



J.B. INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS)

Bhaskar Nagar, Yenkapally (V), Moinabad (M), Hyderabad – 500075, Telangana, India

Academic Regulations– JBIET - R20

Applicable to

B.Tech Regular Four Year Degree Programme

(For the Batches admitted from the Academic Year 2020- 2021)

&

B.Tech (Lateral Entry Scheme)

(For the Batches admitted from the Academic Year 2021- 2022)





J.B. INSTITUTE OF ENGINEERING AND TECHNOLOGY

UGC AUTONOMOUS

ACADEMIC REGULATIONS R-20 FOR B. Tech (REGULAR) (CHOICE BASED CREDIT SYSTEM)

Applicable for the Students of B. Tech (Regular) admitted from the Academic Year 2020-21

1.0 UNDER-GRADUATE DEGREE PROGRAMME IN ENGINEERING & TECHNOLOGY (UGP IN E&T)

J. B. Institute of Engineering and Technology (JBIET) offers a **4-Year (8 Semesters)** Bachelor of Technology (B. Tech.) Degree Programme, under Choice Based Credit System (CBCS) in the following branches of Engineering with effect from the academic year 2020-21.

S.No.	Branch
1	Civil Engineering (CE)
2	Electrical and Electronics Engineering (EEE)
3	Mechanical Engineering (ME)
4	Electronics and Communication Engineering (ECE)
5	Computer Science and Engineering (CSE)
6	Information Technology (IT)
7	Electronics and Computer Engineering (ECM)
8	Mining Engineering (MIE)

ELIGIBILITY FOR ADMISSION

Admission to the under graduate (UG) programme 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 (EAMCET) or the University or on the basis of any other order of merit approved by the College, subject to reservations as prescribed by the government from time to time.

The medium of instructions for the entire Under Graduate Programme in Engineering & Technology is English only.

B.TECH. PROGRAMME STRUCTURE

Duration of the UG Program

Minimum Duration: The minimum (normal) duration of the B. Tech. Programme for the student securing admission under Regular mode is **Four Academic Years (8 Semesters)** and for the student admitted under **Lateral Entry Scheme** is **Three Academic Years (6 Semesters)** Starting from the commencement of the First Year First Semester.

Maximum Duration: A student admitted under Regular mode shall complete the B. Tech. Programme in a maximum period of **Eight Academic Years (16 Semesters)** and the student admitted under **Lateral Entry Scheme** shall complete the B. Tech. Programme in a maximum period of **Six Academic Years (12 Semesters)** starting from the date of commencement of First Year First Semester.

However, student is permitted to write the examinations for **Two more Academic Years** after the Maximum Duration of course work as mentioned in 3.2, failing which he/she shall forfeit his / her seat in B. Tech course.

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 is having „Continuous Internal Evaluation (CIE)“ and „Semester End Examination (SEE)“ under Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) as indicated by UGC. The guidelines issued by JNTUH and AICTE are followed while designing curriculum/course structure.

Credit courses: The student has to register for all the courses offered in a Semester. The credits assigned for each course are indicated in an L: T: P/D: C (Lecture periods: Tutorial periods: Practical/Drawing periods: Credits) pattern as follows:

- One credit for one hour/ week for Theory/ Lecture (L) courses or Tutorials (T).
- One credit for two hours/ week for Laboratory/ Practical (P) & Drawing (D) courses.

Mandatory Courses and Audit Courses will not carry any credits.

Subject Course Classification: All subjects/ courses offered for the Under Graduate Programme in E&T (B. Tech. degree programme) 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-Engg Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to Humanities, Social sciences and Management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5		Project	B.Tech. project or UG project or UG major project or Project Stage I & II
6		Industrial training/ Mini- project	Industrial training/ Summer Internship/ Industry Oriented Mini-project/Mini-project
7	Elective Courses (E&C)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
8		OE – Open Electives	Elective subjects which include inter- disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Audit Courses (AC)	-	Value Added Course / Audit Courses (Non-Credit)
11	Mandatory Courses (MC)	-	Mandatory Courses (Non-credit)

Typical Breakup of Credits for each Category

S.No.	Category	Breakup of Credits
1	Humanities and Social Sciences (HS) including Management.	10
2	Basic Sciences (BS) Courses including Mathematics, Physics and Chemistry.	23
3	Engineering Sciences (ES) - Courses including Workshop, Drawing, Basics of Electrical / Electronics / Mechanical / Computer Engineering.	22
4	Professional Core (PC)-Courses relevant to the chosen specialization / branch.	60
5	Professional Electives (PE)-Courses relevant to the chosen specialization / branch.	18
6	Open Elective (OE) - Courses from other technical and / or emerging subject areas.	12
7	Mini-project / Project Work / Internship / Industrial training / Seminar	15
8	Mandatory Courses / Audit Courses.	Non-Credit
TOTAL		160

COURSE REGISTRATION

A Faculty Advisor is assigned to I, II, III and IV years in every branch of engineering, who will advise the students about the Under Graduate Programme, 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 all Eligible students through their concerned departments before beginning of the Semester through a well defined registration process. Registrations for coming semesters shall be completed before the commencement of SEE of the preceding semester. It is mandatory for the student to register for courses as per his course

structure in time. Students shall be allowed to register, only if he/she has cleared all the pending fee dues for all the previous semesters including the current semester

A student can apply for registration, only after obtaining the written approval from faculty advisor, 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 and the student.

Registration for Additional Online SWAYAM/MOOCs: 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.

However, the additional credits scored shall not be considered for award of division and also not considered for calculation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA). For such extra course(s) registered, a certificate will be issued with a letter grade indicated as a performance measure.

Choice for additional subjects/ courses must be clearly indicated, which needs the specific approval and signature of the faculty advisor/ counselor.

A student is allowed to register for 160 credits in completion of B.Tech programme. However, they can register for additional credits (above 160 credits). The additional credits scored shall not be considered for award of division and also not considered for calculation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA). For such extra course(s) registered, a certificate will be issued with a letter grade indicated as a performance measure.

If the student submits ambiguous choices or multiple options or erroneous entries during 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 while 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 requisite number of open electives (as prescribed in the course structure) from the list of open electives. 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 requisite number of professional electives (as prescribed in the course structure) from the list of professional electives.

ELECTIVESUBJECTS/ COURSES TO BE OFFERED

A typical section (or class) strength for each semester is 60.

A subject / course may be offered to the students, only if a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).

More than one faculty member may offer the same subject (lab / practical may be included along with the corresponding theory subject in the same semester) in any semester. However, the selection of choice for students will be based on - „first come, first serve basis and CGPA criterion“.

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 (Professional Elective and Open Electives) 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“.

ATTENDANCE REQUIREMENTS

A student is 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 and Audit Courses) for that semester. The attendance of Mandatory and Audit Non-Credit Courses should be maintained separately. 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(CAC) on genuine and valid grounds, based on the student's representation with supporting evidence.

A stipulated Condonation fee as decided by the CAC is payable for condoning 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 will not be promoted to the next semester and no grade allotments or SGPA/ CGPA calculations will be done for such students for the entire semester in which they have been detained.

A student detained in a semester due to shortage of attendance may be readmitted in the same semester as and when offered in the forthcoming academic years for fulfillment of academic requirements. **The academic regulations under which a student has been readmitted shall be applicable.**

A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

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 minimum academic requirements and earned the credits allotted to each subject/ course/ Laboratories/ Project Stage-II etc. having both SEE and CIE, if he/she secures not less than 35% of marks (24 out of 70 marks) in the semester end examination and a minimum of 40% of marks in the sum total of the continuous internal evaluation (CIE) and semester end examination (SEE) taken together.

A student is deemed to have fulfilled the minimum academic requirements and earned the credits allotted to subjects having only internal evaluation (CIE), such as Internships / Industry Oriented Mini Project / Seminar / Project Stage - I if the student secures not less than 40% marks in each of them. However, a student who fails to secure minimum 40% marks or abstains from such

subjects; he/ she will be permitted to reappear before the Departmental Committee as and when it is arranged.

The student shall be deemed to have failed to earn the credits allotted to subjects having only internal evaluation (CIE), if he (i) does not submit a report on Industrial Oriented Mini Project/Summer Internships, Project Stage-I or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar or (iii) secures less than 40% marks in Industrial Oriented Mini Project/Summer Internship and seminar evaluations.

Such failed students may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such „one reappearances“ evaluation also, the student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

Promotion Rules for Regular Students

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 19 credits out of 38 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 40 credits out of 80 credits i.e., 50% 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 61 credits out of 122 credits i.e., 50% 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.

Promotion Rules for Lateral Entry Students

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 21 credits out of 42 credits i.e., 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 42 credits out of 84 credits i.e., 50% 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.

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 $SGPA \geq 5.0$ (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).

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 similar to other subjects/ courses** .

A Student 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 regulation under which a student readmitted is 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 regulation under which the student has been readmitted shall be applicable to him.

A student who fails to earn all the 160 credits as indicated in the Program structure within **Eight Academic Years** of course of study from the year of admission plus Two More Academic years given for appearing in supplementary examinations(i.e. total 10 years), shall forfeit his seat in B.Tech Program.

EVALUATION - DISTRIBUTION AND WEIGHTAGE OF MARKS

The performance of a student in all theory and Laboratory courses shall be evaluated for 100 marks each, with 30 marks allotted for Continuous Internal Evaluation (CIE) and 70 marks for Semester End-Examination (SEE).The details of course-wise allotment of marks are given below (Table - 1)

Table 1. Distribution of Marks

S. No.	Course	Marks	
		CIE	SEE
1	Theory courses	30	70
2	Laboratory courses	30	70
3	Mandatory courses	30	70
4	Audit Courses	--	--
5	Internship- I	50	
6	Internship- II	50	
7	Mini Project	50	
8	Project Stage - I	50	
9	Seminar	50	
10	Project Stage - II	30	70

Continuous Internal Evaluation (CIE)

Theory Courses: Continuous Internal Evaluation (CIE) for theory courses has the following components.

S. No.	Component	Frequency of Evaluation	Marks for Each test	Final Marks (Average)
1	Mid-Term Examinations	2	20	20
2	Quiz Examinations	2	5	5
3	Assignments	5	5	5
Total				30

(a) **Mid-term Examinations (20 marks):** There shall be two Mid-Term Examinations of 60 minutes each. The First Mid-Term Examinations shall be conducted with syllabi from Units I & II and the Second Mid-Term Examinations shall be conducted with syllabi from Units III, IV & V. In each theory course, the question paper for the Mid-Term Examinations consists of four questions each for 5 marks with “either” / “or” option. There shall be a minimum of one question from each unit. A student is required to answer all four questions for maximum 20 marks. In final assessment, the average performance in the two Mid-Term Examinations shall be considered for awarding marks.

If a student is absent for any Mid-Term Examinations on medical grounds, he/she may be permitted to apply for makeup examinations within a week after completion of Mid-Term Examinations. A sub-committee with the following composition will look into such cases.

S. No.	Faculty Member	Designation
1	Concerned Head of the Department	Chairman
2	Faculty nominated by Principal	Member
3	Senior faculty member of the concerned Department	Member
4	Class Teacher of the class/section	Member

(b) **Quiz Examinations (5 marks):** Two Quiz Examinations of 20 minutes each shall be conducted with syllabi from Units I & II for the first and Units III, IV & V for the second. The Quiz Examination shall have 20 objective questions. In final assessment, the average performance of the student in two Quizzes shall be considered for awarding marks.

(c) **Assignments (5 marks):** There shall be one assignment from each unit. The average of better four assignments marks shall be considered for awarding marks. The assignments are used to test the student in Bloom's higher order thinking skills.

(d) For the courses like **Engineering Drawing**, the CIE shall be 30 marks out of which 15 marks for day-to-day work, 10 marks for each mid-term examination and 5 marks for Assignment. The question paper for the mid-term examination consists of 2 questions with "either" / "or" option. The student is required to answer 2 questions for maximum 10 marks in each mid-term examination with minimum of one question from each unit.

Laboratory Courses

(a) **Continuous Internal Evaluation (CIE):** The continuous internal evaluation for laboratory courses is based on the following parameters:

S. No.	Component	Marks
1	Day-to-Day Evaluation	20
2	Internal Examination	10
	Total	30

Semester End Examinations (SEE)

Theory Courses

The semester end examinations for theory courses (including **Engineering Drawing**) will be conducted for duration of 3 hours. In each course, the question paper shall consist of 5 questions, one from each Unit with either / or option, carrying 14 marks each. A student is required to answer all 5 questions for maximum 70 marks.

Laboratory Courses

The performance of the student in laboratory courses shall be evaluated for 70 marks jointly by Internal and External Examiners for 3 hours duration.

Internship

The students should undergo two Internships, viz, i) Internship-I on areas of Science/ Basic engineering with some social relevance. ii) Internship- II in an Industry of their branch of Engineering. The Internship must involve practical work related to Science/ Basic Engineering,

systems engineering, Industry practices etc. The duration of Internship shall be for a period of minimum 4 weeks continuously.

The Internship-I is to be taken up during the summer vacation after I Year II Semester Examination and it will be evaluated in II Year I semester for 50 marks. However, the process might be initiated before the end of I Year II Semester by the concerned department

The Internship-II is to be taken up during the summer vacation after II Year II Semester examination and it will be evaluated in III Year I semester for 50 marks. However, the process might be initiated before the end of II Year II Semester by the concerned department.

For both the Internships, the student shall submit a report on the training undergone, along with a certificate from the organization. The internships shall be evaluated by a three-member committee constituted by the Head of Department to assess the student performance on the following parameters. There shall be no Semester End Examinations for the Internships.

Parameter	Marks
Internship report	15
Quality of work	15
Presentation	15
Viva-Voce	5
Total	50

INDUSTRY ORIENTED MINI PROJECT

A student is required to undergo a Mini Project of his/her choice during the vacation after III Year II Semester Examination by applying theoretical concepts to develop a practical component/element /system that include design/ testing/ analysis. The performance of a student in the Mini Project shall be evaluated in IV Year I Semester by a three-member committee constituted by the HoD as per the following parameters:

Parameter	Marks
Mini Project report	15
Quality of work	15
Presentation	15
Viva-Voce	5
Total	50

The performance of a student in Mini Project shall be evaluated based on two reviews, each carrying 50 marks. The average marks of these two reviews will be awarded. There shall be no Semester End Examination for the Industry Oriented Mini Project.

SEMINAR

There is a Seminar in IV Year II Semester for 50 Marks. The student shall deliver a seminar on any emerging topic of his / her choice from the core technical domain. The student shall submit a duly certified Seminar report. A three-member committee constituted by the HoD will evaluate the Seminar report submitted by the student. There shall be no Semester End Examination.

Project Work

The student is required to undertake a Project Work by using the knowledge acquired by him / her during the course of study. The student is expected to design and build a complete system or subsystem on his / her area of interest. The Project Work consists of two parts namely, Project Stage -I (Project Survey) and Project Stage – II (Project Implementation). Project Stage – I is carried out during IV Year I Semester and the Project Stage – II during IV Year II Semester. A project work shall be taken up by a batch of students not exceeding 4 members under the guidance of a faculty supervisor.

For **Project Stage – I**, the Project Review Committee (PRC) consisting of Head of the Department, Project Coordinator, Project supervisor and one senior faculty member shall evaluate the Project Work for 50 marks. **There shall be no End Semester Evaluation for Project Phase-I.** The student is deemed to have failed, if he (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 (ii) secures less than 40% marks in the CIE.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he fails in such „one reappearances“ evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

For Project Stage – II, Project Review Committee (PRC) consisting of Head of the Department, Project supervisor, Project Coordinator and a senior faculty member shall evaluate for 30 marks as continuous evaluation. The External Examiner shall evaluate the Project work for 70 marks as Semester End Examination. The student is deemed to have failed, if he (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. The student is deemed to have failed, if he (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.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if student 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 conducting Viva-Voce of Project Stage – II, Principal selects the External Examiner from the list of experts in the relevant branch of engineering submitted by the concerned Head of Department.

Mandatory Courses (MC)

Mandatory courses are assessed for PASS or FAIL only. No credits will be assigned to these courses. If a student secures more than 40 out of 100 marks, he / she will be declared PASS, else FAIL. Only Pass/Fail is indicated in Grade Card. PASS grade is necessary to be eligible to get the degree.

Audit Courses (AC)

The audit courses offered provide ample scope for the students as well as faculty to keep pace with the latest technologies pertaining to their chosen fields of study. No credits will be assigned to these courses. A separate certificate will be issued by the Head of the institution on satisfactory completion of Audit Courses.

Massive Open Online Courses (MOOCs)

A student without backlog courses up to fifth semester shall be permitted to register BOS approved list of online / self-study course in lieu of the Professional Electives, Open Electives from Massive Open Online Courses (MOOCs) offered by SWAYAM / NPTEL / EdX / Coursera / Udacity / Udemy /upgrad/ Khan Academy / Edureka / QEEE etc . However, the syllabus of the MOOC course shall be approved by the concerned BOS. No formal lectures will be delivered for a self-study course.

One faculty member for each course shall be nominated as coordinator by the Department to monitor the progress made by the student. The coordinator need to carry out the conversion of grades awarded to the student in internal and external examinations by the Host institution into corresponding grades of Parent institution. If any student fails in successfully completing the MOOC course in the first attempt he/she must take the same subject/Substitute subject offered by

the college and successfully complete it in the examination conducted by the college in the subsequent semesters. The question paper pattern and evaluation process for the examination of such subjects for MOOC courses will be similar to that of any other theory course offered in the Institute.

GRADING PROCEDURE

Grades will be awarded to indicate the performance of students in each Theory subject, Laboratory / Practical, 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 is 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 is 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

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 Points (Σ 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 given below:

$$SGPA = \left(\sum_{i=1}^N C_i G_i \right) / \left(\sum_{i=1}^N C_i \right) \text{ For each Semester}$$

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.

$$CGPA = \left(\sum_{j=1}^M C_j G_j \right) / \left(\sum_{j=1}^M C_j \right) \text{ for all S number of semesters registered}$$

(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 x 8 = 32
Course 2	4	O	10	4 x 10 = 40
Course 3	4	C	5	4 x 5 = 20
Course 4	3	B	6	3 x 6 = 18
Course 5	3	A+	9	3 x 9 = 27
Course 6	3	C	5	3 x 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. Programme.

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 is 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 is declared successful or „**PASSED**“ in a semester, if he secures a GP ≥ 5 („C“ grade or above) in every subject/course in that semester (i.e. when the student gets an SGPA ≥ 5.00 at the end of that particular semester); and he is declared 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 is 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.) and credits earned.

11. DECLARATION OF RESULTS

Computation of SGPA and CGPA are done using the procedure listed in 10.3 to 10.6.

For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

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

Eligibility for award of B. Tech. Degree for Regular Students:

- i. 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 ≥ 5.0), within **8 Academic Years and Two more Academic Years for writing supplementary examinations** from the date of commencement of the First Academic Year, is declared to have „qualified“ for the award of B.Tech. Degree in the chosen branch of Engineering selected at the time of admission.
- ii. A student who qualifies for the award of the degree as listed in item 12.3 (i) is awarded with one of the classes mentioned in 12.5.

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

- i. 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**.
- ii. The student shall register for 122 credits and secure 122 credits with CGPA ≥ 5 from II Year to IV Year B. Tech. Programme (LES) for the award of B. Tech. degree.
- iii. The students, who fail to fulfill the requirement for the award of the degree in Six Academic Years from the year of admission. However, he/she is permitted to write the examinations for two more Academic Years after Six Academic Years of course work, failing which he/she shall forfeit his/her seat in B. Tech course.
- iv. The attendance requirement of B. Tech. (Regular) is also applicable to B. Tech. (LES).

A student with final CGPA (at the end of the Under Graduate Programme) ≥ 8.00 , and fulfilling the following conditions - is placed in „First Class with Distinction“.

However, he / she:

- (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.
- (iv) A student not fulfilling any of the above conditions with final CGPA > 8 is placed in First Class.

Students with final CGPA (at the end of the Under Graduate Programme) ≥ 6.50 but < 8.00 are placed in „First Class“. Students with final CGPA (at the end of the Under Graduate Programme) ≥ 5.50 but < 6.50 , are placed in „Second Class“. All other students who qualify for the award of the degree (as per item 12.3.1), with final CGPA (at the end of the Under Graduate Programme) ≥ 5.00 but < 5.50 , are 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 12.5 alone will be eligible for award of „Gold Medal“.

However any amendments related to 12.5 by JNTUH for award of class will be applicable accordingly.

WITHHOLDING OF RESULTS

If the student has not paid the fees to the 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. 0 STUDENT TRANSFERS

Transfer of students from other Colleges or Universities are permitted subjected to the rules and regulations of Telangana State Council for Higher Education (Technical Education Department) and JNTUH in vogue.

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 Academic Council is final.

The College may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made is applicable to all students with effect from the dates notified by the College authorities.

Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.

16. MALPRACTICES RULES

DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

S. No.	Nature of Malpractices/Improper conduct	Punishment
1. (a)	<p>If the student:</p> <p>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)</p>	<p>Expulsion from the examination hall and cancellation of the performance in that subject only.</p>
1. (b)	<p>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.</p>	<p>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.</p>

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.
3.	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 End examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
4.	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.

<p>5.</p>	<p>Refuses to obey the orders of the chief superintendent/assistant superintendent/ any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.</p>	<p>In case of students of the college, they is 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.</p>
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6.	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 End examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
7.	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.
8.	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 police and, a police case will be registered against them.

9.	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 including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/yea
10.	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 including practical examinations and project work of that semester/year examinations.
11.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be referred to the Malpractice Committee for further action and to award suitable punishment.	

