student **detained in a semester due to shortage of attendance may be re-admitted in the same semester in the next academic year for fulfillment of academic requirements**. The academic regulations under which a student has been readmitted shall be applicable. However, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which the student has been detained.
- A student detained **due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits**. The academic regulations under which the student has been readmitted shall be applicable to him.

8.0 Evaluation - Distribution and Weightage of marks

- The performance of a student in every subject/course (including practicals and Project) will be evaluated for 100 marks each, with 30 marks allotted for CIE (Continuous Internal Evaluation) and 70 marks for SEE (Semester End-

Examination).

- For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of one objective paper, one descriptive paper & Participatory Reporting Assessment (PRA). The objective paper and the descriptive paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for descriptive paper) & 10 marks for Participatory Reporting Assessment (PRA). The objective paper is set with 20 multiple choice, fill-in the blanks and matching type of questions for a total of 10 marks. The descriptive paper shall contain 4 full questions out of which, the student has to answer 2 questions, each carrying 5 marks.

Participatory Reporting Assessment (PRA):

- PRA contributes to 10% of the final evaluation of the course. The student is evaluated based on the selected topic of the course and the observations made on the report.
- **PRATIBHA- Participatory Report Assessment of Theme and Innovation Based Harmonic Activities.**
- Based on the type of the course offered, PRA activity can be of two types:
 - i. The students are mandated to participate in any of the relevant activities and prepare a report by the end of the semester for which 10% of the total evaluation component is assessed.

Activities like field visits, questionnaires/case studies collected by the students from an industry expert, real-world observations, recent trends on the relevant course, Interview of the experts, review of related reference books, documentary, video preparation, presentation, prototype design etc.

(or)

- ii. The students are mandated to participate in a prescribed short-term Value-Added Program (VAP) designed by the faculty and need to submit the certificate on completion of the course.
 - The evaluation of the student should be based on the report prepared as part of the PRA requirements or by the submission of VAP certificate.
 - A committee constituted by the Principal comprises of Head of the department, Academic Coordinator, Senior faculty of the department will monitor the execution of PRA.
 - In first phase, during first two weeks of commencement of class work the subject teacher will scrutinize the proposals submitted by the students and will award the marks (out of 10- I mid exam) based on innovation and preparation. In the second phase at the

end of the semester the submitted reports will be evaluated and marks will be awarded (out of 10- II mid exam) based on execution and presentation. These marks will be considered in the Continuous Internal Evaluation (CIE).

- While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus.
- The total marks secured by the student in each mid-term examination are evaluated for 30 marks, and the average of the two mid-term examinations shall be taken as the final marks secured by each student in Continuous Internal Evaluation.
- If any student is absent from any subject of a mid-term examination, re-examination will be conducted for the students with genuine reasons after approval by Head of the respective department and Head of the institution.
- The semester end examinations (SEE) will be conducted for 70 marks consisting of two parts viz. i) Part- A for 20 marks, ii) Part - B for 50marks.
- Part-A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit and carry 2 marks each.
- Part-B consists of five questions carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.
- For subjects like Engineering Graphics/Engineering Drawing, the SEE shall consist of five questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions. There shall be no Part – A, and Part – B system.
- For subjects like Machine Drawing Practice/Machine Drawing, the SEE shall be conducted for 70 marks consisting of two parts viz. (i) Part – A for 30 marks. 3 out of 4 questions must be answered, (ii) Part – B for 40 marks. Part – B is compulsory.
- For subjects Structural Engineering – I & II (RCC & STEEL), the SEE will be conducted for 70 marks consisting of 2 parts viz. (i) Part – A for 10 marks and, (i) Part – B for 60 marks. Part – A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit relating to design theory and codal provisions and carry 2 marks each. The next five sub-questions are from each unit and carry 1 mark each. Part – B consists of 5 questions (numbered 2 to 6) carrying 12 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there is either or choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

- For practical subjects there shall be a continuous internal evaluation during the semester for 30 marks and 70 marks for semester end examination. Out of the 30 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 15 marks conducted by the laboratory teacher concerned. The semester end examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges with autonomous status.
- For the subject having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing, machine drawing practice and estimation), the distribution shall be 30 marks for continuous internal evaluation (15 marks for day-to-day work and 15 marks for internal tests) and 70marks for semester end examination. There shall be two internal tests in a semester and the average of the two shall be considered for the award of marks for internal tests.
- There shall be Summer Internship, in collaboration with an industry of their specialization. Students will register for this immediately after II year II semester examinations and pursue it during summer vacation. Summer Internship shall be submitted in a report form and presented before the committee in III year I semester. Students will register for Mini Project immediately after III year II semester examinations and pursue it during summer vacation. Mini Project shall be submitted in a report form and presented before the committee in IV year I semester. It shall be evaluated for 100 external marks. The committee consists of an external examiner; Head of the Department, supervisor of the mini project/Summer Internship and a senior faculty member of the department. There shall be no internal marks for Mini Project/Summer Internship.
- Major project shall be carried out in IV Year Second Semester and it will be evaluated for 100 marks. Student has to submit project work report at the end of semester. SEE for project shall be completed before the commencement of SEE Theory examinations.
- Out of a total of 100 marks for the UG major Project, 30 marks shall be allotted for internal evaluation and 70 marks for the end semester examination (viva voce). In addition, the UG major Project supervisor shall also be included in the committee. The topics for UG Internship, mini project and UG major Project shall be different from one another. The evaluation of UG major Project shall be made at the end of IV year II semester through external examiner. The internal evaluation shall be on the basis of three reviews given by each student on the topic of UG major Project. A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he fails in such one re-appearance evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.
- The external examiner shall evaluate the project work for 70marks and the project supervisor shall evaluate it for 30 marks. The student is deemed to have failed, if he (i) does not submit a report on Project, or does not make a presentation of the same before the external examiner as per schedule, or (ii) secures less than 40%

marks in the sum total of the CIE and SEE taken together.

- For conducting viva-voce of project, there will be a committee consisting of Head of the department, Project coordinator and external examiner to be nominated by the Principal.
- The laboratory marks and the internal marks awarded by the college are subject to scrutiny and scaling by the Academic and Planning section of the college, wherever necessary the laboratory records and internal & external test papers shall be preserved in the institute.
- For mandatory courses only internal assessment shall be done where in , a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the Continuous Internal Evaluation for passing the subject/course[No external evaluation].

9.0 Grading procedure

- Grades will be awarded to indicate the performance of students in each theory subject, laboratory / practicals, Internship, Mini Project, and Major project. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.
- As a measure of the performance of a student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

% of Marks Secured in a Subject/Course (Class Intervals)	Letter Grade (UGC Guidelines)	Grade Points
Greater than or equal to 90%	O (Outstanding)	10
80 and less than 90%	A ⁺ (Excellent)	9
70 and less than 80%	A (Very Good)	8
60 and less than 70%	B ⁺ (Good)	7
50 and less than 60%	B (Average)	6
40 and less than 50%	C (Pass)	5
Below 40%	F (FAIL)	0
Absent	Ab	0

- A student who has obtained an 'F' grade in any subject shall be deemed to have 'failed' and is required to reappear as a supplementary student in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.
- To a student who has not appeared for an examination in any subject, 'Ab' grade will be allocated in that subject, and he is deemed to have 'failed'. A student will be required to reappear as a supplementary student in the semester end examination, as and when offered next. In this case also, the internal marks in those subjects will remain the same as those obtained earlier.
- A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding credit points (CP) are computed by multiplying the grade point with credits for that particular subject/course.

Credit points (CP) = grade point (GP) x credits For a course

- A student passes the subject/ course only when GP \geq 5 ('C' grade or above)
- The semester grade point average (SGPA) is calculated by dividing the sum of credit CP) secured from all subjects/ courses registered in a semester, by the total Σ points (number of credits registered during that semester. SGPA is rounded off to two decimal places, SGPA is thus computed as

$$\text{SGPA} = \{ \sum_{i=1}^N C_i G_i \} / \{ \sum_{i=1}^N C_i \} \dots \text{For each semester,}$$

where 'i' is the subject indicator index (takes into account all subjects in a semester), 'N' is the no. of subjects 'registered' for the semester (as specifically required and listed under the course structure of the parent department), C_j is the no. of credits allotted to the i th subject, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that i th subject.

- The cumulative grade point average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in all registered courses in all semesters, and the total number of credits registered in all the semesters. CGPA is rounded off to two decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$\text{CGPA} = \{ \sum_{j=1}^M C_j G_j \} / \{ \sum_{j=1}^M C_j \} \dots \text{for all } S \text{ semesters registered}$$

(i.e., up to and inclusive of S semesters, $S \geq 2$),

where 'M' is the total no. of subjects (as specifically required and listed under the course structure of the parent department) the student has 'registered' i.e., from

the 1st semester onwards up to and inclusive of the 8th semester, “j” is the subject indicator index (takes into account all subjects from 1 to 8 semesters), C_j is the no. of credits allotted to the jth subject, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that jth subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

Illustration of calculation of SGPA:

Course/Subject	Credits	Letter Grade	Grade Points	Credit Points
Course 1	4	A	8	$4 \times 8 = 32$
Course 2	4	O	10	$4 \times 10 = 40$
Course 3	4	C	5	$4 \times 5 = 20$
Course 4	3	B	6	$3 \times 6 = 18$
Course 5	3	A+	9	$3 \times 9 = 27$
Course 6	3	C	5	$3 \times 5 = 15$
	21			152

$$\text{SGPA} = 152/21 = 7.24$$

Illustration of calculation of CGPA up to 3rd semester:

Semester	Course/Subject Title	Credits Allotted	Letter Grade Secured	Corresponding Grade Point (GP)	Credit Points(CP)
I	Course 1	3	A	8	24
I	Course 2	3	O	10	30
I	Course 3	3	B	6	18
I	Course 4	4	A	8	32
I	Course 5	3	A+	9	27
I	Course 6	4	C	5	20
II	Course 7	4	B	6	24
II	Course 8	4	A	8	32
II	Course 9	3	C	5	15
II	Course 10	3	O	10	30
II	Course 11	3	B+	7	21
II	Course 12	4	B	6	24
II	Course 13	4	A	8	32
II	Course 14	3	O	10	30
III	Course 15	2	A	8	16

III	Course 16	1	C	5	5
III	Course 17	4	O	10	40
III	Course 18	3	B+	7	21
III	Course 19	4	B	6	24
III	Course 20	4	A	8	32
III	Course 21	3	B+	7	21
	Total Credits	69		Total Credit Points	518

$$\text{CGPA} = 518/69 = 7.51$$

The above illustrated calculation process of CGPA will be followed for each subsequent semester until 8th semester. The CGPA obtained at the end of 8th semester will become the final CGPA secured for entire B.Tech. Program.

- For merit ranking or comparison purposes or any other listing, only the rounded off values of the CGPAs will be used.
- SGPA and CGPA of a semester will be mentioned in the semester Memorandum of Grades if all subjects of that semester are passed in first attempt. Otherwise the SGPA and CGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester. However, mandatory courses will not be taken into consideration.

10 Passing standards

- A student shall be declared successful or 'passed' in a semester, if student secures a GP ≥ 5 ('C' grade or above) in every subject/course in that semester (i.e. when student gets an 5.00 at the end of that particular semester); and a student shall be declared $\geq \text{SGPA} \geq$ successful or 'passed' in the entire under graduate programme, only when gets a CGPA 5.00 for the award of the degree as required.
- After the completion of each semester, a grade card or grade sheet shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, grade earned, etc.), credits earned.

11 Declaration of results

- Computation of SGPA and CGPA are done using the procedure listed in 9.
- For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

12 Award of degree

12.1 A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 160 credits (with CGPA \geq 5.0), within 8 academic years from the date of commencement of the first academic year, shall be declared to have „**qualified**’ for the award of B.Tech. degree in the chosen branch of Engineering selected at the time of admission.

12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.

12.3 A student with final CGPA (at the end of the under graduate program) 8.00, and fulfilling the following conditions – shall be placed in **first class with distinction**’.

However, he

- i) Should have passed all the subjects/courses in **first appearance** within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.
- ii) Should have secured a CGPA 8.00, at the end of each of the 8 sequential semesters, starting from I year I semester onwards.
- iii) Should not have been detained or prevented from writing the semester end examinations in any semester due to shortage of attendance or any other reason.

A student fulfilling any of the above conditions with final CGPA > 8 shall be placed in **first class with distinction**.

12.4 Students with final CGPA (at the end of the under graduate program) 6.50 but < 8.00 shall be placed in **‘first class**’.

12.5 Students with final CGPA (at the end of the under graduate program) 5.50 but < 6.50 , shall be placed in „**second class**’.

12.6 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the undergraduate program) 5.00 but < 5.50 , shall be placed in **“pass class”**.

12.7 A student with final CGPA (at the end of the under graduate program) < 5.00 will not be eligible for the award of the degree.

12.8 Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of **“Gold Medal”**.

13 Withholding of results

- If the student has not paid the fees to the institute at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and the student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.

14.0 Student transfers

- There shall be no branch transfers after the completion of admission process.

15.0 Scope

- The academic regulations should be read as a whole, for the purpose of any interpretation.
- In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Controller of Examinations and Principal is final.
- Institute may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the College Academic Council.
- Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.

Academic Regulations for B.Tech. (lateral entry scheme) from the academic year 2022-23

1. Eligibility for award of B. Tech. Degree(LES)

The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.

2. The student shall register for 120 credits and secure 120 credits with CGPA \geq 5+ from II year to IV year B.Tech. program (LES) for the award of B.Tech. degree.
3. The students, who fail to fulfill the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.
4. The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech.(LES).

5. Promotion rule

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 50% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

- 6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).**

MALPRACTICES RULES

DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

S.No	Nature of Malpractices/Improper conduct	Punishment
	If the student:	
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 student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students 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 student is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student 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 student is to be cancelled.

3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student 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 student is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the student 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.

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 case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The students also are debarred
	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.	and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears off 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 student 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 student is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.

8.	Possesses 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 student 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 student is also debarred and forfeits the seat.
9.	If a student of the college, who is not a student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Expulsion from the examination hall & cancellation of the performance in that subject and all other subjects the student 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 student is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to the police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared for 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 special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared for including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the institute for further action to award a suitable punishment.	

*****End of Regulations*****