G. PULLA REDDY ENGINEERING COLLEGE (Autonomous) : Kurnool
SCHEME – 2020
ACADEMIC REGULATIONS FOR FOUR YEAR B.TECH. DEGREE COURSE
(with effect from the batch admitted in 2020-21)

Contents

Regulations for Four-Year Bachelor of Technology (B.Tech) Degree program for the batches admitted from the academic year 2020-2021 & for B.Tech Lateral Entry batches admitted from the academic year 2021-2022

1   Extent

All the rules and regulations, specified herein after, shall be read as a whole for the purpose of interpretation and when a doubt arises, the interpretation of the Chairman, Academic Council, G. Pulla Reddy Engineering College (Autonomous), subsequently referred to as GPREC, is final. As per the requirements of the Statutory Bodies, Principal, GPREC, shall be the Chairman of the College Academic Council.

GPREC may revise, amend or change the regulations, scheme of examinations and syllabi, from time to time, if found necessary and on approval by the Academic Council of the Institute, keeping the recommendations of the Board of Studies(BOS) in view.

2   Admissions

2.1   Regular admissions into the first year of B.Tech Program of GPREC, will be as per the norms stipulated by Jawaharlal Nehru Technological University Anantapur, Ananthapuramu and Govt. of Andhra Pradesh.

2.2   Lateral Entry admissions into the second year of B.Tech Program of GPREC will be as per the norms stipulated by Jawaharlal Nehru Technological University Anantapur, Ananthapuramu and Govt. of Andhra Pradesh.

3   Under Graduate B.Tech Degree Programs

3.1   Full Time Under Graduate B.Tech Degree Programs are offered in the following disciplines/branches
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. Computer Science and Technology (CST)
7. Computer Science and Business Systems (CSBS)

3.2   The provisions of these Regulations shall be applicable to any new disciplines/branches that may be introduced from time to time and appended to the above list.

4   Duration of the Program and Medium of Instruction

4.1   **Normal Duration**
❖ The duration of the B.Tech. degree program for the students admitted after 10+2 or equivalent is four academic years consisting of two semesters in each academic year.
❖ The duration of the program for the students admitted under lateral entry into III semester is three academic years consisting of two semesters in each academic year.

4.2 **Maximum Duration**

❖ Students admitted after 10+2 or equivalent shall fulfil all the requirements for award of the B.Tech. Degree within eight academic years (16 semesters) from the date of admission. After eight academic years from the year of their admission, the students shall forfeit their seat in B.Tech program and their admission stands cancelled.

❖ Lateral entry students shall fulfil all the requirements for award of B.Tech Degree within six academic years (12 semesters) from the date of admission. After six academic years from the year of their admission, the Lateral Entry students shall forfeit their seat in B.Tech program and their admission stands cancelled.

4.3 The total period for completion of the program is reckoned from the commencement of the semester to which the candidate was first admitted and shall not exceed the maximum duration (Clause 4.2). The maximum duration includes Gap Year, Temporary withdrawal, and semester repetition. (Clause 8.2 and Clause 9)

Completing the program of study shall mean not only satisfying the attendance and academic/credit requirements but also passing of all the courses and earning the credits prescribed in the curriculum within the respective stipulated duration.

4.4 Each semester shall consist of 15 instruction weeks excluding the days allotted for examinations. Head of the Department shall ensure that every faculty member teaches the course (subject) as prescribed in the approved curriculum and syllabi and that the concerned teacher teaches the full content of the specified syllabus.

4.5 The medium of instruction for all the courses including their content delivery, examinations, seminars, presentations and project/ thesis reports will be in English

5 **Structure of the B.Tech Programs**

5.1 **Classification of Courses**

The Curriculum of every B.Tech Program consists of the following components

S.No	Category	Courses
1	Humanities and Social Sciences including Management Courses (HSMC)	English, Communication skills, Humanities and Management.
2	Basic Science Courses (BSC)	Mathematics, Physics, and Chemistry.
3	Engineering Science Courses (ESC)	Workshop, Drawing, Basics of Civil/Electrical/Mechanical/ Electronics/ Computer etc.,
4	Professional Core Courses (PCC)	Core Courses relevant to the chosen discipline.
5	Professional Elective Courses (PEC)	Elective Courses relevant to the chosen discipline.
6	Open Elective Courses (OEC)	Courses from other technical/ emerging areas.
7	Major Project (PROJ)	Full Semester Internship, Seminar, Thesis
8	Mandatory Courses (MC)	Non-credit mandatory courses on Environment, Constitution and Ethical Values etc.,
9	Skill Oriented Courses (SC)	Courses from the same discipline/ interdisciplinary/industry relevant.

Every student has to study all the courses specified under HSMC/BSC/ESC/PCC. However the student will have the choice in the elective courses.

During V to VII semesters every student will have the choice to opt for five professional elective courses from the defined list of domain related courses and Four Open Elective courses from the defined list of other technical and/or emerging areas as prescribed in the curriculum. Student is required to give the options through on-line registration for these elective courses in advance (at least one week) before the commencement of every semester.

In the final semester, the student should mandatorily undergo internship and parallelly he/she should work on a project with well-defined objectives. At the end of the semester the candidate shall submit an internship completion certificate and a project report. A student shall also be permitted to submit project report on the work carried out during the internship. The project report shall be evaluated with an external examiner.

5.2   Credit Assignment

Each course is allotted certain number of credits based on its importance to the program and the number of contact periods per week allotted to it in the time-table.

The credits adopted in the design of the curriculum are shown below

1 Hour Lecture (L) per week	1 Credit
1 Hour Tutorial (T) per week	1 Credit
1 Hour Practical (P) per week	0.5 Credit
Major Project and Final Semester Internship	12 Credits
Summer Internship	1.5 / 3 Credits
Mandatory Courses	Zero Credit

5.3   Total Credits

Total credits of all the courses in the curriculum for the B.Tech. program shall be 160 (121 for Lateral entry admissions). To become eligible for the award of degree, every student must earn   160 credits (Lateral entry students must earn 121 credits) specified in the curriculum of the program with a CGPA of not less than 4.0 and within the duration specified in clause 4.2.

A student admitted to the B.Tech. program in a particular discipline of engineering will earn the degree in that discipline by fulfilling all the requirements prescribed in the regulations during the course of study.

The students fulfilling the eligibility criteria are also permitted to opt for an Honors Degree in the same discipline of engineering or a Minor Degree in another discipline of engineering/Industry tracks in addition to the Degree in his/her own discipline of engineering.

The student opting for B.Tech. degree with Honors or B.Tech. degree with Minor is required to earn additional 20 credits.

6   Summer Internship and Skill Oriented Courses

6.1   Two summer internships each with six weeks duration to be done at the end of second and third years are mandatory. The internship can be done by the students at Industries, Govt. Organizations, Construction Agencies, Hydel and Thermal Power Plants and also in Software Companies. Evaluation of the summer internships shall be through the departmental committee. A student will be required to submit a summer internship report to the concerned department and appear for an oral presentation before the departmental committee. The report and the oral presentation shall carry 40% and 60% weightages respectively.

Community Service Project is considered as an integral part of the curriculum, as an alternative to the Summer Internships, whenever there is an exigency when student cannot pursue their summer internships. Student should take prior approval of HoD and should put in a minimum of 180 hours for the Community Service Project during the summer vacation. A mentor will be assigned for a group of students. A group of students or even a single student shall be assigned for a particular habitation or village or municipal ward and the student/s could take up a social activity, concerning their domain or specific local issues. The students are expected to carry out these projects with involvement, commitment, responsibility and accountability. Evaluation shall be based on the active participation of the student and grade will be awarded by the mentor/faculty member.

6.2   Five Skill Oriented Courses shall be offered during III to VII semesters. Out of these, two courses shall be from the same domain and shall be completed in second year (III and IV semesters). Of the remaining three courses, one shall be a soft skill course and the remaining two shall be skill-advanced courses either from the same domain or job oriented skill courses, which can be of inter disciplinary nature.

       A pool of interdisciplinary job oriented courses shall be designed by a College Level Committee and the list of such courses shall be included in the curriculum structure of each discipline of Engineering, so as to enable the student to choose from the list.

       The student shall be given an option to choose either the skill courses being offered by the college or to choose a certificate course being offered by external agencies (Industries/Professional bodies/APSSDC or any other accredited bodies) as approved by the College Level Committee.

       If a student chooses to take a Certificate Course offered by external agencies, in lieu of the skill advanced course offered by the Department, the credits shall be awarded to the student upon producing the Course Completion Certificate from the external agencies. The college level committee shall evaluate the grades/marks given for a course by external agencies and convert to the equivalent marks/grades.

7   Induction Program and Extra Academic Activity (EAA)

7.1   Induction Program

There shall be mandatory student induction program for fresher's, with three-week duration before the commencement of first semester. Activities include Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations etc.,

7.2   Extra Academic Activity

In addition to completion of the academic requirements, to become eligible for the award of degree, every student should successfully complete Extra Academic Activity. During first and second semesters every student is required to register for Sports and Games activity and shall maintain at least 75% attendance, independent of overall attendance to earn satisfactory grade which is mandatory. During third and fourth semesters every student is required to register for one of the following activities which are mandatory.

(i)   NSS/ NCC ii) Yoga/ Meditation iii) Extension Activities
(iv)   Literary/ Cultural Activities v) Community Service Activities.

The activities shall be carried out beyond the class hours. The activities will be monitored by the respective faculty in-charge and HOD. Evaluation shall be on the basis of participation, attendance, performance and behavior. Grade shall be entered in the grade sheet as satisfactory/unsatisfactory and shall not be used while computing CGPA (clause 12.4)

If a student fails to get the satisfactory grade in any of these chosen activities, he/she has to repeat the same in subsequent semesters.

8   Eligibility for Promotion

Promotion to the next semester depends on (i) the aggregate attendance put in by the student in the current semester (ii) Attendance in each course and (iii) the no. of credits cleared by the student in the earlier semesters. For this purpose the aggregate attendance in any semester is calculated as (total number of classes attended by the student in all the courses of that semester put together divided by the total number of classes held in all the courses of that semester put together) multiplied by 100.

8.1   Attendance Requirement

In any semester a student is considered to have completed the regular course of study only when he/she puts in an aggregate attendance of 75% and a minimum of 40% attendance in each course(subject).

Condonation of shortage of attendance in genuine cases on health grounds may be recommended by the Principal, if a student puts in an aggregate attendance of at least 65% and a minimum of 40% attendance in each course (subject). However the student has to make an application and pay the prescribed fee.

A student who has not satisfied these requirements of attendance in any semester will not be allowed to write the end examination and shall have to repeat that semester. The attendance under this clause does not include attendance at any examinations/test/extra academic/co-academic activities.

Students who represent the college in intercollegiate tournaments organized by JNTUA and those who represent University or State or Nation shall be given attendance exemption as per the University / Government norms.

Having satisfied the minimum attendance requirements in any semester, a student may repeat that semester, after obtaining written permission from the Principal and cancelling the previous record of attendance and sessional work of the semester. Student who wants to utilize this facility has to give the option within seven days of the commencement of the semester. However, this facility may be availed by any student maximum twice (only once in case of the lateral entry students) during the entire course of study.

8.2   Temporary Withdrawal and Semester repetition

A student is also permitted to withdraw temporarily from the program for medical or other compelling reasons. A student after temporary discontinuance may rejoin the program at the commencement of the semester at which he discontinued. However, the total period for the completion of the course, reckoned from the commencement of the first semester to which the student was admitted, shall not in any case exceed eight years (six years for lateral entry students), including the period of authorized temporary discontinuance/repetition of semester.

8.3   Eligibility for appearing for End Examinations

All students who have satisfied the attendance requirement in any semester with or without condonation are eligible to appear for the regular end examinations of that semester. They shall register for the end examinations of that semester by paying the prescribed examination fee. However, they have to clear all the dues to the college and hostel before they collect their hall tickets. It is mandatory for all the eligible students to register for the regular end examination. If a student does not register for any semester and desires to register for subsequent semesters he will be required to pay the prescribed fee along with stipulated fine of all the semesters he/she skipped.

8.4   Credit Requirements for Promotion

The promotion from I to II sem, II to III sem and from every odd semester to the next immediate even semester, shall be automatic for all the students except for those detained due to shortage of attendance and there will be no credit requirements and restrictions for a student to progress. Example (I to II, III to IV, V to VI and VII to VIII semester). However for promotion to V semester (Regular students only) and VII semester (Regular and Lateral entry students), in addition to attendance requirement mentioned above in clause 8.1, the following credit requirements have to be satisfied.

8.4.1   For Four Year B.Tech students:

(i) Promotion to V semester

    A student shall be promoted from IV semester to V semester only if he/she secures 40% of credits (up to and including III semester) from the following Examinations, whether the candidate takes the examinations or not.
   a. One Regular and Two subsequent Supplementary Examinations of semester – I
   b. One Regular and One subsequent Supplementary Examinations of semester – II
   c. One Regular Examination of Semester – III

(ii) Promotion to VII semester

    A student shall be promoted from VI semester to VII semester only if he/she secures 40% of credits (up to and including V semester) from the following Examinations, whether the candidate takes the examination or not.
     a) One Regular & Four subsequent Supplementary Exams of semester -I
     b) One Regular & Three subsequent Supplementary Exams of semester -II
     c) One Regular & Two subsequent Supplementary Exams of semester -III
     d) One Regular & One subsequent Supplementary Exam of semester -IV
     e) One Regular Exam of semester – V

8.4.2   For Lateral Entry Students:

Promotion to VII semester

A student shall be promoted from VI semester to VII semester only if he/she secures 40% of total credits of III semester, IV semester and V semester from the following Examinations, whether the candidate takes the examination or not.

a. One Regular & Two subsequent Supplementary Exams of semester - III
b. One Regular & One subsequent Supplementary Exam of semester - IV
c. One Regular Exam of semester - V

The above promotion criteria is also depicted in the following table

For Promotion to	Minimum Credits required	
	For Four Year B.Tech Students	For Lateral Entry Students
V Semester	Students should earn 40% of the credits up to and including III semester before they register for IV semester regular exams	---
VII Semester	Students should earn 40% of the credits upto and including V semester before they register for VI semester regular exams	Students should earn 40% of the total credits of III, IV and V semesters before they register for VI semester regular exams

If 40% credit value results into a non-integer number, then the integer part of the number shall be used for arriving at the decision. When a student is detained due to lack of credits in any semester, he/she shall be eligible for promotion to the next semester after obtaining required number of credits.

9   **Gap Year**

The concept of Student Entrepreneur in Residence is introduced and outstanding students who wish to pursue entrepreneurship are allowed to take a break of one year at any time after I year/II year/III year to pursue entrepreneurship full time. This period shall be counted for the maximum duration for graduation (refer clause 4.2). An evaluation committee at institution level will be constituted to evaluate the proposal submitted by the student and the committee shall decide on permitting the student for availing the Gap Year**.**

10.1   **Minor Degree**

(i)   The student shall be given an option to earn a minor degree in another discipline of engineering or Industry relevant minor specialization of his/her choice at the beginning of the IV semester based on his/her academic performance.

(ii)   A student is eligible to exercise this option if he has passed all the courses offered in the I and II semesters in the first attempt itself and has earned a minimum 8.0 CGPA

(iii)   If a student fails to acquire 8.0 CGPA upto III semester or fail in any of the courses, his/her registration for Minor Degree shall stand cancelled.

(iv)   CGPA of 8.0 has to be maintained without any backlog in order to keep the Minor Degree registration active.

(v)   A student shall earn additional 20 credits in the specified area to be eligible for the award of B. Tech degree with Minor. This is in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline.

(vi)   Out of the 20 Credits, a student shall earn 16 credits by undergoing specified

courses along with prerequisites. It is the responsibility of the student to acquire/complete prerequisite before taking the respective course. A student shall be permitted to choose only those courses that he/she has not studied in any form during the Program.

(vii) In addition to the 16 credits, students must pursue at least two courses through MOOCs. The courses must be of minimum 8 weeks in duration. Attendance will not be monitored for MOOC courses. In order to earn 4 credits student has to acquire a certificate with grading or marks or pass/fail from the agencies approved by the College Level Committee. If the MOOC course is a pass/fail course without any grades, the grade to be assigned shall be decided by the College Level committee constituted by the Principal.

(viii) The concerned department shall decide on the minimum enrolments for offering Minor program. If minimum enrolment criteria are not met then the students shall be permitted to register for the equivalent MOOC courses as approved by the College Level Committee.

(ix) Student can opt the courses from Skill Development Corporation (APSSDC) or can opt the courses from an external agency recommended and approved by concerned BOS and should produce course completion certificate.

(x) If a student drops or fails to meet the CGPA requirement for B.Tech degree with Minor at any point after registration, he/she will be dropped from the list of students eligible for degree with Minor and they will receive B. Tech degree only. The credits earned by such students cannot be converted to open or core electives and they will remain extra. However, such students will receive a separate grade sheet (but not in the Provisional/Degree Certificate) mentioning the additional courses completed by them. In such cases, the student may choose to omit the mention of the course in the separate grade sheet as for the following:
    a) All the courses done under the dropped Minor will be shown in the grade sheet.
    b) None of the courses done under the dropped Minor will be shown in the grade sheet.

(xi) Minor must be completed simultaneously with a Major degree program. A student cannot earn the Minor after he/she has already earned bachelor's degree.

10.2   Honors Degree

(i) The student shall be allowed to opt for Honors program in the same discipline/branch of engineering at the beginning of the IV semester based on his/her academic performance.

(ii) Students can select the additional and advanced courses from their respective discipline/branch in which they are pursuing the degree and get an Honors degree in the same. e.g. If a Mechanical Engineering student completes the selected advanced courses from same branch under this scheme, he/she will be awarded B.Tech. (Honors) in Mechanical Engineering.

(iii) A student is eligible to exercise this option if he/she has passed all the subjects offered in the I and II semesters in the first attempt itself and has earned minimum of 8.0 CGPA.

(iv) If a student fails to acquire 8.0 CGPA up to III semester or fail in any of the courses, his/her registration for Honors Program stands cancelled and he/she shall continue with the regular Program. CGPA of 8.0 has to be maintained without any backlog in order to keep the Honors Degree registration active.

(v) In addition to fulfilling all the requisites of a Regular B.Tech Program, a student

shall earn 20 additional credits to be eligible for the award of B. Tech (Honors) degree. This is in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline.

(vi) Of the 20 additional credits to be acquired, a student shall earn 16 credits by undergoing specified courses listed as pools, with four courses, each carrying 4 credits.

(vii) In addition to the 16 credits, a student must pursue at least two courses through MOOCs (approved by College Level Committee). These courses must be of minimum 8 weeks in duration. Attendance will not be monitored for MOOC courses. In order to earn 4 credits student has to acquire a certificate with grading or marks or pass/fail from the external agencies approved by the College Level Committee. If the MOOC course is a pass/fail course without any grades, the grade to be assigned shall be decided by the College Level committee constituted by the Principal.

(viii) It is the responsibility of the student to acquire/complete prerequisites before taking the respective course. The courses offered in each pool shall be domain specific courses and advanced courses. Each pool can have theory as well as laboratory courses.

(ix) The concerned department shall decide on the minimum enrolments for offering Honors program. If minimum enrolment criteria is not met then the students shall be permitted to register for the equivalent MOOC courses as approved by the College Level Commitee.

(x) The concerned head of the department shall also consider courses listed under professional electives of the respective B. Tech programs for the requirements of B. Tech (Honors). However, a student shall be permitted to choose only those courses that he/she has not studied in any form during the Program.

(xi) If a student drops or fails to meet the CGPA requirement for B.Tech degree with Honors at any point after registration, he/she will be dropped from the list of students eligible for degree with Honors and they will receive r e g u l a r B. Tech degree only. The credits earned by such students cannot be converted to open or core electives and they will remain extra. However, such students will receive a separate grade sheet mentioning the additional courses completed by them. In such cases, the student may choose to omit the mention of the course in the separate Grade sheet as for the following:
   a) All the courses done under the dropped Honors will be shown in the grade sheet.
   b) None of the courses done under the dropped Honors will be shown in the grade sheet.

(xii) Honors must be completed simultaneously with a major degree program. A student cannot earn Honors after he/she has already earned bachelor's degree.

10.3   No class/division shall be awarded for Minor/Honors Program and eligible student is permitted to earn only one of these degrees in addition to the degree in his/her own discipline of engineering –
   (i)   Honors degree
   (ii)   Minor degree

11　　　　　　　Assessment

Each Course shall be evaluated for a maximum of 100 marks as shown below

Sno	Course Category	Continuous Internal Assessment (CIA)	End Examination (EE)
1	Theory/Design/Drawing Courses including Electives and Skill Oriented Courses	40	60
2	Practical Courses	40	60
3	Major Project and Final Semester Internship	40	60
4	Internship	100	--
6	Mandatory Courses (Non Credit)	100	--

11.1　Continuous Internal Assessment (CIA)

11.1.1　CIA for Theory /Design/Drawing Courses including Electives

CIA for Theory Courses :
There shall be two sessional examinations for 25 marks each with the first exam (for first 50% of the syllabus) conducted in the middle of the semester and the second exam (for remaining 50% syllabus) conducted towards the end of the semester and the sessional marks are awarded giving a weightage of 0.75 for the better score and 0.25 for the other score.

For 10 marks, Four quiz tests (Two quiz tests during first spell of instruction and Two quiz tests during second spell of instruction) for 10 marks each shall be conducted. The final quiz test marks shall be the average of best three quiz test marks scored by the student.

For the remaining 5 marks evaluation will be done continuously throughout the semester by the respective faculty in charge based on brief talks, seminars, Home Assignments, Class room behaviour, Regularity in attending the classes, Punctuality, Oral/Written Presentation Skills, Maintaining Class notes, Active Participation in the class, Problem Solving skills or any other such evaluation methods depending on the nature of the course. The faculty in charge will announce the mode of the assessment to the respective class at the beginning of the course.

CIA for Design/Drawing/Estimation and Analysis Courses:
There shall be two sessional examinations for 25 marks each with the first exam (for first 50% of the syllabus) conducted in the middle of the semester and the second exam (for remaining 50% syllabus) conducted towards the end of the semester and the sessional marks are awarded giving a weightage of 0.75 for the better score and 0.25 for the other score.
Remaining 15 marks shall be awarded based on day to day work/Assignments.

11.1.2　CIA for Practical Courses

For Practical Courses, out of 40 marks, 15 marks are awarded based on the performance in the day to day laboratory work, 10 marks for record work, 10 marks for viva-voce and internal practical examination conducted at the end of the semester and remaining 5 marks for additional work beyond prescribed experiments/exercises, creating a model/mini project, solutions to undefined problems/new findings etc.

11.1.4 CIA for Major Project

Periodic Evaluation by the Guide/Supervisor	30 Marks
Review by the Department Committee including seminar and presentation	10 Marks

The marks shall be distributed among various components like selection of topic, problem statement, literature review, oral and written presentation of the work done. The project work will commence in VII semester and will be for duration of two semesters. The final evaluation of the project work will be done at the end of VIII semester.

11.1.5 CIA for Summer Internship

The evaluation of Summer Internship is through CIA only. A committee comprising HoD or his nominee, a senior faculty nominated by HoD and faculty mentor of the concerned student will assess the internship for 100 marks, by evaluating the internship report and the oral presentation. The report and the oral presentation shall carry 40% and 60% weightages respectively.

11.1.6 CIA for Final Semester Internship

Final Semester internship shall be evaluated through CIA. After completion of the internship the student shall submit a detailed report on the training undergone and a certificate of internship completion from the industry/organization. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three member Departmental Committee consisting of HoD/His nominee, Project Guide and faculty mentor of the concerned student. Feedback from the manager/supervisor of the student in the industry may also be considered in the evaluation.

Any arrangement of internship in industry has to be routed through Training & Placement office via the Professor-in-charge of training with the recommendation of respective HoD.

11.1.7 CIA for Skill Oriented Courses

Course Category	Assessment
Soft Skills Courses	CIA for 40 marks through Quiz, Presentation, Group tasks, Group Discussion, Debates, and Assignments etc.
Courses with Theory Component Only	Two sessional exams for 25 marks each shall be conducted and marks will be finalized with a weightage of 0.75 for the better score and 0.25 for the other. Remaining 15 marks shall be awarded through Quizzes etc.
Courses with both Theory and Lab Component	Theory Component shall be evaluated through two sessional exams for 25 marks each and marks will be finalized with a weightage of 0.75 for the better score and 0.25 for the other. The marks scored shall be reduced to 20. Marks distribution for Lab component shall be as follows : Day to Day laboratory work : 15 marks Record :5 marks Internal examination and viva : 10 marks The marks scored shall be reduced to 20. The total CIA marks for the course shall be the sum of the marks in theory and lab components.
Courses with Lab Component	CIA for 40 marks through tests, assignments, model building etc

11.1.8   CIA for Mandatory Courses

Mandatory non-credit courses are to be completed satisfactorily. The evaluation of Mandatory non-credit courses is through CIA only. The teacher/subject coordinator handling the course will assess the student through activities, tests, quizzes, seminars, debates, assignments etc. Faculty shall maintain the record of assessment tests and marks scored by the students. For passing the course student has to secure 40% of the total CIA marks. Student failing to secure 40% of the CIA marks shall register for the equivalent MOOCs course or shall appear for reassessment tests to be conducted by the teacher and obtain 40%. No letter grades shall be awarded for Mandatory non-credit courses.

The teacher handling the course is solely responsible for continuous internal assessment and he/she shall be responsible for maintaining all records to justify his/her evaluation scheme and score thereof. Every teacher shall maintain an 'ATTENDANCE RECORD' which consists of attendance marked in each Theory/Laboratory/Electives, the assessment marks and the record of class work (topics covered), separately for each course. This should be submitted to the HoD periodically (at least three times in a semester) for verifying the syllabus coverage and the records of assessment marks and attendance.

11.2   End Examination (EE)

11.2.1   EE for the theory, professional electives, open electives and design/drawing courses :

For each Theory/Professional/Open electives/Design/Drawing courses there shall be a comprehensive end examination of three hours duration for 60 marks.

11.2.2   EE for practical courses:

For each practical course the end examination with duration as specified in the scheme shall be conducted for 60 marks by one internal and one external examiner nominated by the concerned HoD. However if external examiner is not available HOD with approval of the Principal may nominate a faculty member from among the same department competent in the course and preferably who had not handled that practical course for that class as an external examiner. Out of 60 marks 40 Marks shall be allotted for procedure, experiment, result etc and 20 marks for Viva Voce and quiz.

11.2.3   EE for Skill Oriented Courses

There shall be comprehensive examination of three hours duration for 60 marks for the skill oriented courses offered by the department/institution. If a student completes the certificate course offered by external agencies in lieu of these courses offered by the department/institution, the student shall submit the certificate issued by the recognized external agencies. The College level committee shall evaluate the grades/marks given by the external agencies and convert to the equivalent grade/marks.

11.2.4   EE for Major Project:

The end viva-voce examination in the Major Project shall be conducted by one external and two internal examiners for 60 marks.

The weightages for the Continuous Internal Assessment(CIA) and End Examination (EE) are also presented in the Table below

S.No	Nature of the course	Assessment	Marks	Scheme of examination
1	Theory (including Elective and Skill oriented Courses)	Continuous Internal Assessment	40	Two sessional exams each for 25 marks shall be conducted and marks will be finalized with a weightage of 0.75 for the better score and 0.25 for the other score. For 10 marks, Four quiz tests (Two quiz tests during first spell of instruction and Two quiz tests during second spell of instruction) for 10 marks each shall be conducted. The final quiz test marks shall be the average of best three quiz test marks scored by the student. For the remaining 5 marks evaluation will be done continuously throughout the semester by respective faculty in charge based on brief talks, seminars, Home Assignments, Class room behaviour, Regularity in attending the classes, Punctuality, Oral/Written Presentation Skills, Maintaining Class notes, Active Participation in the class, Problem Solving skills or any other such evaluation methods depending on the nature of the course
		End Examination	60	The end examination will be for a maximum of 60 marks.
2	Design / Drawing / Estimation Courses	Continuous Internal Assessment	40	Two sessional exams each for 25 marks shall be conducted and marks will be finalized with a weightage of 0.75 for the better score and 0.25 for the other score. Day to Day work/Assignments carry 15 marks
		End Examination	60	The end examination will be for a maximum of 60 marks.
3	Theory Courses with Lab Component	Continuous Internal Assessment	40	Theory Component shall be evaluated through two sessional exams each for 25 marks and marks will be finalized with a weightage of 0.75 for the better score and 0.25 for the other. The marks scored shall be reduced to 20. Marks distribution for Lab component shall be as follows : Day to Day laboratory work : 15 marks ; Record :5 marks ; Internal examination and viva : 10 marks The marks scored shall be reduced to 20. The total CIA marks for the course shall be the sum of theory component marks and lab component marks.
		End Examination	60	There shall be end examination of three hours duration for 60 marks.

S.No	Nature of the course	Assessment	Marks	Scheme of examination
4	Skill Oriented Course with Lab Component	Continuous Internal Assessment	40	CIA for 40 marks through tests, assignments, model building etc
		End Examination	60	There shall be end examination of three hours duration for 60 marks.
5	Practical Courses	Continuous Internal Assessment	40	Day to Day Laboratory work :15 marks ; Record work : 10 marks; Internal practical exam and Viva Voce : 10 marks ; Additional work beyond prescribed experiments /exercises, creating a model/ mini project, solutions to undefined problems/ new findings etc. : 5 marks
		End Examination	60	Procedure, experiment, result etc : 40 marks ; Viva Voce and quiz : 20 marks;

6	Major Project	Continuous Internal Assessment	40	i) Evaluation by the Supervisor : (Max Marks: 30)
				    (a) Problem identification/Literature Review 10 marks
				    (b) Thesis preparation 20 marks
				ii) Evaluation by the Department committee (Max Marks: 10)
				    (a) Presentation 5 marks
				    (b) Defence of the topic/problem: 5 marks

		End Examination	60	Thesis Presentation / Viva Voce Examination shall be conducted by one external and two internal examiners nominated by HoD.
7	Internship	Continuous Internal Assessment	100	A committee comprising HoD or his nominee, a senior faculty nominated by HoD and faculty mentor of the concerned Student will assess the internship for 100 marks, by evaluating the internship report and the oral presentation. The report and the oral presentation shall carry 40% and 60% weightages respectively.
8	Mandatory Non Credit Courses	Continuous Internal Assessment	100	Continuous Internal Assessment through seminars, quiz, assignment etc. At least two assessment tests shall be conducted by the faculty handling the subject.
9	Audit Course	--	--	Audit Course without evaluation

11.3 Question Paper Pattern

Sessional Examination

The duration of Sessional Examination shall be 90 minutes. The Sessional Examination Question paper is for 25 marks. The question paper shall consist of three sections with Two Questions (EITHER/ OR Type) in each section. The student shall answer one question from each section.

However to meet the specific course requirement a different pattern of question paper can be recommended by the course teacher with the approval of HoD/Chairman BoS. But this must be informed to the students well in advance.

End Examination:

The Duration of End Examination shall be 180 minutes. For theory courses, there will be Five Essay type(Either/ OR Type) questions carrying 12 marks each. Each of these questions is from one unit and may contain sub-questions. i.e there will be two questions from each unit and the student should answer any one question.

Model Question paper for each theory course shall be prepared by the course teacher/expert within 15 days from the commencement of the semester and the same shall be forwarded to the Controller of Examinations through the Chairman, BoS concerned.

11.4 Massive Open Online Courses (MOOCs)

A student shall be permitted to pursue up to a maximum of two elective courses under MOOCs during the Program. Each course must be of minimum of 8 weeks in duration. Attendance will not be monitored for MOOC courses. Student has to pursue and acquire a certificate for a MOOC course only from the organizations/agencies approved by the College Level Committee in order to earn the 3 credits. The HoD shall notify the list of such courses at the beginning of the semester. Student can pursue two elective courses through MOOCs with prior approval of the HoD before registering for MOOCs.

- ❖ MOOC courses can be taken in lieu of Elective courses only (pertaining to their branch only). No Core, Lab or Project course can be dropped in lieu of MOOC.
- ❖ The student shall submit course title, institute offering MOOC, examination system and credits of the course, duration of course.
- ❖ After selecting the approved MOOC course a student shall enrol and clear the course in the stipulated time period and produce the assessment certificate to the department.
- ❖ If the assessment certificate is submitted
    - (i) before the commencement of the semester in which the equivalent course is offered , the student will be exempted from attending the regular class work and CIA of the equivalent subject.
    - (ii) during the semester the student is permitted to withdraw from the remaining part of the course work and CIA.
    - (iii) after the semester is over but before the results of that semester are declared the student can request for considering his/her performance in the MOOCs in lieu of its equivalent.
    - ❖ The student shall submit to the HOD the original certificate issued by MOOCs agency along with a photocopy. The original certificate will be returned after due verification. The HoD shall retain the photocopy with his signature affixed on it. An equivalent grade corresponding to grade/marks awarded by MOOCs agency shall be determined by college level committee. This equivalent grade shall be shown in the grade sheet and accounted in the SGPA and CGPA calculations.

12 Grading

After each course is evaluated for 100 marks, the marks obtained by the student in each course will be converted to a corresponding letter grade as given below, depending on the range in which the marks fall.

Range in which the marks in the course fall	Grade	Grade points assigned	Performance
≥ 90	A^+	10	Outstanding
80 to 89	A	9	Excellent
70 to 79	B	8	Very Good
60 to 69	C	7	Good
50 to 59	D	6	Fair
40 to 49	E	5	Satisfactory
< 40	F	0	Fail
ABSENT	Ab	0	

12.1 Requirement for clearing any course

In the theory and practical courses the students have to obtain a minimum of 35% marks in the end examinations and also minimum 40% of marks in the sum of the continuous internal assessment and end examination taken together, otherwise they will be awarded grade-F in that course. F is considered as a fail grade indicating that the student has to reappear for the end supplementary examination in that course and obtain a non fail grade for clearing that course.

In other words to pass in a course, a student shall score 21 marks or more out of 60 marks in the end examination and also shall score 40 marks or more out of 100 in the end examination and the continuous internal assessment put together. To become eligible for the award of degree a student must obtain a minimum CGPA of 4.0 (refer clause 12.4)

12.2 Supplementary Examinations

Apart from the regular end examinations, the college will also schedule and conduct supplementary examinations for all courses for the benefit of students with backlogs. Such students may have to write more than one examination per day.

Instant examination for eighth semester courses will be conducted only for the benefit of those outgoing students who failed in or who are absent for only one course of final semester and who do not have any other backlogs. The instant exam will be conducted normally within one month of the announcement of the final semester revaluation results.

12.3 Improvement

A student is permitted to improve his/her performance in any end examination of theory courses that belong to immediately preceding semester only. For example, a student appearing for regular exams of III semester can improve in the courses of II semester only. Similarly a student appearing for regular exams of VI semester can improve in the courses of V semester only. Students can improve their performance in theory courses only. However, this facility shall not be availed by a student who has taken the Original Provisional / Degree Certificate.

12.4 Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

The Semester Grade Point Average (SGPA) for each semester and Cumulative Grade Point Average (CGPA) up to any semester are calculated as follows:

A Semester Grade Point Average will be computed as follows

$$SGPA = \frac{\sum_{i=1}^{n} c_i \; x \; GP_i}{\sum_{i=1}^{n} c_i}$$

here 'n' is the number of courses in that semester, C_i = Credits for the course i , GP_i = the Grade Point obtained for the course i. and the summation is over all the courses in that semester.

A Cumulative Grade Point Average (CGPA) will be computed for every student at the end of each semester. The CGPA would give the cumulative performance of a student from the first semester up to the end of the semester to which it refers and is calculated as follows.

$$CGPA = \frac{\sum_{j=1}^{m} SGPA_j \; x \; TC_j}{\sum_{j=1}^{m} TC_j}$$

Where 'm' is the number of semesters under consideration. TC_j the total number of credits for a particular semester and $SGPA_j$ is the Semester Grade Point Average of that semester. Both SGPA and CGPA will be rounded off to the second digit after decimal and recorded as such.

While computing the SGPA/CGPA the courses in which the student is awarded zero grade points will also be included.

For any academic/employment purpose the following formulae shall be used for conversion of CGPA to % of marks.

% of marks = (CGPA – 0.5) x 10

12.5 Grade Sheet

A grade sheet will be issued to each student indicating his/her performance in all courses of that semester in the form of grades and also indicating the SGPA and CGPA up to that semester. After successful completion of the total course of study, a Consolidated Grade sheet containing performance of all academic years will be issued as a final record. Duplicate Grade sheets will also be issued if required after the payment of requisite fee. Partial Grade sheet will also be issued up to any semester to any student on request and by paying the stipulated fee in force.

13   **Award of Degree**

After having admitted into the program, B.Tech degree shall be conferred on a student who has satisfied the following conditions.

(i)   The student joining with Intermediate qualification must have, after admission into the Regular B.Tech program of the college, pursued a regular course of study for not less than four academic years and not more than eight academic years.

(ii)   The student joining under lateral entry scheme with diploma qualification must have, after admission into III Semester B.Tech, pursued a regular course of study for not less than three academic years and not more than six academic years.

(iii)   The student must have satisfied the minimum academic requirements in the respective branch of engineering in each semester.

(iv)   Students must register for all the courses and earn the credits specified

(v)   Students who fail to fulfil all the academic requirements for the award of degree within the specified period from the year of their admission shall forfeit their seat in B.Tech and their admission stands cancelled.

(vi)   The student shall successfully complete non credit courses like EAA and mandatory Courses.

(vii)   The student shall have no dues to the institution, library, hostels etc

(viii)   The student shall have no disciplinary action pending against him/her.

The Degree will be conferred and awarded by Jawaharlal Nehru Technological University Anantapur, Ananthapuramu on recommendations by the Academic council of the college basing on the eligibility as in Clause 14.

14   **Minimum Academic Requirements**

14.1   A student is deemed to have satisfied the minimum academic requirement if he/she scores not less than 35% marks in the end examinations and also minimum 40% of marks in the sum total of the internal evaluation and end examination together in each of the theory and practical courses including Major project etc., and obtains a minimum CGPA of 4.0 which is calculated considering all the semesters. However, lateral entry students must obtain a CGPA of 4.0 which is calculated considering the performance from third semester to eighth semester.

14.2   A student shall be declared to have satisfied the minimum academic requirements and has become eligible for the award of degree if he/she fulfills each of the following conditions.

i.   Satisfies minimum requirements as stated in Clause 14.1.

ii.   Satisfies the minimum requirement of attendance as stipulated in Clause 8 and

iii.   Satisfies all other regulations, academic or otherwise stipulated by the college from time to time.

15   **Award of Class**

After a student has satisfied the minimum requirements prescribed for the completion of the program as stipulated in clause 14 and have become eligible for the award of degree he/she shall be placed in one of the following classifications based on CGPA.

Division / Class	CGPA
First Class with Distinction	≥7.5
First Class	≥6.5 and< 7.5
Second Class	≥5.5 and<6.5
Pass Class	≥4.0 and< 5.5

16	**With holding of Results**

The result of a candidate shall be withheld if:
   (i) He/she has not cleared any dues to the Institution/ Hostel /University.
   (ii) A case of disciplinary action against him/her is pending disposal.

17	**Exam Hall Culture**

- ❖ Students are not permitted to use mobile phones in the examination halls.
- ❖ Any attempt by any student to influence the examiners, faculty and staff or Controller of Examinations for undue favours in the exams, and bribing them either for marks or attendance will be treated as malpractice case and the student can be debarred from the college.
- ❖ When a student absents himself/herself, he/she is treated as to have appeared and obtained zero marks in that course(s) and Grading is done accordingly.
- ❖ When a student's answer book is confiscated for any kind of attempted or suspected malpractice, the decision of the examination committee is final.

18	**Transitory Regulations**

Candidates who have been detained for want of attendance/lack of credits or who wish to repeat the same semester or avail temporary withdrawal or avail gap year are eligible for readmission into the respective semester and shall be governed by the curriculum and academic regulations in force at the time of re-joining.

19	**Amendment of Regulations**

The college may, from time to time, revise, amend or change the regulations, scheme of examinations and syllabi.

20	**Ragging**

Ragging of any kind is strictly prohibited. A Student who indulges in ragging shall be punished as per the provisions of the Ragging Act.

21	**Rules of Discipline**

- ❖ Use of mobile phones with camera on the campus is strictly prohibited.
- ❖ Students shall behave and conduct themselves in a dignified and courteous manner on the campus/Hostels.
- ❖ Students shall not bring outsiders to the institution or hostels.
- ❖ Students shall not steal, deface, damage or cause any loss to the institution property.
- ❖ Students shall not collect money either by request or coercion from others within the campus or hostels.
- ❖ Students shall not resort to plagiarism of any nature/extent. Use of material, ideas, figures, code or data without appropriate acknowledgement or permission of the original source shall be treated as cases of plagiarism. Submission of material, verbatim or paraphrased, that is authored by another person or published earlier by oneself shall also be considered as cases of plagiarism.
- ❖ Use of vehicles by the students inside the campus is prohibited.
- ❖ Any conduct which leads to lowering the esteem of the institution is prohibited.
- ❖ Any student exhibiting prohibited behaviour shall be suspended from the institute. The period of suspension and punishment shall be clearly communicated to the student. The student shall lose the attendance for the suspended period
- ❖ Dress Code
- ❖ Boys : All the boy students should wear formal dresses. Wearing T-shirts and

other informal dresses on the campus is strictly prohibited.

Girls : All the girl students shall wear churidhar with dupatta/ saree

22 **General**

❖ The academic regulations should be read as a whole for purpose of any interpretation.

❖ The college reserves the right of altering the regulations as and when necessary.

❖ The regulations altered may be applicable to all the Candidates on rolls.

❖ Wherever the word he, him or his occur, it will also include she, her, hers.

❖ Whenever ambiguities arise in interpreting the regulations, the chairman joint board of studies in consultation with Joint Board of Studies shall have the powers to issue clarifications and /or to make new rule for removing such ambiguities which shall be final.

23 **Punishments for Malpractice cases – Guidelines**

The examinations committee may take the following guidelines into consideration while dealing with the suspected cases of malpractice reported by the invigilators/squad members etc; during end examinations. The punishment may be more severe or less severe depending on the merits of the individual cases.

S. No	Nature of Malpractice/Improper conduct	Punishment
1.	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 course of the examination (theory or practical) in which he/she 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 course of the examination)	For Possession of mobile phone: Expulsion from the examination hall and cancellation of the performance in that course only. For possession of any material relevant to the exam: Expulsion from the examination hall and cancellation of the performance in 50% of the subjects.(In case of fraction, the integer part of the number). The subjects for cancellation will be selected in cyclic order starting with the subject in which the candidate is found to resort to malpractice.
2.	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 course.
3.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that course and all other courses the candidate has appeared including practical examinations and project work of that semester/year examinations.
4.	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 other student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that course only of all the students involved. In case of an outsider, he will be handed over to the police and a case shall be registered against him.

5.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the course of the examination (theory or practical) in which the student is appearing.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses including practical examinations and project work of that semester/year.
6.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses including practical examinations and project work of that semester/year.
7.	Smuggles in the answer book or takes out or arranges to send out the question paper during the examination or answer book during or after the examination	Expulsion from the examination hall and cancellation of performance in that course and all the other courses including practical examinations and project work of that semester/year. The student is also debarred for two consecutive semesters from class work and all examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
8.	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.	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that course and all other courses 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 shall be registered against them.
9	Leaves the exam hall taking away answer script or intentionally tears up the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that course and all the other courses including practical examinations and project work of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all end examinations. The continuation of the program by the candidate is subject to the academic regulations in connection with forfeiture of seat.

10.	Possesses any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses including practical examinations and project work of that semester/year. The student is also debarred and forfeits the seat.
11.	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 S.No. 7 to S.No. 9.	For Student of the college : Expulsion from the examination hall and cancellation of the performance in that course and all other courses including practical examinations and project work 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 shall be registered against them.
12.	Impersonates any other student in connection with the examination	The student who has impersonated shall be expelled from examination hall. The student is debarred from writing the remaining exams, and rusticated from the college for one academic year during which period the student will not be permitted to write any exam. If the imposter is an outsider, he will be handed over to the police and a case shall be registered against him. The performance of the original student who has been impersonated, shall be cancelled in all the courses of the examination including practicals and project work of that semsester /year. The student is rusticated from the college for two consecutive years during which period the student will not be permitted to write any exam. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
13.	If any malpractice is detected which is not covered in the above S.No. 1 to S.No. 12 items, it shall be reported to the college academic council for further action and award suitable punishment.	
14.	Malpractice cases identified during sessional examinations will be reported to the examination committee to award suitable punishment.	