ACADEMIC REGULATIONS

***For***

**5 YEAR INTEGRATED DUAL DEGREE PROGRAM (I.D.P)**

**Leading to (B.Tech & M.Tech)**

***(Applicable for the batches admitted from 2021-2022)***

**JNTUH COLLEGE OF ENGINEERING HYDERABAD**

***(Autonomous)***

Kukatpally, Hyderabad – 500085 Telangana, India



#  JNTUH COLLEGE OF ENGINEERING HYDERABAD

**(Autonomous)**

**Kukatpally, Hyderabad-500 085**

# ACADEMIC REGULATIONS 2021 FOR CBCS BASED 5 YEAR INTEGRATED DUAL DEGREE PROGRAM (B.Tech & M.Tech)

(Effective for the students admitted into B.Tech from the Academic Year **2021-2022** onwards)

# 5 Year Integrated Dual Degree Program in Engineering & Technology (IDP)

JNTUH offers 5 Year (10 Semesters) Integrated Dual Degree (IDP) Programme, under Choice Based Credit System (CBCS) at its Constituent Autonomous College - JNTUH College of Engineering Hyderabad, with effect from the Academic Year 2018 - 19 onwards, in the following branches of engineering as listed in Table 1.

**Table 1. UG and PG Programmes Offered by JNTUH CEH**

|  |  |  |
| --- | --- | --- |
| **S.No.** | **UG Programme** | **PG Programme** |
| 1. | B.Tech in Civil Engineering | M.Tech in Structural Engineering |
| 2. | B.Tech in Electrical and Electronics Engineering | M.Tech in Power Electronics |
| 3. | B.Tech in Mechanical Engineering | M.Tech in Manufacturing Systems |
| M.Tech in Thermal Engineering |
| 4. | B.Tech in Electronics and Communication Engineering | M.Tech in Communications and Signal Processing |
| 5. | B.Tech in Computer Science and Engineering | M.Tech in Computer Science |

 ***(\* A Minimum of 50% of students is necessary for any specialization to be offered.)***

A student shall be conferred with the B.Tech degree and M.Tech degree in the IDP, after the successful completion of all the requirements for the 10 semesters of study and earning the appropriate credits.

# 2. Eligibility for Admission

Admission to the IDP 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 University, subject to reservations as prescribed by the Government from time to time.

* 1. The medium of instructions for the entire IDP in B.Tech+M.Tech will be in ENGLISH only.
	2. Students opting for the 5 year IDP must specify their choice for M.Tech (Within the specializations given above) after choosing the appropriate branch of engineering at the time of admissions only. Option thus exercised is final and cannot be changed during the study period.

2.3 Students opting for 5 year IDP have to study for the specified period to earn the relevant credits for the award of both the B.Tech and M.Tech degrees, and they will not be permitted to have a choice for B.Tech degree alone after 4 years of study.

# 3. Structure of IDP Programme (B.Tech+M.Tech)

The IDP programmes of JNTUH-CEH are of semester pattern, with 10 semesters of 5 academic years where each academic year is of two semesters (first/odd and second/even semesters). Each semester shall be of 22 weeks duration (inclusive of examinations), with a minimum of 90 instructional days per semester.

# 3.1. Semester Scheme:

Each Semester has ‘Continuous Internal Evaluation (CIE)’ and ‘Semester End Examination (SEE)’. Choice Based Credit System (CBCS) as denoted by UGC shall be implemented.

# 3.2. Credit System:

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).
* One credit for two hours/ week/semester for laboratory/ practical (P) courses.
* Other student activities like study tour, guest lecture, conference/workshop participations, technical paper presentations and mandatory courses **(Non-credit Audit Courses)** will not carry any credits.

# 3.3. Subject/Course Classification:

All subjects/courses offered for the Under Graduate Programme (UGP) are broadly classified as:

(a) Foundation Courses (FC), (b) Core Courses (CC), (c) Elective Courses (EC), and (d) Mandatory Courses (MC)

* **Foundation Courses (FC)** are further categorized as: (a) HS (Humanities and Social Sciences), (b) BS (Basic Sciences), and (c) ES (Engineering Sciences)
* **Core Courses (CC) and Elective Courses (EC)** are categorized as: (a) PC (Professional/Departmental Core) Subjects, (b) PE (Professional/Departmental Electives), (c) OE (Open Electives) and (d) Project Works (PW)
* **Mandatory Courses** are non-credit courses

# 3.4. Course Nomenclature:

Every course of the B.Tech and M.Tech will be placed in one of the following categories listed in Table 2.

**Table 2. Category of Courses**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **UG/PG Programme** | **Category** | **Description** |
| 1. | UG | BS-Basic Sciences | Includes Mathematics, Physics and Chemistry Subjects |
| 2. | UG | ES-Engineering, Arts and Sciences | Includes fundamental engineering subjects |
| 3. | UG | HS – Humanitiesand Social Sciences | Includes subjects related to Humanities,Social Sciences and Management |
| 4. | UG | PC – Professional Core | Includes core subjects related to the parent discipline, department or branch of engineering |
| 5. | UG | PE – Professional Electives | Includes elective subjects related to the parent discipline/department/ branch of engineering |
| 6. | UG | OE – Open Electives | Elective subjects which include inter- disciplinary subjects or subjects in an area outside the parent discipline/department/branch of engineering |
| 7. | UG | Project | B.Tech Project/UG Project/UG Major Project |
| 8. | UG | Industrial Training/Mini Project | Industrial Training/Internship/UG Mini Project/Mini Project |
| 9. | PG | PGC | PG Core subjects related to the M.Tech specialization |
| 10. | PG | PGE | PG Elective subjects related to the M.Tech specialization |
| 11. | PG | Project |  M.Tech Project or PG Project |

# 4. Course Work

# 4.1. A student, after securing admission, shall pursue the IDP (B.Tech+M.Tech) in a minimum period of 5 academic years, and a maximum period of 10 academic years (starting from the date of commencement of I Year). The entire course of study is of five academic years, comprising of 10 semesters.

4.2. Each student shall register for and secure the specified number of credits required for the completion of the IDP and award of the B.Tech+M.Tech degree in respective branch of engineering.

4.3. The student must secure a total of 212 credits for the IDP - 151 credits for the B.Tech degree programme and 61 credits for the M.Tech programme.

4.3. The course work and curriculum for first 3 years (6 Semesters) will be same as that of the regular B.Tech (4 year) in the relevant branch of engineering.

# 5. Course Registration

5.1. A ‘Faculty Advisor or Counselor’ shall be assigned to each student, who will advise him about the IDP, its Course Structure and Curriculum, Choice/Option for Subjects/ Courses, based on his competence, progress, pre-requisites and interest.

5.2. Academic Section of the college invites ‘Registration Forms’ from students before the beginning of the semester, through ‘ON-LINE SUBMISSIONS’, ensuring ‘DATE and TIME Stamping’. The requests of ON-LINE registrations for the ‘CURRENT SEMESTER’ shall be completed BEFORE the commencement of SEEs (Semester End Examinations) of the ‘PRECEDING SEMESTER’.

5.3. A Student can apply for ON-LINE registration, ONLY AFTER obtaining the ‘WRITTEN APPROVAL’ from his Faculty Advisor, which should be submitted to the College Academic Section through the Head of Department (a copy of the same being retained with the Head of the Department, Faculty Advisor and the Student).

5.4. A student is permitted to register for Subjects/Courses of his/her CHOICE as indicated in the Table 3 below. Up to III year II semester a deviation of ± 17% of total credits per semester is allowed and thereafter up to V year I semester a deviation of ± 14% of total credits per semester is allowed, based on the progress of the student i.e., based on SGPA/CGPA, and fulfillment of the prerequisites of the selected Subjects/Courses. However, a student must register for Subjects/Courses in V year II semester with a total of 16 credits per semester. The student should register for Subjects/Courses ensuring MINIMUM credits per semester for enrolling in any semester.

**Table 3. Minimum Credits Required and Maximum Credits allowed for Registration in a Semester**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year and Semester** | **Total Credits per Semester** | **Minimum credits required** | **Maximum credits allowed** |
| I Year I Semester | 18 | 15 | 21 |
| I Year II Semester | 18 | 15 | 21 |
| II Year I Semester | 21 | 17 | 25 |
| II Year II Semester | 21 | 17 | 25 |
| III Year I Semester | 22 | 18 | 26 |
| III Year II Semester | 22 | 18 | 26 |
| IV Year I Semester | 26 | 22 | 30 |
| IV Year II Semester | 27 | 23 | 31 |
| V Year I Semester | 21 | 18 | 24 |
| V Year II Semester | 16 | 16 | 16 |

5.5. **Open Electives:** Students are to register an Open Elective (OE-I) during III year II semester, an Open Elective (OE-II) during IV year I semester, and a PG Open Elective (OE (PG) –I) in V year I semester from the list of Open Electives given. However, a student cannot opt for an Open Elective offered by the parent department, if it is already listed under any category of the subjects offered by parent department in any semester.

5.6. A student shall register for an Industry-Oriented Mini-Project/Sumer Internship/Seminar under UG course, in collaboration with industry immediately after III year II semester examinations under the guidance of a Project Supervisor assigned by the Head of the Department.

5.7. A student shall register for the UG Major Project during the IV year I semester, as per the instructions of the Project Guide/ Project Supervisor assigned by the Head of Department and shall continue through IV year I and II semesters.

5.8. The topics for Industry-Oriented Mini-Project/Summer Internship/Seminar and the UG Major Project shall be different from one another.

5.9. a) The PG Project shall start immediately after the completion of the IV year II semester, and shall continue through V year I and II semesters under the supervision of the Project Guide/Project Supervisor assigned by the Head of Department. The student shall register for the PG Project within four weeks after the completion of IV year II semester. The student shall carry out literature survey, and present the project proposal in consultation with Project Supervisor to the PRC during PRC-I for project approval within 6 weeks after the completion of IV year II Semester. The student can initiate the PG Project work only upon obtaining the approval of the Project Review Committee (PRC) in PRC-I. The student can submit the final PG Project dissertation not earlier than 40 weeks from the date of approval.

 b) The student can change the topic of PG Project or the Project Supervisor with the approval of the PRC. However, the PRC shall examine whether or not the change of the topic/supervisor leads to major changes of the student’s initial plans of project proposals. If so, the student’s date of approval for the PG Project work shall be the date of change of topic or supervisor as the case may be and the student can submit the final PG Project dissertation upon completion of 40 weeks from the new date of approval.

5.10. The choice for additional Subjects/Courses to reach the Maximum Permissible Limit of 21/24/25/26/30/31 credits (above the typical 18/21/21/22/26/27 credit norm) must be clearly indicated, which needs the specific approval and signature of the Faculty Advisor/ Counselor.

* 1. If the student submits ambiguous choices or multiple options or erroneous entries - during ON-LINE registration for the Subject(s)/Course(s) under a specified Course Group/Category as listed in the Course Structure, only the first mentioned Subject/Course in that Category will be taken into consideration.
	2. Subject/Course options exercised through ON-LINE registration are final and CANNOT be changed. However, if the Subject/Course that has already been listed for registration (by the Head of Department) in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to exercise an alternative choice - either a new subject (added in the list by the Head of the Department) or an existing subject (subject to availability of seats). Such alternative arrangements will be made by the Head of the Department, with due notification and time-framed schedule, within the FIRST WEEK from the commencement of class-work for that semester.
	3. Cancelation of registration of Subjects/Courses may be permitted, ONLY AFTER obtaining prior approval from the Faculty Advisor (subject to retaining a minimum of required credits) within 15 days from the beginning of the current semester.

# Subjects/ Courses offered by the Department

* 1. A Subject/Course may be offered by the department, only if a minimum of 1/3 of the class strength opt for the same. The maximum strength of a class is limited to 4/3 of the class strength.
	2. If more than maximum number of students opt for a Subject/Course, then the priority shall be given to students firstly on ‘first come first serve’ basis (i.e., based on the time of ON-LINE ENTRY) and secondly based on CGPA (student who has higher CGPA is given more preference).
	3. If more than maximum number of students opt for a Subject/Course, then the department can offer the Subject/Course by having multiple sections.
	4. More than one teacher may offer the same subject.
	5. In case of options coming from students of other Departments/ Branches/ Disciplines (not considering OPEN ELECTIVES), PRIORITY shall be given to the student of the ‘Parent Department’.

# Attendance Requirements

* 1. A student shall be eligible to appear for the Semester End Examinations up to III year II semester, if he acquires a minimum of 75% of attendance in aggregate of all the Subjects/Courses (excluding Mandatory or Non-Credit Courses) for that semester.

7.2. A student shall be eligible to appear for the Semester End Examination in a subject of IV/V year, I/II semester, if he acquires a minimum of 75% of attendance in that subject.

7.3. Shortage of attendance up to 10% (65% and above, and below 75%) can be condoned in each semester by the College Academic Committee on genuine and valid grounds, based on the student’s representation with supporting evidence. A stipulated fee is levied on students whose shortage of attendance is condoned.

7.4. Shortage of attendance below 65% in a semester shall in NO case be condoned.

7.5. Up to III year II semester, students whose shortage of attendance is not condoned in a semester are not eligible to appear for Semester End Examinations of the semester; they shall be detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester. They may seek re-registration for all the subjects registered in that semester in which the student got detained, by seeking re-admission for the semester as and when offered; in case if there are any Professional Electives and/or Open Electives, the same may also be re-registered if offered, however, if those electives are not offered in later semesters, then alternative electives may be chosen from the SAME set of elective subjects offered under that category.

7.5. Student from IV year I semester onwards, whose shortage of attendance is not condoned in a Subject, is not eligible to appear for Semester End Examination of that Subject; the student is detained in that subject and the registration for that Subject shall stand cancelled. The student may seek re-registration of detained Subjects as and when the Subject is offered by the Department.

7.6. When a student is detained due to shortage of attendance in any semester, he may be re- admitted into that semester, as and when offered, with the Academic Regulations of the Batch into which he gets readmitted. However, no Grade Allotments or SGPA/ CGPA calculations will be done for that entire Semester in which he got detained.

# 8. Academic Requirements

The following Academic Requirements have to be satisfied, in addition to the Attendance Requirements mentioned in Item No.**7.**

**8.1. UG Part**

* 1. (a) A student will not be promoted from I Year to II Year, unless he fulfills the Attendance and Academic Requirements and secures a total of 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.
	2. (b) A student will not be promoted from II Year to III Year, unless he fulfills the Attendance and Academic Requirements and secures a total of 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.
	3. (c) A student will not be promoted from III Year to IV Year, unless he fulfills the Attendance and Academic Requirements and secures a total of 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.

 (d) A student shall be deemed to have satisfied the Academic Requirements and earned the Credits allotted to each Subject/Course, if he secures not less than 35% marks in the Semester End Examination (SEE), and a minimum of 40% of marks in 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.

 (e) The Industry-Oriented Mini-Project/Summer Internship/Seminar shall commence after III year II semester and shall be completed during the summer vacation in eight weeks duration which will be evaluated in IV year I semester for a total of 100 marks.

 The student is deemed to have satisfied the academic requirements and earned the credits allotted to Industry-Oriented Mini Project/Summer Internship/Seminar if the student secures not less than 40% of total marks (i.e., 40 out of 100 marks) in the evaluation. The student is deemed to have failed if the student does not submit a report on Industry-Oriented Mini-Project/Summer Internship/Seminar, or does not make a presentation of the same before the evaluation committee as per schedule or secures less than 40% of 100 marks during evaluation.

 A student who has failed may reappear once for evaluation when it is scheduled again; if the student fails in the evaluation of “second appearance” also, the student has to reappear for the same in the subsequent semester as and when the evaluation is scheduled.

 (f) The student is deemed to have satisfied the academic requirements and earned the credits allotted to Project Stage-I if the student secures not less than 35% in SEE (25 marks out of 70 marks) and 40% in CIE and SEE taken together (i.e., 40 marks out of 100 marks).

 The student is deemed to have failed if the student does not submit a report on work carried out during Project Stage-I or does not make a presentation of the same before the evaluation committee as per schedule or secures less than minimum marks in SEE or CIE+SEE taken together.

 A student who has failed may reappear once for evaluation when it is scheduled again; if the student fails in the evaluation of “second appearance” also, the student has to reappear for the same in the subsequent semester as and when the evaluation is scheduled.

 (g) The student is deemed to have satisfied the academic requirements and earned the credits allotted to Project Stage-II if the student secures not less than 35% in SEE (i.e., 25 marks out of 70 marks) and 40% of CIE and SEE taken together (i.e., 40 marks out of 100 marks).

 The student is deemed to have failed if the student does not submit a report on work carried out during Project Stage-II or does not make a presentation of the same before the evaluation committee as per schedule or secures less than the minimum marks in SEE or CIE+SEE taken together.

 A student who has failed may reappear once for evaluation when it is scheduled again; if the student fails in the evaluation of “second appearance” also, the student has to reappear for the same in the subsequent semester as and when the evaluation is scheduled.

**8.2.** **PG Part**

 **(a)** A student shall be promoted from IV year to V year, if the student completes the UG Major Project satisfactorily and earns the prescribed number of credits in Project Stage I and II of UG Major Project by the end of IV year II semester.

 (b) A student shall be deemed to have satisfied the Academic Requirements and earned the Credits allotted to each Subject/Course, if he secures not less than 40% marks in the SEE, and a minimum of 50% of marks in CIE and SEE taken together; in terms of Letter Grades, this implies securing B Grade or above in that Subject.

 (c) A student shall be deemed to have satisfied the Academic Requirements and earned the Credits allotted to Dissertation Phase –I, if the student secures not less than 40% marks (28 marks out of 70 marks) in PRC-II (SEE) and a minimum of 50% marks (50 marks out of 100 marks) in CIE+SEE taken together. The Continuous Internal Evaluation for 30 marks is done by the Project Supervisor. A failed student should reappear for the Dissertation Phase-I during supplementary examinations.

 (d) The PG Project dissertation is eligible for final submission upon the approval of the PRC in PRC-III conducted in V year II semester. A student shall be deemed to have satisfied the Academic Requirements and earned the Credits allotted to Dissertation Phase-II, if the student secures a minimum of 40% marks (i.e., 40 marks out of 100 marks) in external viva-voce examination (SEE) and a minimum of 50% marks in CIE+SEE taken together (i.e., 100 marks out of 200). The CIE is done by the PRC for 50 marks in Project Review-III and the Project Supervisor for 50 marks.

 (e) PRC II and III will be conducted as per the schedule. The unsuccessful students of Dissertation Phase-I in V year I semester shall appear for PRC-II in the next semester i.e., V year II Semester as supplementary students at the time of PRC-III. These students shall upon successful completion of Dissertation Phase-I, can appear for PRC-III in the subsequent academic year at the time of PRC-II. Accordingly, the unsuccessful students of Dissertation Phase-II in V year II semester can appear for PRC-III in the first semester of the subsequent academic year at the time of PRC-II.

 (f) After successful completion of PRC-III, the dissertation should be submitted to the Head of the Department for the ANTI-PLAGIARISM check. The dissertation will be accepted for submission, if the similarity index is less than 30%. Otherwise, the student is advised to modify and re-submit the dissertation after one month. The maximum number of re-submissions of dissertation after plagiarism check is limited to TWO.

 (g) Furthermore, the student shall be allowed to submit the PG Project dissertation and appear for viva-voce examination only after successful completion of all the prescribed UG and PG subjects (Theory/Practical/Industry-Oriented Mini-Project/UG Major Project) securing B grade or above, and after obtaining all approvals from the PRC.

8.3. A Student shall - register for all Subjects covering 212 credits as specified and listed (in the Course/Subject classification mentioned) in the Course Structure, and satisfy the Attendance and Academic requirements for 212 Credits securing a minimum of P / B Grade (Pass Grade) or above in each Subject. The student shall earn ALL 212 Credits securing SGPA $\geq $ 5.0 / 6.0 (in each semester), and CGPA (at the end of each successive Semester) $\geq $ 5.0/ 6.0, to successfully complete the UGP and PGP respectively.

8.4. If a student registers for extra subjects (offered by the parent department or other departments) other than the listed subjects specified in the course structure, the performance in those extra subjects (although evaluated and graded using the same procedure as that of the required 212 credits) will not be taken into account while calculating the SGPA and CGPA. For 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 Items 7 and 8.1 – 8.3 above.

8.5. Students who fail to earn 212 credits as per the Course Structure, and as indicated above, within 10 Academic Years from the Date of Commencement of their I Year shall forfeit their seats in IDP Programme and their admissions shall stand cancelled.

8.6. When a student is detained due to lack of credits in any year, he may be readmitted in the next year, after fulfillment of the Academic Requirements, with the Academic Regulations of the Batch into which he gets readmitted.

8.7. A student eligible to appear in the Semester End Examination in any Subject/ Course, but is absent or failed (thereby failing to secure P Grade or above), may reappear for that Subject/Course in the supplementary examination/SEE as and when conducted. In such cases, his Internal Marks assessed earlier for that Subject/Course will be carried over, and added to the Marks obtained in the supplementary examination/SEE, for evaluating his performance in that Subject.

# 9. Evaluation - Distribution and Weightage of Marks

**9.1 UG Part**

 **(a)** The performance of a student in each semester shall be evaluated subject-wise for 100 marks in each of Theory, Practical, Minor Course, Drawing/Design, Project Stage-I and Project Stage II; For all Subjects/Courses mentioned, the distribution shall be 30 marks for CIE, and 70 marks for the SEE; and a Letter Grade corresponding to the % of marks obtained shall be given.

 (b) 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 an objective paper for 10 marks, and a 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, True/ False, fill-in the blanks, matching the following, etc. Subjective paper shall contain 5 questions, out of which the student has to answer 3 questions, each for 5 marks.

 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.

 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 given by the concerned subject teacher.

 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 better 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.

 (c) For Practical Subjects, there shall be a Continuous Internal Evaluation (CIE) during the Semester for 30 internal marks and a Semester End Examination for 70 marks. Out of the 30 marks for internals, day-to-day work in the laboratory shall be evaluated for 20 marks; and the remaining 10 marks are awarded based on the two internal practical tests (each of 10 marks) conducted by the concerned laboratory teacher. The better of these two tests is taken into account. The SEE for Practicals shall be conducted at the end of the Semester by two Examiners appointed by Head of the Department.

 (d) 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.

 (e) The Industry-Oriented Mini-Project shall be submitted in a report form and a presentation of the same shall be made before a committee for evaluation. The committee consisting of the Head of the Department, the Project Supervisor and a Senior Faculty Member of the Department will evaluate for 100 marks. There shall be no internal marks.

 (f) UG Major Project will be evaluated in two stages: Project Stage-I in IV year I semester and Project Stage-II in IV year II semester for 100 marks each. The student is required to submit the report of the project work carried out at the end of each semester.

 (g) Project Stage-I in IV year I semester shall be evaluated for a total of 100 marks. The Continuous Internal Evaluation (CIE) is done by the Project Supervisor for 30 marks. The external evaluation of Project Stage-I (SEE) is done by the departmental committee consisting of Head of the Department, Project Supervisor and a Senior Faculty Member of the Department for 70 marks.

 (h) Project Stage –II in IV year II semester is also evaluated for a total of 100 marks. The external evaluation of UG Major Project in Project Stage-II at the end of the semester (SEE) shall be done by an external examiner for 70 marks and CIE shall be done by the Project Supervisor for 30 marks for the work carried out during Project Stage-II.

**9.2. PG Part (M.Tech)**

 (a) 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, Practicals, Drawing/Design, etc; These evaluations shall be based on 30% CIE and 70% SEE; a Letter Grade corresponding to the % of marks obtained shall be given.

 (b) For Theory Subjects, during the Semester, there shall be 2 mid-term examinations for 25 marks each. Each mid-term examination consists of a subjective paper for 25 marks, with duration of 120 minutes. Further, there will be an allocation of 5 marks for Assignment. Subjective paper shall contain 8 questions, out of which the student has to answer 5 questions, each for 5 marks.

 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.

 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 given by the concerned subject teacher.

 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 better 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.

 (c) For Practical Subjects, there shall be a Continuous Internal Evaluation (CIE) during the Semester for 30 internal marks and a Semester End Examination for 70 marks. Out of the 30 marks for internals, day-to-day work in the laboratory shall be evaluated for 20 marks; and the remaining 10 marks are awarded based on the two internal practical tests (each of 10 marks) conducted by the concerned laboratory teacher. The better of these two tests is taken into account. The SEE for Practicals shall be conducted at the end of the Semester by two Examiners appointed by Head of the Department.

 (d) The Project Review Committee (PRC) for PG Project work shall be constituted by the Head of the Department and shall consist of the Head of the Department (Chairperson), Project Supervisor and a Senior Faculty Member of the Department.

 (b) The student shall present the title, objective and plan of action for the approval of PG Project before the PRC during PRC–I in V year I Semester.

 (c) The PRC will monitor the progress of the PG Project work through PRC II & III. PRC-II will be held at the end of the V year I semester and PRC-III will be held at the end of the V year II semester before the submission of the PG Project dissertation.

 (d) The Dissertation Phase-I is evaluated in V year I semester for 100 marks. The CIE of Dissertation Phase-I will be evaluated by the Project Supervisor for 30 marks. The evaluation of SEE shall be done by the PRC during PRC-II for 70 marks.

 (e) Dissertation Phase-II is evaluated in V year II semester for 200 marks. The CIE is done by the PRC for 50 marks during PRC-III and the Project Supervisor for 50 marks. The PG Project dissertation is eligible for final submission upon the approval of the PRC in PRC-III.

 (f) After successful completion of PRC-III, the dissertation should be submitted to the Head of the Department for the ANTI-PLAGIARISM check. The dissertation will be accepted for submission, if the similarity index is less than 30%. Otherwise, the student is advised to modify and re-submit the dissertation after one month. The maximum number of re-submissions of dissertation after plagiarism check is limited to TWO.

 (g) The dissertations approved for submission by the PRC will be sent to the external examiner nominated by the Principal of the College, on whose approval, the student can appear for the external project viva-voce examination, which shall be conducted by a Board consisting of the Project Supervisor, Head of the Department and the External Examiner. The Board shall jointly declare the dissertation as satisfactory or unsatisfactory. In case of satisfactory report, the external examiner shall evaluate for 100 marks (SEE).

 (h) In case, the Board declares the dissertation as unsatisfactory, the student is deemed to have failed in the project viva-voce examination and shall reappear for the viva-voce examination as per the recommendations of the Board. If the student fails in the second appearance of the viva-voce examination also, the student is not considered eligible for the award of the degree. The student can revise and resubmit the dissertation within 5 years from the date of commencement of I year I semester.

9.3. 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, only after securing$\geq $65% attendance in such a Course. No marks or Letter Grade shall be allotted for these activities.

# 10. Grading Procedure

10.1. Marks will be awarded to indicate the performance of each student in each Theory Subject, or Lab/Practicals, Industry-Oriented Mini-Project, Minor Course, Project Stage I, Project Stage II, Dissertation Phase I, Dissertation Phase II, etc., based on the percentage of marks obtained in CIE + SEE (Continuous Internal Evaluation + Semester End Examination, both taken together) as specified in Item 9 above, and a corresponding Letter Grade shall be given.

10.2. As a measure of the student’s performance, a 10-point Absolute Grading System using the following Letter Grades (UGC Guidelines) and corresponding percentage of marks shall be followed:

# For UG

|  |  |  |
| --- | --- | --- |
| **% of Marks Secured in a Subject / Course** | **Letter Grade****As per UGC Guidelines** | **Grade Points** |
| More 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 not less than 60% | B(Average) | 6 |
| 40 and not less than 50% | C(Pass) | 5 |
| Below 40% | F(Fail) | 0 |
| Absent | Ab | 0 |

1. **For PG**

|  |  |  |
| --- | --- | --- |
| **% of Marks Secured in a Subject / Course** | **Letter Grade****As per UGC Guidelines** | **Grade****Points** |
| 80% and above( $\geq $ 80% , ≤ 100% ) | O(Outstanding) | 10 |
| Below 80% but not less than 70%( $\geq $ 70% , < 80% ) | A+(Excellent) | 9 |
| Below 70% but not less than 60%( $\geq $ 60% , < 70% ) | A(Very Good) | 8 |
| Below 60% but not less than 55%( $\geq $ 55% , < 60% ) | B+(Good) | 7 |
| Below 55% but not less than 50%( $\geq $ 50% , < 55% ) | B(above Average) | 6 |
| Below 50%( < 50% ) | F(FAIL) | 0 |
| Absent | Ab | 0 |

10.3. A student obtaining F Grade in any Subject shall be considered ‘failed’ and will be required to reappear as ‘Supplementary Candidate’ in the Semester End Examination (SEE), as and when conducted. In such cases, his Internal Marks (CIE Marks) in those Subject(s) will remain same as those he obtained earlier.

10.4. A Letter Grade does not imply any specific % of Marks.

10.5. 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 Subjects/Courses pertaining to that Semester, when he is detained (as listed in Items 7.6 & 8.6).

10.6. A student earns Grade Point (GP) in each Subject/Course, on the basis of the Letter Grade obtained by him/her in that Subject/Course (excluding Mandatory non-credit Courses). Then 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) × No. of Credits for a Course

10.7. The Student passes the Subject/ Course only when he gets GP $\geq $ 5 (for UG) / 6 (for PG)

10.8. 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:

$$SGPA=\frac{\sum\_{i=1}^{N}C\_{i}G\_{i}}{\sum\_{i=1}^{N}C\_{i}}$$

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 number of Credits allotted to the ith Subject, and $G\_{i}$ represents the Grade Points (GP) corresponding to the Letter Grade awarded for that ith Subject.

10.9. The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student over 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 Second Semester onwards, at the end of each Semester, as per the formula

$$CGPA=\frac{\sum\_{j=1}^{M}C\_{j}G\_{j}}{\sum\_{j=1}^{M}C\_{j}}$$

where ‘M’ is the TOTAL number of Subjects (as specifically required and listed under the Course Structure of the parent Department) the Student has ‘REGISTERED’ from the 1st Semester onwards up to and inclusive of the Semester S (obviously M>N), ‘j’ is the Subject indicator index (takes into account all Subjects from 1 to S Semesters), $C\_{j}$ is the no. of Credits allotted to the jth Subject, and $G\_{j}$ represents the Grade Points (GP) corresponding to the Letter Grade awarded for that jth Subject. After registration and completion of I Year I Semester however, the SGPA of that Semester itself may be taken as the CGPA, as there are no cumulative effects.

10.10. For Merit Ranking or Comparison Purposes or any other listing, ONLY the ‘ROUNDED OFF’ values of the CGPAs will be used.

10.11. For Calculations listed in Item 10.6 – 10.10, 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. However, Mandatory Courses will not be taken into consideration.

10.12. Passing Standards:

 a) A student shall be declared successful or ‘passed’ in a Semester, only when he gets a SGPA $\geq $ 5.00/ 6.00 (at the end of that particular Semester); and a student shall be declared successful or ‘passed’ in the entire UG Programme, only when gets a CGPA$\geq $ 5.00/ 6.00; subject to the condition that he secures a GP $\geq $ 5 (for UG) / 6 (for PG) in every registered Subject/ Course in each Semester (during the entire UG Programme/PG Programme) for the Degree Award, as required.

 b) In spite of securing P Grade or above in some (or all) Subjects/ Courses in any Semester, if a Student receives a SGPA < 5.00 / 6.00 and/ or CGPA < 5.00/ 6.00, then on the ‘specific recommendations’ of the Head of the Department and subsequent approval from the Principal –

 i) The student may be allowed to be promoted to the next Semester (subject to fulfilling all other attendance and academic requirements as listed under Items 7-8);

 ii) The student may be allowed to ‘improve his SGPA of such a Semester (and hence CGPA) to 5.00/ 6.00 or above’, by reappearing for ONE or MORE (as per Student’s choice) of the same Subject(s) / Course(s) in which he has secured P Grade(s) in that Semester, in the Supplementary Examinations to be held in the subsequent Semester(s). In such cases, his Internal Marks (CIE Marks) in those Subject(s) will remain same as those he obtained earlier.

 Under these considerations, the newly secured Letter Grades will be recorded and taken into account for calculation of SGPA and CGPA, only if there is an improvement.

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

11.13. 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, Credits earned, SGPA, and CGPA.

**11. Declaration of Results**

11. 1**.** Computation of SGPA and CGPA are done using the procedure listed in 10.6 – 10.10.

11.2. For computing final % of marks equivalent to the computed final CGPA, the following formula may be used:

$$\% of marks=(final CGPA-0.5)×10$$

**12. Award of Degree**

12.1. A Student who registers for all the specified Subjects/ Courses as listed in the Course Structure, satisfies all the Course Requirements, and passes all the examinations prescribed in the entire IDP and secures the required number of 151 for UG Programme and 61 Credits for PG Programme (with CGPA $\geq $ 5.0/ 6.0), within 10 Academic Years from the Date of Commencement of the First Academic Year, shall be declared to have ‘QUALIFIED’ for the Award of the B.Tech+M.Tech Degree (UG Programme and PG Programme) in the chosen Branch of Engineering as selected at the time of Admission.

12.2. A Student who qualifies for the Award of UG + PG Degree as listed in Item 12.1 shall be placed in the following Classes:

12.3. Students with final CGPA (at the end of the IDP) for both UGP/ PGP $\geq $ 8.00/ 7.75, 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 5 Academic Years (or 10 Sequential Semesters) from the Date of Commencement of his First Academic Year,

 (ii) should have secured a CGPA $\geq $ 8.00/ 7.75, at the end of each of the 10 Sequential Semesters, starting from the I Year I Semester onwards,

 (iii) should have not been detained or prevented from writing the Semester End Examinations in any Semester due to shortage of attendance or any other reason.

12.4. Students having final CGPA (at the end of IDP) for both UGP/ PGP $\geq $ 8.00/ 7.75, but not fulfilling the above conditions in 12.3 shall be placed in ‘FIRST CLASS’.

12.4. Students with final CGPA (at the end of the IDP) for UGP/ PGP $\geq $ 6.50/ 6.75 but < 8.00/ 7.75, shall be placed in ‘FIRST CLASS’.

12.5. Students with final CGPA (at the end of the IDP) for both UGP/ PGP $\geq $ 5.50/ 6.00 but < 6.50/ 6.75, shall be placed in ‘SECOND CLASS’.

12.6. All other Students who qualify for the Award of the Degree (as per Item 12.1), with final CGPA (at the end of the IDP) for UGP $\geq $ 5.00 but < 5.50, shall be placed in ‘PASS CLASS’.

12.7. A student with final CGPA (at the end of the IDP) for UGP < 5.00 will not be eligible for the Award of the B. Tech Degree.

12.8. A student with final CGPA (at the end of the IDP) for PGP < 6.00 will not be eligible for the Award of the M. Tech Degree.

12.9. Students fulfilling the conditions listed under Item 12.1 alone will be eligible candidates for - ‘University Rank’ and ‘Gold Medal’ considerations.

# 13. Withholding of Results

13.1. If the student has not paid fees to University/ College at any stage, or has pending dues against his name due to any reason whatsoever, or if any case of indiscipline is pending against him, the result of the student may be withheld, and he 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. Transitory Regulations**

14.1. 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 Subjects/ 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 (within the time-frame of 10 years from the Date of Commencement of his I Year I Semester).

**15. Student Transfers**

15.1. There shall be no Branch transfers after the completion of Admission Process.

15.2. There shall be no transfer among the Constituent Colleges and Units of Jawaharlal Nehru Technological University Hyderabad.

# 16.0. 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.

# MALPRACTICE RULES

**The following malpractice rules are applicable to Internal Examinations as well as SEE of Regular as well as Supplementary Examinations:**

|  |  |  |
| --- | --- | --- |
|  | **Nature of Malpractices** | **Punishment** |
|  | **If the candidate:** |  |
| 1 (a) | Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of the same. Material shall also include any marks on the body of the candidate which can be used as an aid in the subject of the examination | Expulsion from the examination hall and cancellation of the performance in that subject only. |
| 1 (b) | Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cellphones with any candidate 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 candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him. |
| 2 | Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing. | Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The Hall Ticket of the candidate is to be cancelled. |
| 3 | Impersonates any other candidate in connection with the examination. | The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate 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 candidate is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him. |
| 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 candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. |
| 5 | Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks. | Cancellation of the performance in that subject. |
| 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.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 hallAssaults the officer-in-charge or any person on duty in or outside the examination hall or any of his relations whether by words, either spoken or written or by signs. Indulges in any other act of misconduct or mischief which results in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination. | In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The candidates 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. |
| 7 | Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall. | Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. |
| 8 | Possess any lethal weapon or firearm in the examination hall. | Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. |
| 9 | If student of the college, who is not a candidate 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. | Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person(s) who do not belong to the College will be handed over to police and, a police case will be registered against them. |
| 10 | Comes in a drunken condition to the examination hall. | Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. |
| 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 candidate has appeared including practical examinations and project workof 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 College / University for further action or punishment |  |