



**ACADEMIC REGULATIONS COURSE STRUCTURE AND
DETAILED SYLLABUS**

For

**B.TECH. FOUR YEAR DEGREE COURSE
(Applicable for the batches admitted from 2021-2022)**

(Academic Regulations are Common
upto 3rd Year II-Semester for
IDP, IDDMP & IIDDMP Programmes also)



**JNTUH COLLEGE OF ENGINEERING HYDERABAD
(Autonomous)**

Kukatpally, Hyderabad - 500085

TELANGANA, INDIA



**JNTU COLLEGE OF ENGINEERING HYDERABAD
(AUTONOMOUS)**

Kukatpally, Hyderabad-500085, Telangana (India).

**ACADEMIC REGULATIONS FOR B.TECH. CBCS BASED PROGRAM
(Asper AICTE Model Curriculum)**

WITH EFFECT FROM ACADEMIC YEAR 2021-22(R21)

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

JNTU College of Engineering Hyderabad offers a 4-year (8 semesters) **Bachelor of Technology** (B.Tech.) degree programme, under Choice Based Credit System (CBCS). With effect from the academic year 2021-22 onwards, in the following Branches of Engineering.

S No	Branch
I	Civil Engineering
II	Electrical and Electronics Engineering
III	Mechanical Engineering
IV	Electronics and Communication Engineering
V	Computer Science and Engineering
VI	Metallurgical Engineering
VII	Chemical Engineering

2 ELIGIBILITY FOR ADMISSION

Admission to the under graduate (UG) programme shall be made either on the basis of the merit rank obtained by the qualifying candidate at an entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the Government of Telangana, from time to time.

The medium of instruction is **English**.

3 B.TECH. PROGRAMME STRUCTURE

A student after securing admission shall complete the B.Tech. programme 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 programme and award of the B.Tech. Degree.

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 programme is of 4 academic years (8 semesters) with the academic year divided into two semesters of 22 weeks (≥ 90 instructional days) each, each Semester having - 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)' under Choice Based Credit System (CBCS) 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 (T); and,
- One credit for two hours/ week/ semester for laboratory/ practical (P) Courses.

Courses like Environmental Science, Indian Constitution, Induction Program are mandatory courses. These courses will not carry any credits.

Subject/ Course Classification

The College has followed almost all the guidelines issued by AICTE/ UGC All subjects/ courses offered for the UGP in E&T (B.Tech. degree programmes) are broadly classified as follows.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes mathematics, physics and chemistry subjects
2		ES - Engineering Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to humanities like English, social sciences and management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter- disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. project or UG project or UG major project or Project Stage I & II
8		Industrial training/	Industrial training/ Summer Internship
		Mini- project	Industrial Oriented Mini-project/ Mini-project
9		Seminar	Seminar based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor courses	-	1 or 2 Credit courses(subset of HS)
11	Mandatory Courses (MC)	-	Mandatory courses (non-credit)

4 COURSE REGISTRATION

A 'faculty advisor or counselor' shall be assigned to a group of 20 students, who will advise the students about the UGP, 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 go for **on-line** registration, **only after** obtaining the '**written approval**' from faculty advisor/ counselor, which should be submitted to the college 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 content.

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 **one 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

Professional Electives: The students have to choose six professional electives (PE-I to VI) from the list of professional electives given.

5 ELECTIVES COURSES TO BE OFFERED

An elective course may be offered to the students, **only** if a minimum of 20 students (1/3 of the sanctioned strength) opt for it. The maximum strength of a section is limited to 80 (4/3 of the sanctioned 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**.

6 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 class work aggregate of all the subjects/ courses (including attendance in mandatory courses like Environmental Science, Indian Constitution, Induction Program, sports/ NCC/ NSS etc) for that semester.

Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic council on genuine medical grounds, based on the student's representation with supporting evidence. To be submitted by the student as and when such requirement arises but not at the end of semester.

A stipulated fee shall be payable for condoning of shortage of attendance after obtaining in the condonation by college academic council.

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-admission 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-admission 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 semester.

7 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 Industry Oriented Mini Project/Summer Internship and seminar, 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 Industry Oriented 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 Industry Oriented Mini Project/Summer Internship and seminar evaluations.

A student may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such 'one reappearance' 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 18 credits out of 36 credits i.e., 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 47 credits out of 78 credits i.e., 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 73 credits out of 122 credits i.e., 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) fulfils 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 programme. 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 programme**), 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 totalling 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 eligible to appear in the end semester examination for any subject/ course, but absent for 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 fulfilment 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 credits.** The academic regulations under which the student has been readmitted shall be applicable to him.

8 EVALUATION - DISTRIBUTION AND WEIGHTAGE OF MARKS

The performance of a student in each Semester shall be evaluated Subject-wise (irrespective of Credits assigned) with a maximum of 100 marks for Theory or Practical's or Seminar or Drawing/ Design or Industry oriented Mini-Project or Minor Course, etc; however, the B.Tech. Project Work (Major Project) will be evaluated for 200 Marks. These evaluations shall be based on 30% CIE (Continuous Internal Evaluation) and 70% SEE (Semester End Examination), and a Letter Grade corresponding to the % marks obtained shall be given.

For all Subjects/ Courses as mentioned above, the distribution shall be 30 marks for CIE, and 70 marks for the SEE. The semester end examinations will be conducted for 70 marks consisting of two parts viz. i) **Part-A** for 20 marks (10 x 2 marks), ii) Part-B for 50 marks. **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.

- a) For Theory Subjects (inclusive of Minor Courses), during the Semester, there shall be 2 mid-term examinations for 25 marks each. Each mid-term examination consists of one objective paper for 10 marks, plus one subjective paper for 15 marks, with duration of 120 minutes (20 minutes for objective and 100 minutes for subjective papers). Further, there will be an allocation of 5 marks for Assignment. Objective paper may be set with multiple choice questions which include Assertion and reason, fill-in the blanks, matching type questions, etc. Subjective paper shall contain 5 questions, out of which the Student has to answer 3 questions, each for 5 marks.

- b) The first mid-term examination shall be conducted for the first 50% of the syllabus, and the second mid-term examination shall be conducted for the remaining 50% of the syllabus.
- c) First Assignment should be submitted before the conduct of the first mid-term examinations, and the Second Assignment should be submitted before the conduct of the second mid-term examinations. The Assignments shall be as specified by the concerned subject teacher.
- d) The first mid-term examination Marks and first Assignment Marks shall make one set of CIE Marks, and the second mid-term examination Marks and second Assignment Marks shall make second set of CIE Marks; and the 80% of better mid should be given to of these two sets of marks shall be taken as the final marks secured by the Student towards Continuous Internal Evaluation in that Theory Subject.

For Practical Subjects, there shall be a Continuous Internal Evaluation (CIE) during the Semester for 30 internal marks, and 70 marks are assigned for Lab./Practical End Semester Examination (SEE). Out of the 30 marks for internals, day-to-day work in the laboratory shall be evaluated for 20 marks; and for the remaining 10 marks - (one internal practical test) shall be conducted by the concerned laboratory teacher. The SEE for Practical's shall be conducted at the end of the Semester by Two Examiners appointed by Head of the Department.

For the Subjects having Design and/or Drawing, (such as Engineering Graphics, Engineering Drawing, Machine Drawing, Production Drawing Practice, and Estimation), the distribution shall be 30 marks for CIE (20 marks for day-to-day work, and 10 marks for internal tests) and 70 marks for SEE. There shall be two internal tests in a Semester and the better of the two shall be considered for the award of marks for internal tests.

- a) There shall be an Industry oriented Mini-Project/Summer Internship, in collaboration with an Industry of the relevant specialization, to be registered immediately after III Year II Semester examinations, and taken up during the summer vacation for about eight weeks duration.
- b) The Industry oriented Mini-Project/Summer Internship shall be submitted in a Report form, and a presentation of the same shall be made before a Committee, it should be evaluated for 100 marks. The Committee shall consist of Head of the Department, the guide of Mini-Project and a Senior Faculty Member of the Department. **There shall be no internal marks for** Industry oriented Mini-Project/Summer Internship. The Industry oriented Mini-Project/Summer Internship shall be evaluated in the IV Year I Semester.

There shall be a Seminar Presentation in IV Year I Semester. For the Seminar, the student shall collect the information on a relevant specialized topic, prepare a Technical Report and submit to the Department at the time of Seminar Presentation. The Seminar Presentation (along with the Technical Report) shall be evaluated by Two Faculty Members assigned by Head of the Department, for 100 marks. **There shall be no SEE or external examination for Seminar.**

If the student fails to present the Seminar as required in the IV year I Semester He may reappear for the seminar when they are scheduled again (within one month); if he fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent Semester, as and when it is scheduled.

For NCC/ NSS/ NSO types of Courses, and/or any other Mandatory Non-Credit Course offered in a Semester, a 'Satisfactory Participation Certificate' shall be issued to the Student from the concerned authorities..

Each Student shall start the Project Work during the IV Year I Semester, as per the instructions of the Project Guide assigned by the Head of Department. For Project Stage-I, the departmental committee consisting of Head of the Department, project supervisor and a senior faculty member shall evaluate the project work for 70 marks and project supervisor shall evaluate for 30 marks.

The student is deemed to have failed, if he/she (i) does not submit a report on Project Stage - I or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) secures less than 40% marks in the sum total of the CIE and SEE taken together. A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he/she fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled. For Project Stage – II, the external examiner shall evaluate the project work for 70 marks and the project supervisor shall evaluate it for 30 marks. The topics for industrial oriented mini project, seminar and Project Stage–I shall be different from one another. The student is deemed to have failed, if he/she (i) does not submit a report on Project Stage - II, 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 of student's performance throughout the Project Work period), and the other 30 marks shall be awarded by a Departmental Committee consisting of Head of the Department and Project guide, based on the work carried out and the presentation made by the Student at the time of Viva-voce Examination.

No marks or letter grades shall be allotted for mandatory/non-credit courses. Only Pass/Fail shall be indicated in Grade Card.

9 GRADING PROCEDURE

Grades will be awarded to indicate the performance of students in each theory subject, laboratory/practicals, seminar, Industry Oriented Mini Project, and project Stage - I & II. 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	Letter Grade	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 considered ‘failed’ and is required to reappear as a ‘supplementary student’ in the semester end examination as and when conducted. 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 conducted. 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.

In general a student shall not be permitted to repeat any subject/course(s) only for the sake of ‘Grade Improvement’ or ‘SGPA/CGPA Improvement’. However, he has to repeat all the Subject/Courses pertaining to that Semester when he is detained due to shortage of attendance.

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 subject/course

A student passes the subject/ course only when **GP ≥ 5 (‘C’ grade or above)**

The Semester Grade Point Average (SGPA) is calculated by dividing the sum of credit points ($\sum CP$) secured from all subjects/ courses registered in a semester, by the total number of credits registered during that semester. SGPA is rounded off to two decimal places. SGPA is thus computed as

$$SGPA = \frac{\{\sum_{i=1}^N C_i G_i\}}{\{\sum_{i=1}^N C_i\}} \text{ ----for each semester}$$

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_i is the no. of credits allotted to the i^{th} subject, and G_i 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

$$CGPA = \frac{\{\sum_{j=1}^M C_j G_j\}}{\{\sum_{j=1}^M C_j\}} \text{ --- ... for all S semesters registered}$$

(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 j^{th} subject, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that j^{th} 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

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

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. Programme.

For merit ranking or comparison purposes or any other listing, only the 'rounded off' values of the CGPAs will be used.

For calculations listed in regulations 9.7 to 9.10, performance in failed subjects/ courses (securing F grade) will also be taken into account, and the credits of such subjects/ courses will also be included in the multiplications and summations. After passing the failed subject(s) newly secured letter grades will be taken into account for calculation of SGPA and CGPA. However, mandatory courses will not be taken into consideration.

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.

10 **PASSING STANDARDS**

A student shall be declared successful or 'passed' in a semester, if he secures a $GP \geq 5$ ('C' grade or above) in every subject/course in that semester (i.e. when the student gets an $SGPA \geq 5.00$ at the end of that particular semester); and he shall be declared successful or 'passed' in the entire under graduate programme, only when gets a $CGPA \geq 5.00$ for the award of the degree as required.

After the completion of each semester, a grade card or grade sheet (or transcript) 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, SGPA, and CGPA from I year II semester onwards

A Student shall be declared successful or 'passed' in any Non-Credit Subject/course, if she/he secures a 'Satisfactory Participation Certificate' for that Mandatory Course.

11 **DECLARATION OF RESULTS**

Computation of SGPA and CGPA are done using the procedure listed in 9.7 to 9.10.

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**

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.

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

A student with final CGPA (at the end of the under graduate programme) ≥ 7.5 and fulfilling the following conditions - shall be placed in '**first class with distinction**'.

(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 ≥ 7.5 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 end semester examinations in any semester due to shortage of attendance or any other reason.

A student not fulfilling any of the above conditions with final CGPA > 7.5 shall be placed in '**first class**'.

Students with final CGPA (at the end of the under graduate programme) ≥ 6.50 but < 7.5 shall be placed in '**first class**'.

Students with final CGPA (at the end of the under graduate programme) ≥ 5.50 but < 6.50 , shall be placed in '**second class**'.

All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the under graduate programme) ≥ 5.00 but < 5.50 , shall be placed in '**pass class**'.

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

Students fulfilling the conditions listed under item 12(i,ii,iii) alone will be eligible candidate for '**first class with distinction**' '**University Rank**' and '**Gold Medal**' considerations.

13 WITHHOLDING OF RESULTS

If the student has not paid the fees to the University/ College 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 TRANSITORY REGULATIONS (to be in line with University regulations)

Student who has discontinued for any reason, or has been detained for want of attendance or lack of required credits as specified, or who has failed after having undergone the Degree Programme, may be considered eligible for readmission to the same Subject/Courses (or equivalent Subjects/ Courses, as the case may be), and same Professional Electives/Open Electives (or from set/category of Electives or equivalents suggested, as the case may be) as and when they are offered (with the time-frame of 8 years from the Date of Commencement of his I Year I Semester).

15 STUDENT TRANSFERS

16 STUDENT TRANSFERS

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

There shall be no transfers among the constituent colleges and units of Jawaharlal Nehru Technological University Hyderabad.

**MALPRACTICES RULES
DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS**

	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 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 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 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 And forfeit their seats. In case of outsiders, they will be handed over to the police and a Police case is registered against them.
	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.	
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 University 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. Police case will be registered.

9.	If 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 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. 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 Principal for further action to award a suitable Punishment.	

Malpractices identified by squad or special invigilators

1. Punishments to the students as per the above guidelines.

17 Scope

- i) Where the words “he”, “him”, “his”, occur in the write-up of regulations, they include “she”, “her”, “hers”.
- ii) Where the words “Subject” or “Subjects”, occur in these regulations, they also imply “Course” or “Courses”.
- iii) The Academic Regulations should be read as a whole, for the purpose of any interpretation.
- iv) In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor/Principal is final.
- v) The College 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 Authorities.



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
COLLEGE OF ENGINEERING HYDERABAD (AUTONOMOUS)

Kukatpally, Hyderabad-500085, Telangana (India).

Academic Regulations for B.Tech. (LateralEntry Scheme) from the AY 2022-23

1. Eligibility forward 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.
- The student shall register for 124 credits and secure 124 credits with CGPA ≥ 5 from II year to IV year B.Tech. programme (LES) for the award of B.Tech. degree.
 - The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.
 - The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

5. Promotionrule

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 25 credits out of 42 credits i.e., 60% 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 52 credits out of 86 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.

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