

Academic Regulations

AR 20

Undergraduate Programs

Version 3.0



GMR Institute of Technology
Rajam 532 127, AP
Accredited by NAAC & NBA
www.gmr.it.org

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The Vision of GMRIT

- ❖ To be among the most preferred institutions for engineering and technological education in the country
- ❖ An institution that will bring out the best from its students, faculty and staff – to learn, to achieve, to compete and to grow – among the very best
- ❖ An institution where ethics, excellence and excitement will be the work religion, while research, innovation and impact, the work culture

The Mission of GMRIT

- ❖ To turnout disciplined and competent engineers with sound work and life ethics
- ❖ To implement outcome based education in an IT-enabled environment
- ❖ To encourage all-round rigor and instill a spirit of enquiry and critical thinking among students, faculty and staff
- ❖ To develop teaching, research and consulting environment in collaboration with industry and other institutions

Academic Regulations for B. Tech. Program

(For all the candidates admitted from the Academic Year 2020 – 2021 onwards)

1. Eligibility for Admission

The total seats available as per the approved intake are grouped into two categories viz. category A and Category B with a ratio of 70:30 as per the state government guidelines vide G.O No.52

- a. The admissions for category A and B seats shall be as per the guidelines of Andhra Pradesh State Council for Higher Education (APSCHE) in consonance with government reservation policy
 - ❖ Under Category A: 70% of the seats are filled through EAMCET counseling
 - ❖ Under Category B: 30% seats are filled based on 10+2 merits in compliance with guidelines of APSCHE
- b. Admission eligibility-Under Lateral Entry Scheme

Students with diploma qualification have an option of direct admission into 2nd year B. Tech. (Lateral entry scheme). Under this scheme 10% seats of sanctioned intake will be available in each course as supernumerary seats. Admissions to this three year B Tech later entry Programme will be through ECET. The maximum period to complete B. Tech. under lateral entry scheme is six consecutive academic years from the date of joining

2. Duration of the Programme

The course duration for the award of the Degree in **Bachelor of Technology** will be four academic years, with two semesters in each year. However, if a student is unable to complete the course within 4 years, he/she can do so by giving more attempts but within 8 consecutive academic years from the date of admission.

2.1 Academic Calendar

For all the eight semesters a common academic calendar shall be followed in each semester by having sixteen weeks of instruction, one week for the conduct of practical exams and with three weeks for theory examinations and evaluation. Dates for registration, sessional and end semester examinations shall be notified in the academic calendar of every semester. The schedule for the conduct of all the curricular, co-curricular and extr-curricular activities shall be notified in the semester planner.

3. Award of the Degree

A student will be declared eligible for the award of B. Tech. degree if he/she fulfills the following:

- a. Pursues a course of study in not less than four and not more than eight academic years
- b. After eight academic years from the year of their admission, he/she shall forfeit their seat in B. Tech. course and their admission stands cancelled
- c. Registers for 160 credits and must secure all the 160 credits
- d. A student shall be eligible for the award of B.Tech degree with Honours or Minors if he/she earns 20 credits in addition to the 160 credits
- e. A student shall be permitted to register for Honours or Minors and not for both.

4. Branches of Study

B. Tech. Programmes

- I Chemical Engineering (CHE)
- II Civil Engineering (CE)
- III Computer Science and Engineering (CSE)
- IV Electrical and Electronics Engineering (EEE)
- V Electronics and Communication Engineering (ECE)
- VI Information Technology (IT)
- VII Mechanical Engineering (ME)

5. Program Structure & Curriculum Framework

The curriculum of B. Tech. program has different categories of courses. For a total of 160 credits the indicative credit distribution among these categories is listed in table below for all the programs.

No.	Categories of Courses	Credits
1	Basic Science & Humanities	22.5
2	Engineering Science	20
3	Professional Core	61.5
4	Professional Core Electives	13
5	Open Electives	12
6	Integrated and Skill	8
7	Internships and Seminar	15
8	Project	8

The curriculum and its structure is designed based on the philosophy of Outcome Based Education with a composition of courses spread out in the various categories listed above and syllabi is prescribed by the respective Boards of Studies from time to time. The students have an option of taking nine electives bases on their interest/career path spanned across 5th to 8th semesters from the list of electives prescribed in the curriculum. Under Choice Based Credit System (CBCS) the students also have the flexibility to choose one elective from the list of open electives offered by the other programs of study in consultation with their respective department. Following are some of the distinct courses that are being offered in the curriculum.

- a. **Skill Oriented Courses:** Skill Oriented Courses are offered in the form of Integrated courses that are exclusively designed to provide a unique learning experience of layered learning where in the students have the chances to practice while learning. These courses are designed by blending both theory and laboratory components one over the other
- b. **Mini project:** The curriculum offers Mini Projects for the students during 6th semester. They will be divided into batches and the report will be evaluated by a committee as nominated by CoE constituted with internal and external members
- c. **Term paper:** The term paper is a self-study report with an objective enhancing the students' written technical-communication and shall be carried out in 5th semester. Every student will take up this either individually or as a batch of maximum four members and

submit a report. The scope of the term paper could be an exhaustive literature review choosing any engineering concept with reference to standard research papers or an extension of the concept of earlier course work in consultation with the term paper supervisor.

The report will be evaluated by a committee nominated by HoD with the approval of the Controller of Examinations (CoE)

- d. Project work:** The final year project work shall be carried out during the 7th or 8th semester based on the interest of the students. Students shall take up the capstone project at the industries along with the full semester internship (FSI) in the same industry. However, students should take prior permission if he/she is interested to take up both the above said courses and shall submit separate report. Projects shall be taken up either as a team or as an individual.

Internal evaluation will be done by the Project Review Committee (PRC), comprising of HOD and two senior members of faculty along with the project supervisor. Semester end evaluation will be done by Project Evaluation Committee (PEC) comprising of three members including HOD, project guide and an external examiner nominated by the office of the CoE

- e. Audit courses:** Audit courses are those courses which do not carry any credits and are not accounted for the calculation of CGPA and the students shall register for one Audit courses in the beginning of 3rd semester. The list of the courses will be notified at the beginning of the third semester for all students and the student has to choose one audit course under self-study mode.

All the students (regular and lateral entry students) shall complete the audit course similar to other regular courses and the results will be indicated with “Satisfactory” (40% of the total marks) or “Not Satisfactory” performance

- f. MOOCs and Self-Study Courses:** MOOCs and Self-Study Courses: The Curriculum provides adequate flexibility for the students to take up MOOCs through self-study mode enabling them to learn the courses on independent mode with minimal guidance of faculty mentor to earn credits for the award of the degree B. Tech. (Regular) and B. Tech. (Honours) and the attendance is not mandatory. The courses shall be opted from MOOCs platform viz. NPTEL, SWAYAM or any other platforms as approved by the respective Board of Studies (BoS).

The evaluation and assessment pattern for such courses which are part of the curriculum for the B. Tech. (Regular) Degree shall be carried out as similar to other regular theory courses. However, the evaluation and assessment of MOOCs for B. Tech. (Honours) shall be in line with the assessment platforms offering these courses. Further, if the grade is not specified by the particular platform, the office of CoE shall follow the institutional SOP for the award of the grade

- g. Summer Internships (I and II)**

Summer Internship #I: As a part of curriculum in all UG programmes, it is mandatory for all students to undergo summer internship #I at industries (core or allied) / R & D organization to get practical insight of their subject domain or community engagement during summer break after the 4th semester. This summer internship programme shall be availed to a maximum duration of 6 weeks and the assessment shall be carried out in the very beginning month of the 5th semester with both internal and external experts and

will be accounted for the calculation of CGPA. Students can also choose Community Engagement to take field related projects.

Summer Internship #II: Will be deployed in the form of skill bridge training for a duration of 6 weeks during summer break after the 6th semester wherein the students will be trained on Problem Solving and Computer Coding Skills which are very much needed for skill up gradation. Assessment shall be carried out in the very beginning month of the 7th semester with both internal and external experts and will be accounted for the calculation of CGPA

- h. Employability Skills:** It is mandatory for all students to take a course on Employability Skills from 3rd Semester to 6th Semester. The Employability Skills are covered under three broad streams viz. **Aptitude Skills, Soft Skills and Domain Specific Knowledge**. The credits earned through these courses will be indicated in the grade memos of 4th and 6th semester and will be taken into account for CGPA calculation. The End semester assessment for all the four semesters will be done independently by an internal examiner(s) nominated by CoE.
- i. Industry Driven One Credit Courses (IDC):** Meeting with the industry requirements/research organizations as well as to reduce the gap between industry-academia-research organizations, the one credit (15 hours.) course has been introduced. The credits earned through these courses will be indicated in the grade memo and will not be taken into account for CGPA calculation. However, the student can compensate four 1-credit courses to a 4-credit course which is over and above for those students who have registered for B. Tech. (Honours) and B. Tech. (Minor). If a student does not successfully complete the registered course under this category in a semester at its first attempt, the registration of the course will be cancelled automatically. Further it will not be treated as an arrear and no supplementary examination will be conducted for the course. Alternatively, if he/she wishes, he/she can register for the same course/some other course in the subsequent semesters and successfully complete it as and when offered by the programme
- j. Full Semester Internship (FSI):** Students shall undergo mandatory FSI programme at industries during 7th or 8th semester to get practical insight relevant to their core branch of engineering or in allied branch of study under the guidance of internal and external expert members in the institute and at industries respectively. The Institute shall allow approximately 50% of the students to pursue FSI during the 7th semester and the rest during 8th semester. The student shall register their choice of interest either in 7th or 8th semester for FSI in the beginning of 5th semester with Career Development Cell. The students opting for FSI in 7th semester should take up the courses offered in 8th semester on self-study mode during the internship period (7th semester) and those who undergo FSI in 8th semester should take the courses offered in that particular semester on self-study mode during the internship period (8th semester)
- k. Semester Away Programme (SAP):** In lieu of FSI interested students can have the option of undergoing Semester Away Programme during 7th semester with Higher Learning Institutions at Foreign Countries or Institutions of National Repute or Research Organizations in India, by earning necessary equivalent credits subject to the terms and conditions as prescribed by the respective host organization. The student shall acquire 9 credits (three 3-credit courses) at the host institution to compensate the credit requirement for FSI and take up the two electives in self-study mode. The students who

are interested to opt for SAP shall register at the beginning of 3rd semester and initiate the process with the host institute

l. Career Path Electives (CPE):

- The curriculum provides opportunities to the students to gain expertise in the emerging technologies in the form of Career path with expertise by offering elective courses in a sequential mode from 5th semester onwards. The students can choose any one of these career paths during the V semester and shall continue in the same career path by selecting specific electives in the VI and VII semesters in a sequence and finally leading to a Capstone project aligning with the career path in the VII/VIII semester.
- All the students who successfully complete the elective course aligned as per the CPE will have their Consolidated Grade Memos mentioning the title of the career path. Further, they will also receive a certificate/citation issued by the college.
- After choosing CPE during 5th semester and if any student fails to take up the specific electives courses as per the sequence in the subsequent semesters and select the electives from the general pool of electives, the student will be automatically gets out of the CPE.
- All those students who don't take up the Capstone project in the CPE domain will also get out the CPE
- In case of the students who are going for FSI/SAP in 7th semester shall take the respective elective course on self-study mode and further, complete the Capstone project in the 8th semester on campus
- In case of the students who are going for FSI in 8th semester shall take the respective elective course on self-study mode and further, complete the Capstone project in the 7th semester itself
- In case of the students going for FSI as a preplacement offer during 8th semester, he/she shall take up the elective courses on self-study mode and complete the Capstone project in the industry.
- The assessment pattern pertaining to the career path courses will be similar to those of other theory and integrated courses.
- The students who are not interested in any of these career paths can choose any of the other core electives as furnished in the respective list of the electives in the curriculum

m. Language Electives:

To enable the students to take up foreign languages as a language elective during the 2nd semester, students are provided with an option of selecting any of the foreign languages Viz. French, Spanish, Japanese and German apart from the national language Hindi. All these courses are offered as a language elective during the 2nd semester to prepare them for higher education and compete in the global market. All these courses are offered in Synchronous Online mode of delivery and the assessment will be done in line with the regular theory courses.

5.1. Basis for Credit Allotment for Courses Offered

No	Course	L	T	P	Credits
1	Theory Course (Regular)	1	0	0	1.0
2	Integrated Course (Theory +Lab)	1	0	1	1+0.5
3	Laboratory/Drawing Course	0	0	1	0.5
4	Elective Courses	1	0	0	1
5	Elective Courses (Integrated)	1	0	1	1+0.5
6	Term Paper	0	0	1	0.5
7	Mini Project	0	0	1	0.5
8	Project work	0	0	1	1.0
9	Co- and Extra-curricular Activities (CC&EC)	0	0	1	0.5
10	Employability Skills (ES)	0	0	1	0.5
11	Audit /Mandatory Courses	0	0	0	0
12	Theory Course (Honours/Minors)	1	0	0	1
13	MOOCs/Industry Driven courses (For every 15hrs of Duration)	-	-	-	1
14	Summer Internship (6 Weeks: Offline/Online)	-	-	-	1.5
15	Full Semester Internship (16 Weeks)	-	-	-	9

5.2. Semester-wise Curriculum Structure

Course Pattern for Four Year Regular and Three Year Lateral Entry Programme

Sem.	No. of Theory Courses	No. of Lab Courses, Internship, Term Paper, Project	Total Credits
I	4 Theory	3	16.5
II	4 (3 Theory + 1 Language Elective)	3	16.5
III	7 (4 Theory + 2 Integrated + 1 Audit)	2 + Employability Skills + CCEC	23
IV	5 (4 Theory + 1 Integrated)	2 + Employability Skills + CCEC	23
V	6 (2 Theory + 2 Integrated + 1 Professional Elective +1 Open Elective)	1 + Term Paper + Employability Skills + CCEC + Summer Internship #1	24.5
VI	5 (3 Theory + 1 Professional Integrated Elective +1 Open Elective + Audit Course)	1 + Mini Project + Employability Skills + CCEC + Summer Internship #2	24.5
VII	3 (2 MOOCs + 1 Open Elective (MOOCs))	Project	17
VIII	2 (1 MOOCs + 1 Open Elective (MOOCs))	FSI	15
Total Credits			160

The credit requirement for three year programme i.e. students admitted through lateral entry will be as per the sum of credits from third semester through eighth semester as above i.e. 127.

5.3 Credit Break-up for Various Category of Courses

For Four Year/Three Year Regular Programme

S. No.	Category	Total No. of Credits and Courses					
		Four Year		Total Credits	Three years		Total Credits
		Credits	Courses		Credits	Courses	
1	Theory courses	3	21	63	3	13	39
2	Integrated course	4	5	20	4	5	20
3	Laboratory course	1.5	12	18	1.5	6	9
4	Professional elective	3/4 (7)	4/1 (5)	16	3/4 (7)	4/1 (5)	16
5	Open Elective	3	4	12	3	4	12
6	Employability Skills	3	2	6	3	2	6
7	CC & EC activities	1	2	2	1	2	2
8	Internship (Summer Internship/FSI)	1.5/9 (10.5)	2/1 (3)	12	1.5/9 (10.5)	2/1 (3)	12
9	Term paper	1.5	1	1.5	1.5	1	1.5
10	Mini Project	1.5	1	1.5	1.5	1	1.5
11	Project	8	1	8	8	1	8
Total		-	57	160	-	43	127

5.4 Division of Marks for Continuous and Semester End Assessment

Course	Marks Continuous Assessment	Marks for Semester end Assessment
Theory	40	60
Integrated Course	40	(60T+30L)
Drawing Courses	25	50
Laboratory	25	50
Term Paper	50	--
Audit Courses	50	--
Mini Project	25	50
Industry Driven Courses (IDC)	25	--
CC & EC	Participation In Activities	CC & EC
Employability Skills(AS+SS+DSS)	30+30+30	20+20+20
Full semester Internship	100	100
Project Work	100	100

6. Evaluation Methodology

- The assessment will be based on the performance in the semester-end examinations and / or continuous assessment, carrying marks as specified
- At the end of each semester, final examinations will normally be conducted during October/November and during April / May of each year. Supplementary examinations shall be conducted as per the schedule announced
- Continuous Assessment Marks will be awarded on the basis of Continuous Evaluation made during the semester as per the scheme
- The letter grade and the grade points are awarded based on the hybrid grading system having earned grades and awarded grades. Grading is done based on the percentage of marks secured by a candidate in individual course as detailed below:

Range of Percentage of Marks	Letter Grade	Qualitative Meaning	Grade Point	Remarks
90-100	A+	Outstanding	10	Earned grade
85-89	A	Excellent	9	
Due to hybrid grading system the ranges of marks may vary for each course based on the normal distribution of marks	B+	Very Good	8	Awarded grade
	B	Good	7	
	C+	Average	6	
	C	Satisfactory	5	
	D	Pass	4	
< 40 for Theory and < 50 for Lab	F	Fail	0	Earned grade

- After completion of the programme, the Cumulative Grade Point Average (CGPA) from the I Semester to VIII Semester (from III to VIII semester for lateral entry) is calculated using the formula:

$$CGPA = \frac{\sum_{i=1}^{n-1} (c_i \times g_i)}{\sum_{i=1}^{n-1} c_i}$$

Where n is the number of courses registered for, 'c_i' is the credits allotted to the given course and 'g_i' is the grade point secured in the corresponding course

- In view that Hybrid grading system is adopted for the award of the grade points in each of courses, for the benefit of the students and other stack holders who wish to have an equivalence for the CGPA secured for the graduation, the following empirical relation is provided.

Equivalent Percentage: (CGPA)0.95 x 10

6.1 Continuous Assessment Pattern for all courses

a. Theory Course:

Out of 40 marks allotted for continuous assessment 30 marks will be awarded based on two tests (Each test will be conducted for 40 marks and scale down to 30 marks) conducted and 10 marks shall be awarded based on Open book examination enabling to assess Higher Order Thinking skills (HOT)

Internal Test 1 & Test 2 will be conducted for 30 Marks (80 % of marks secured in 1st best internal tests and 20% marks secured in 2nd best internal test)

- The duration of each internal test will be 90 minutes addressing predominantly on lower order thinking skills and shall cover two units of syllabus in each test
- All the students will be notified with the marks secured within one week after the completion of the sessional exams
- Students are permitted for reconciliation within a period of two working days after the notification of marks
- The evaluation methodology of Design and Drawing courses coming under theory will be given in their respective course handouts which will be approved by the respective chairperson of the BoS

Open book Examination: Is an assessment process providing the students a realistic environment to assess the higher order learning/thinking skills with the questions that mimic professional ability to demonstrate Creating, analyzing and evaluating skills. Open Book Examination carries 25% weightage in the continuous assessment and the exam will be conducted for 30 marks at the end of every semester and will be scaled down to 10 marks

The duration of each test will be 120 minutes, the questions predominantly focusing on Higher Order Thinking Skills. In case, if the course has limited scope of HOTs, assessment shall be carried out with LOTs. This assessment is done strictly following the **process manual** that clearly explains the objectives and guidelines to be followed by both the faculty members and the students. (*Annexure*)

b. Integrated Course:

40 marks allotted for continuous assessment as given below:

Theory Course:

20 marks will be awarded based on two tests conducted similar to theory (Each Test will be conducted for 40 marks and scale down to 20 marks) as given below:

Internal Test 1 & Test 2: 20 Marks (80 % of marks secured in 1st best internal test and 20% marks secured in 2nd best internal test)

Laboratory

20 marks are awarded for continuous assessment and following is the pattern for the award of 20 marks

Preparation, Observation & Result:	10 Marks
Record	: 05 Marks
Internal Test	: 05 Marks
External Exam (Lab)	: 30 Marks
External Exam (Theory)	: 60 Marks

c. Laboratory Course:

25 marks are awarded for continuous assessment and following is the pattern for the award of 25 marks

Preparation, Observation & Result:	05 Marks
Record	: 05 Marks
Internal Test	: 05 Marks
Viva – Voce	: 05 Marks
Augmented Experiment	: 05 Marks (Laboratory Mini Project)

Engineering drawing course is evaluated in line with lab courses and the Pattern of awarding 25 marks for continuous evaluation is as follows

Day-to-day work : 15 marks

Internal test : 10 marks

There shall be two internal tests for 10 marks each during the semester and the average shall be considered

d. Term Paper:

Continuous Assessment : 50 Marks

Distribution

Literature Survey : 10 Marks

Review 1 : 10 Marks

Review 2 : 10 Marks

Publication/Presentation of Paper : 10 Marks

Final Presentation : 10 Marks

e. Audit Courses:

Online Objective Test : 50 Marks

f. Mini Project:

Continuous Assessment : 25 Marks

Distribution

Review 1 : 05 Marks

Review 2 : 05 Marks

Literature Survey : 05 Marks

Final Presentation : 10 Marks

g. Project:

Continuous Assessment : 100 Marks

Distribution

Innovativeness of the Project : 05 Marks

Literature Survey : 10 Marks

Experimentation / Simulation : 15 Marks

Result Analysis : 05 Marks

Review 1 : 10 Marks

Review 2 : 10 Marks

Product development : 25 Marks

Publication/Presentation of Paper : 05 Marks

Final Presentation : 05 Marks

Project Report : 10 Marks

h. Full Semester Internship:

Continuous Assessment : 100 Marks

Distribution

Internship Progress Report : 10 Marks

On Site Assessment : 15 Marks

Assessment by Industry : 50 Marks
(Intern Assessment Tool)

Final Assessment on Campus : 25 Marks

Total : 100 Marks

Distribution

Project Report : 60 Marks

Final Presentation : 40 Marks

i. Co-Curricular and Extra Curricular (CCEC) Activities:

Students shall acquire 1 credit each in 2nd and 3rd years with the following scheme:

Scheme of evaluation for the CCEC activities:

- No. of slots in each Semester @ 1 slots every week : 16
- No of activities per slot : 1
- No. of Streams [1 CC + 1 (EC+ Community Engagement)] : 2
- No. of minimum activities to be conducted in each stream : 6
- Students shall secure an overall attendance of 75% in all activities put together
- Students need to perform a minimum of one activity in each stream
- Students who did not maintain 75% of attendance in all activities put together and not performed in a minimum of two activities are not eligible for summative assessment
- Students need to appear for the final summative assessment in which he/she will perform in any one of the activities offered by the department and grades will be awarded based on the marks secured as per the rubric.

The credits earned through these courses will be indicated in the grade memo of 4th and 6th semesters and will be taken into account for CGPA calculation. If any student fails to attend summative assessment or failed in the summative assessment, he/she will not be eligible for the award of Distinction.

In case, if any student fails to meet the compliance in CCEC activities as stated above, he/she will not be eligible for the final summative assessment and need to attend the make-up classes conducted by the respective department in the following semester and a common schedule for the make-up classes will be notified with a prior notice. If a student fails in the summative assessment, he/she shall reappear in the subsequent supplementary examination.

The number of make-up classes/activities to be conducted for each of the semesters will be at least 35% of the regular activities and students need to perform in at least two activities (one in each stream) per semester and secure 90% of attendance. The student has no flexibility to change the stream after initial registration.

j. Employability Skills (ES):

Students shall take this course during from 3rd – 6th semesters and will have three components 1) Aptitude Skills_AS 2) Soft Skills_SS and 3) Domain Specific Skills_DSS having equal weightage. The course content for AS and SS will be common for all the programs whereas the course content for DSS will be program specific and shall be notified before the commencement of every semester based on the demand and need.

The students will be assessed in all the three components in each of the semesters with equal weightage. For the two component AS & DSS the students are assessed based on the marks secured in continuous assessment. For SS, the students are assessed based on the attendance for the various activities scheduled. Minimum of 16 periods shall be allotted for each stream per semester.

Assessment for Aptitude Skills

End Semester Assessment : 30 Marks

Comprehensive Test : 20 Marks

For continuous assessment, tests will be conducted along with midterm examinations. 30 marks will be evaluated by taking into account 80% of marks secured in 1st best assessment test and 20% marks secured in 2nd best assessment test along with 20 marks for comprehensive test in each semester to get qualified.

Assessment of Soft Skills

Minimum of six activities are conducted for SS training in a semester. Assessment for Soft Skills is done based on the participation and performance of the students under different SS activities. Students are expected to perform in at least four activities to get qualified in each semester out of six activities.

Continuous Assessment : 30 Marks

End Semester Assessment : 20 Marks

Under continuous assessment, the students will be assessed for the four activities based on this performance for 30M. At the end of the semester every student will be assessed in one of the activities offered by the department for 20M.

Assessment of Domain Specific Skills

The Domain specific skill training will be preferably a training program on branch specific Application Software tool. Students need to maintain 75% attendance in the training classes conducted to be eligible for assessment. For continuous assessment, tests will be conducted along with midterm examinations. 30 marks will be evaluated by taking into account 80% of marks secured in 1st best assessment test and 20% marks secured in 2nd best assessment test along with 20 marks for End Semester Assessment test in each semester to get qualified.

Continuous Assessment : 30 Marks

End Semester Assessment : 20 Marks

After the semester end final assessment in all the three components (AS; SS & DSS) and upon securing the qualifying marks the student will secure 3-credits each at the end of 4th and 6th semesters. The total cumulative score secured by the student in all the three components in Employability Skills shall be scaled down separately to 100 marks for the calculation of the overall grade point.

In case, a student fails in any of the three skill components (AS/SS/DSS), students need to take the make-up classes wherever needed and take the final assessment as per the schedule announced. The schedule for the make-up classes for SS and AS & DSS End Semester Assessment will be notified. The student registered for make-up classes for SS shall maintain 90% of attendance. The number of make-up classes to be conducted for SS will be at least 35% of regular class work allotted per semester and the student need to attend 2 activities to get qualified in SS.

K. Industry Driven One Credit Courses:

Online Objective Test : 25 Marks

Grading:

Marks \geq 20 : Very Good (A grade)

Marks $<$ 20 and \geq 15 : Good (B grade)

Marks $<$ 15 and \geq 10 : Satisfactory (C grade)

Marks $<$ 10 : Course registration gets cancelled

L. Summer Internship #1:

Total Assessment	: 100Marks
Distribution	
Assessment by industry experts:	30 Marks (Once in 3 weeks, Mode of assessment- Rubrics)
Report Writing	:30 Marks
Presentation & Viva Voce	:40 Marks
Distribution	
Technical Knowledge	:10 Marks
Communication & Articulation	:10 Marks
Presentation Skills	:10 Marks
Viva Voce	:10 Marks

Summer Internship #2:

Students shall appear for three continuous assessments which is spanned across 6 weeks of internship duration, preferably once in two weeks. The continuous assessment will be either with Subject Matter Experts (SMEs) or with Internal Experts depending on the feasibility at the time of assessment. Each online assessment will be having a combination of Multiple-Choice Questions (MCQs), Snippets, Debugging and Computer Coding for a maximum of 100 Marks. At the end of the final continuous assessment, the average of the three continuous assessments will be taken as the final score for the calculation of CGPA as per the norms of autonomous regulation for the award of the grade

6.2 Performance Assessment Committee

The Performance Audit Committee is constituted by Internal Quality Assurance Cell comprising of the course coordinators/course faculty members and programme coordinator. This committee shall review the attainment of Course Outcomes and Program Outcomes, progress and status of the students of the semester concerned at the beginning and end of the semesters. The committee may invite faculty mentors and students as invitees and suggest appropriate solutions to ensure continuous improvement in the learning outcomes across all semesters.

7. Attendance Requirements

- It is desirable for a candidate to put on 100% attendance in all the subjects. However, a candidate shall be permitted to appear for the semester end examination by maintaining at least 75% of attendance on an average in all the courses in that semester put together
- The shortage of attendance on medical grounds can be condoned to an extent of 10% provided a medical certificate is submitted to the Head of the Department when the candidate reports back to the classes immediately after the leave. Certificates submitted afterwards shall not be entertained. Condonation fee as fixed by the college for those who put on attendance between $\geq 65\%$ and $<75\%$ shall be charged before the end examinations. Attendance may also be condoned as per the State Government rules for those who participate in sports, co-curricular and extra-curricular activities provided their attendance is in the minimum prescribed limits for the purpose and recommended by the concerned authority

- c. In case of the students having overall attendance less than 65% after condonation shall be declared detained and has to repeat semester again
- d. In case of the student having less than 65% of attendance in any of the courses during that particular semester, he/she will not be permitted to appear for that particular course in that particular semester end examinations. In such cases, the students need to register makeup classes which will be notified by the CoE office after the completion of that particular semester or at appropriate time whichever is applicable. The students need to secure 90% of the attendance in the make-up classes to appear for the supplementary examinations thereafter and this will be treated as a second attempt. The number of makeup classes to be conducted will be atleast 35% of the regular class work taken in that particular course
- e. His / her academic progress and conduct have been satisfactory

8. Promotion Policies

- ❖ In four year B. Tech. Programme, a student shall be promoted from 2nd year to 3rd year only if he/she fulfills the academic requirements and earning of minimum 50% of credits up to 2nd year
- ❖ In four year B. Tech. Programme, a student shall be promoted from 3rd year to 4th year only if he/she fulfills the academic requirements and earning of minimum 50% credits up to 3rd year
- ❖ In three year lateral entry B. Tech. Programme, a student shall be promoted from 3rd year to 4th year only if he/she fulfills the academic requirements and earning of minimum 50% credits up to 3rd year

9. Graduation Requirements

a) The following academic requirements shall be met for the award of the B. Tech. degree:

- ❖ Student shall secure 160 credits for regular B. Tech. Programme and 127 credits for the students who entered in second year through lateral entry scheme and CGPA is calculated accordingly for the award of Grade/Class/Division.
- ❖ A student of a regular Programme who fails to earn 160 credits within eight consecutive academic years from the year of his/her admission with a minimum CGPA of 4.0 shall forfeit his/her degree and his/her admission stands cancelled
- ❖ A student of a lateral entry Programme who fails to earn 127 credits within six consecutive academic years from the year of his/her admission with a minimum CGPA of 4.0 shall forfeit his/her Degree and his/her admission stands cancelled

b) Award of degree:

Classification of degree will be as follows:

- | | | |
|------|--|----------------------------|
| I. | CGPA \geq 8.0 + No history of arrears +20 addl. Credits
(20 credits shall be earned through core domine courses) | : Degree with Honours |
| II. | CGPA \geq 8.0 + No history of arrears +20 addl. Credits
(20 credits shall be earned through inter-disciplinary courses) | : Degree with Minor) |
| III. | CGPA \geq 7.5 | : Degree with Distinction |
| IV. | CGPA \geq 6.5 and $<$ 7.5 | : Degree with First Class |
| V. | CGPA \geq 5.0 and $<$ 6.5 | : Degree with Second Class |
| VI. | CGPA \geq 4.0 and $<$ 5.0 | : Degree with Pass Class |

- ❖ **First Class with Distinction:** A candidate who qualifies for the award of the Degree (vide clause 8 (a)) having passed all the courses of study of all the eight semesters (six semesters for lateral entry candidates) at the first opportunity, within eight consecutive semesters (six consecutive semesters for lateral entry candidates) after the commencement of his/her study and securing a CGPA of 7.5 and above shall be declared to have passed in **First Class with Distinction**. For this purpose the withdrawal from examination (vide clause 9) will not be construed as an opportunity for appearance in the examination
 - ❖ **First Class:** A candidate who qualifies for the award of the Degree (vide clause 8 (a)) having passed all the courses of study of all the eight semesters (six semesters for lateral entry candidates) within maximum period of ten consecutive semesters (eight consecutive semesters for lateral entry candidates) after the commencement of his/her study and securing a CGPA of 6.5 and above shall be declared to have passed in **First Class**
 - ❖ **Second Class:** A candidate who qualifies for the award of the Degree (vide clause 8 (a)) having passed all the courses of study of all the eight semesters (six semesters for lateral entry candidates) within maximum period of ten consecutive semesters (eight consecutive semesters for lateral entry candidates) after the commencement of his/her study and securing a CGPA of 5.0 and above shall be declared to have passed in **Second Class**
 - ❖ **Degree with Pass Mark:** All other candidates who qualify for the award of the degree shall be declared to have passed in Degree with Pass Mark
 - ❖ **Degree with Honours/Minors:** The students can register for Honours Degree or Degree with Minors by earning additional 20 credits over and above the credit requirement of B. Tech. (Regular) Degree Programme and also maintain minimum of 8 CGPA at the time of graduation clearing the courses in single attempt
- c) **Grafting:** In order to extend the benefit to the students with one/ two backlogs after either 6th semester or 8th semester, GRAFTING option is provided to the students enabling their placements and fulfilling graduation requirements. Following are the guidelines for the Grafting:
- ❖ Grafting will be done among the courses within the semester. A maximum of 7 marks shall be drawn from any one of the cleared courses in the semester and will be grafted to the failed course in the same semester
 - ❖ Students shall be given a choice of grafting only once in the 4 years Programme, either after 6th semester (Option#1) or after 8th semester (Option#2)
 - ❖ Option#1: Applicable to students who have maximum of TWO theory courses in 5th and/or 6th semesters
 - ❖ Option#2: Applicable to students who have maximum of TWO theory courses in 7th and/or 8th semesters
 - ❖ Eligibility for grafting:
 - i. Prior to the conduct of the supplementary examination after the declaration of the 6th or 8th semester results
 - ii. He/she must appear in all regular or supplementary examinations as per the provisions laid down in regulations for the courses, he/she appeals for grafting
 - iii. The marks obtained by her/him in latest attempt shall be taken into account for grafting of marks in the failed course(s)

- d) Betterment Chance:** Student who clears all the subjects up to 6th semester and wish to improve their CGPA can register and appear for one betterment chance for maximum of any five theory courses up to 6th semester. Betterment chance can be availed along with 7th and 8th semester examinations
- e) Quick Supplementary Examination:** Student shall appear for Quick Supplementary Examination (immediately after the completion of 8th semester) to clear the failed courses of 8th semester
- f)** All the candidates who register for the semester end examination will be issued memorandum of marks by the Institute. Apart from the semester wise grade memos, the institute will issue the consolidate grade memo subject to the fulfillment of all the academic requirements

10. Flexibility to Add or Drop Courses Self Study Courses (SSC)

- a.** It is mandatory that all the students need to earn the minimum number of credits (as per clause 8) for the award of B. Tech. degree in their respective disciplines. However, a student can earn more number of credits if he/she opt, by registering one additional course, from the list of courses available in the curriculum of all disciplines, over and above to the existing courses from 4th semester to 6th semester
- b.** The student shall be permitted to drop any SSC at any point of time and registration for such courses will gets cancelled and it will not be reflected Cumulative Grade Memo (CGM)
- c.** All the courses registered and cleared by a student in this mode will be mentioned in the CGM as additional acquired. However, the CGPA is calculated for the 160/127 credits only (as mentioned in the clause 8)

11. Withdrawal from the Examination

- a.** A candidate may, for valid reasons, be granted permission by the Principal to withdraw from appearing for the examination in any course or courses of only one semester examination during the entire duration of the Degree Programme. Also, only ONE application for withdrawal is permitted for that semester examination in which withdrawal is sought.
- b.** In case of students who are attending NCC activities and the event date gets overlapped with the examination schedule, the student shall be given a special examination/test and shall be treated as first attempt
- c.** Withdrawal application shall be valid only if the candidate is otherwise eligible to write the examination and if it is made prior to the commencement of the examination in that course or courses and also recommended by the Head of the Department
- d.** Such withdrawal from the examination shall be treated as absent for the 1st attempt to the respective examination and will lose the eligibility for First Class with Distinction
- e.** If any student is intended to drop FSI subsequent to his/her registration followed by allotment, he/she needs to re-register the course
- f.** In case, if any student has not registered for FSI course either in 7th or 8th semester and he/she has a mandate requirement of internship as a part of pre-placement offer (PPO), he can take up the courses in the respective semester on self study mode
- g.** If any student withdraws from FSI course after the stipulated period mentioned in the clause 10d, he/she will be considered as detained from the semester. He/she needs to register for the semester in the next academic year

12. Transitory Regulations: To enable the students to get into GMRIT either by Re-admission, Admission, or Transfer from other Autonomous and Non-Autonomous Engineering colleges affiliated to JNTUK/Academic regulation within GMRIT, the following transitory regulations will be applicable based on the situation and the case of transfer Following are possible cases that may arise in transitory regulations

- Transfer of a student from a Non-Autonomous engineering college affiliated to JNTUK
 - Transfer of a student from an Autonomous engineering college affiliated to JNTUK
 - A student within the Institution gets transferred from one regulation to the other regulation
- a.** Transfer of candidates from Non-Autonomous Engineering College affiliated to JNTUK:
A student who wishes to transfer from a Non-Autonomous engineering college affiliated to JNTUK either in the 3rd semester or thereafter, shall acquire the credits required for graduation as per the GMRIT regulations and the following two cases may arise:
- Students getting admission into 3rd semester shall be treated at par with the lateral entry students and shall complete all the courses works in the 1st & 2nd semester before joining as per the JNTUK regulations. The credits acquired per course during 1st & 2nd semester will be calculated as per the GMRIT regulations. In case of any credit mismatch for the 1st & 2nd semester when compared with JNTUK regulations, the student shall take the additional courses approved by the concern Board of Studies and Academic council during 3rd semester at GMRIT
 - Students getting admission into 5th or 7th semesters, the students shall clear all the earlier courses under JNTUK regulations and curriculum before joining and acquire the required credits. The credits acquired per course at JNTUK regulation will be calculated as per the GMRIT regulations. After joining at GMRIT the students shall follow the GMRIT regulations and in case of credits mismatch, students will take up additional courses approved by the concern Board of Studies and Academic council at GMRIT

After taking necessary approvals from the concern Board of Studies & Academic council the details of the transferred students will be forwarded to the University.

- b.** Transfer of candidates from an Autonomous college affiliated to JNTUK:

A student who wishes to transfer from an Autonomous engineering college affiliated to JNTUK either in the 3rd semester or thereafter, shall acquire the credits required for graduation as per the GMRIT regulations and the following two cases may arise:

- Students getting admission into 3rd semester shall be treated at par with the lateral entry students and shall complete all the courses works in the 1st & 2nd semester before joining as per the other Autonomous regulations of the earlier college. The credits acquired per course at the earlier autonomous college will be calculated as per the GMRIT regulations. In case of any credit mismatch for the 1st & 2nd semester when compared with the previous Autonomous college regulations, the student shall take the additional courses approved by the concern Board of Studies and Academic council during from 3rd semester at GMRIT
- Students getting admission into 5th or 7th semesters, the students shall clear all the earlier courses under the earlier college regulations and curriculum before joining and acquire the required credits. The credits acquired per course at the earlier autonomous college will be calculated as per the GMRIT regulations. After joining at GMRIT the students shall follow the GMRIT regulations and in case of credits

mismatch, students will take up additional courses approved by the concern Board of Studies and Academic council at GMRIT

After taking necessary approvals from the concern Board of Studies & Academic council the details of the transferred students will be forwarded to the University.

- c. Students getting readmitted within GMRIT moving from one regulation to another regulation. A student gets admission into one regulation in the first year shall continue with the same graduation requirements in terms of total credits required for the award of Degree. However,
- In case the students getting readmitted into a subsequent new regulation, and if the readmission is into any of the semesters from 1st to 4th semester, the student shall follow the regulations applicable to the ongoing batch to which he/she gets admitted and continue in the same regulation till graduation. The substitute courses will be offered and number of credits/ semesters shall be compensated and balanced between the old and new regulations on case to case basis. Necessary approvals from the concern Board of Studies and Academic council shall be taken
 - In case the students getting readmitted into a subsequent new regulation, and if the readmission is into any of the semesters from 5th to 8th semester, the student shall follow the regulations applicable as per the regulations existing at the time of his/her admission and will clear all the subjects and acquire the credits for graduation. For all the common courses he/she will continue along with the students in the new regulations. Necessary approvals from the concern Board of Studies and Academic council shall be taken

After taking necessary approvals from the concern Board of Studies & Academic council the details of the transferred students will be forwarded to the University.

13. Eligibility for Degree with Honours or Degree with Minors

- a. The curriculum provides flexibility to enable the competent students to register for B. Tech. degree with Honours or B.Tech Degree with Minors by earning additional 20 credits which are over and above 160 credits for the award of B. Tech. (Regular) degree. He/She shall register Honours/Minors by paying registration fee during the 4th semester provided he/she secures ≥ 8 CGPA clearing all the courses in single attempt till 3rd semester. In case of students admitted through lateral entry, the CGPA compliance will be considered from 3rd semester onwards.
- b. The students shall have scope to earn these additional 20 credits from 4th semester onwards and at any point of time if he/she wishes to withdraw from B. Tech. (Honours) program, the additional credits acquired till that time will get lapsed and cannot be used to compensate with those 160 credits needed for the award of the degree. A separate grade sheet will be issued to the students who register for the Honours and minors degree program indicating the domain name for Honours and Minor degree title name for Minors along with the GPA.
- c. All the students who maintain ≥ 8 CGPA are eligible to enrollment for B. Tech. with Honours, However, registration for Minors degree will be limited to maximum of 35% of the total intake in a particular batch of students.
- d. These additional courses offered by the program may change from time to time based on the demand and resources availability. The courses may be offered in different modes i.e. guided learning/taught courses/Blended mode or combination

- e. To acquire 20 additional credits, the students are suggested to register for four 4-credit courses under the list of the courses offered by the respective departments and two 2-credit MOOCs of 30 hours or 6 weeks duration each.
 - f. For the award of B. Tech. degree with Honours the additional 20 credits shall be earned by taking the courses offered by the respective department of study in one domain. A set of four courses are offered under each of the four different domains preferably from the new emerging areas as recommended by the BoS
 - g. For the award of **B. Tech degree with Minors** the additional 20 credits shall be earned by taking the inter-disciplinary courses offered preferably from the new emerging areas by the other departments. Minors degree will be awarded with a Title among the pool of titles recommended by the various BoS.
 - h. The students who acquire 20 additional credits and maintain 8.0 CGPA at the time of registration and graduation clearing all the courses in single attempt and acquiring 160 credits will be awarded the B.Tech degree Honours or Minors.
 - i. The students shall register for the courses related to additional 20 credits as per the calendar released by the respective departments and clear them in a single attempt. All the students who maintain 8.0 CGPA at the time of registration and graduation in regular B.Tech courses and acquire GPA of minimum of 6.5 in Honour/Minor courses are eligible for the award of B. Tech. (Honours)/B.Tech (Minors) . Any student who fails to full fill these conditions will automatically get deregistered for B. Tech. (Honours)/B.Tech (Minors) without any notification.
- 14 Gap Year:** The curriculum provides flexibility for the students having ≥ 9 CGPA shall take a break of one year at any time after the end of I/II/III year of study to pursue entrepreneurship full time. This period of gap shall be counted for the maximum time of graduation. A committee approved by the Academic Council shall be constituted to evaluate the proposal submitted by the student and the committee shall decide on permitting the student for availing the Gap Year.

15 Curriculum of all the UG Programmes

The curriculum of the UG programmes mentioned below is provided by the respective BoS

- I Chemical Engineering (CH)
- II Civil Engineering (CE)
- III Computer Science and Engineering (CSE)
- IV Electrical and Electronics Engineering (EEE)
- V Electronics and Communication Engineering (ECE)
- VI Information Technology (IT)
- VII Mechanical Engineering (ME)

General

- a. He/she represents "he" and "she" both
- b. Where the words 'he', 'him', 'his', occur, they imply 'she', 'her', 'hers' also
- c. The academic regulations should be read as a whole for the purpose of any interpretation
- d. In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Chairman, Academic Council will be final

The college may change or amend the academic regulations or syllabi from time to time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the institute.