

**Nadimpalli Satyanarayana Raju Institute of
Technology
(Autonomous)**

**Academic rules and Regulations of four year B.Tech. Regular degree
programme applicable for the student batches admitted from the
Academic Year 2020 – 2021**

1.0 Introduction:

Nadimpalli Satyanarayana Raju Institute of Technology (NSRIT) aims at achieving academic excellence by implementing new initiatives in Teaching-Learning and Evaluation processes. Based on the directions of the University Grants Commission (UGC), New Delhi, All India Council for Technical Education (AICTE), New Delhi and Jawaharlal Nehru Technological University Kakinada (JNTUK) Kakinada, NSRIT introduced the Choice Based Credit System (CBCS) in both the under-graduate and post-graduate programmes offered from the academic year 2020 – 2021. Keeping in view of the standardization of the higher education system in India, NSRIT is continuing the implementation of CBCS ahead.

2.0 Short Title, Application and Commencement:

- ✚ These regulations shall be called as the “NSRIT B.Tech. Choice Based Credit System (CBCS) Academic Regulations, 2020”. In short, it shall be referred as ‘NSRIT B.Tech. R20 Regulations’.
- ✚ The regulations are quite comprehensive and include definitions of key terms, semester system, credit system, grading system and other relevant details.
- ✚ The regulations detailed herein shall apply to all the regular and professional under-graduate programmes offered by the Institute.
- ✚ These regulations shall be applicable and come into force to the student batches admitted from the academic year 2020-2021 onwards.
- ✚ The Institute 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 BoS in view.
- ✚ Any or all such amendments shall be effective from such date and to such batches of students including those already undergoing the programme, as may be approved through Academic Council of the Institute.

3.0 Choice Based Credit System(CBCS):

- ✚ The Choice Based Credit System (CBCS) enables a student to obtain a degree by accumulating the required number of credits prescribed for that degree. Under the

CBCS, the requirement for awarding a degree is prescribed in terms of number of credits to be completed by the students. The number of credits earned by the student reflects the knowledge or skill acquired by him / her.

- ✚ Each course is assigned with a fixed number of credits based on the contents to be learned. The student also has choice in selecting the courses out of those offered by the various departments. The grade points earned for each of the course reflects the student's proficiency in that course.
- ✚ The CBCS provides the student flexibility in duration to complete a programme of study. The CBCS facilitates transfer of credits earned in different departments or institutions of higher education in India.
- ✚ The CBCS permits students to:
 1. Choose electives from a wide range of elective courses offered by the departments.
 2. Undergo additional courses of interest.
 3. Adopt an interdisciplinary approach in learning.
 4. Make the best use of expertise of the available faculty.

4.0 Abbreviations:

Abbreviation	Full Form
AC	Academic Council
AICTE	All India Council for Technical Education
B.Tech.	Bachelor of Technology
BIE	Board of Intermediate Education
BT	Bloom's Taxonomy
BoS	Board of Studies
C	Credit
CBCS	Choice Based Credit System
CGPA	Cumulative Grade Point Average
CIE	Continuous Internal Evaluation
CO	Course Outcomes
CoE	Controller of Examinations
CP	Credit Point
D	Drawing
DA	Dean Academics
GO	Government Order

GP	Grade Point
HoD	Head of the Department
JNTUK	Jawaharlal Nehru Technological University Kakinada
L	Lecture
MOOC	Massive Open Online Course
NBA	National Board of Accreditation
NPTEL	National Programme on Technology Enhanced Learning
NSRIT	Nadimpalli Satyanarayana Raju Institute of Technology
OBE	Outcome Based Education
P	Practical
PG	Post-Graduate
Ph.D.	Doctor of Philosophy
PO	Programme Outcomes
PSO	Programme Specific Outcomes
SEE	Semester End Examination
SGPA	Semester Grade Point Average
SWAYAM	Study Webs of Active Learning for Young and Aspiring Minds
T	Tutorial
UG	Under-Graduate
UGC	University Grants Commission

5.0 Organization:

S. No.	Keywords	Definition
1.	Academic Council	Highest academic body of the Institute and is responsible for the maintenance of standards of instruction, education and examination within the Institute. Academic Council is an authority as per the AICTE / UGC regulations and has the right to take decisions on all academic matters including academic and research.

B.Tech R20 Regulations

2.	Academic Plan	A document defining the course contents and complete details of plan of delivery of the course viz. Course title, Course code, Pre- requisite, Credit structure, Team of instructors, Course objectives, Course outcomes, Mapping of course outcomes and programmes outcomes, relevant syllabus, textbook(s) and reference books, Course session plan and delivery plan, evaluation method, course notices and other course related aspects.
3.	Academic Year	A period that is necessary to complete courses of study. It consists of two consecutive (one odd + one even) semesters.
4.	Admission Procedure	As prescribed by the Government of Andhra Pradesh.
5.	Audit Course	A course of study which has neither evaluation component nor a grade.
6.	Autonomous Institute	An Institute designated as 'Autonomous' by University Grants Commission (UGC), New Delhi in concurrence with the affiliating University i.e., Jawaharlal Nehru Technological University, Kakinada and Andhra Pradesh State Government.
7.	Backlog Course	A course is considered to be a backlog course if the student has obtained a Fail (F) grade.
8.	Basic Science Courses	Courses of foundational nature in the areas of Mathematics, Physics, Chemistry, Biology etc.
9.	Board of Studies	An authority, as defined in UGC regulations, constituted by the Principal for each of the department separately. The board is responsible for curriculum design and update in respect of all the programmes offered by a department.
10.	Branch	A discipline or specialization of a degree programme like Civil Engineering, Mechanical Engineering etc.
11.	Certificate Course	A course that makes a student gain hands-on expertise and skills required for holistic development. It is a mandatory, non-credited course for the award of degree.
12.	Choice Based Credit System (CBCS)	A system which provides choice for students to select from the prescribed courses.

B.Tech R20 Regulations

13.	Compulsory Course	Course required to be undertaken for the award of the degree as per the programme.
14.	Course	A course offered for learning in a particular semester by the Institute. These could be theory / laboratory / project work / mini project / internship etc. and may comprise of lectures / tutorials / practicals / assignments / examination / viva-voce etc. All the courses need not carry the same weightage. A course is defined through course objectives and course outcomes.
15.	Course Outcomes (CO)	Statements describing essential skills that each and every student need to acquire at the end of a course. They can be from 3 to 5 for all the courses.
16.	Course Registration	Process of enrolling into a set of courses in a semester of the programme.
17.	Credit	A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one lecture hour of teaching (lecture or tutorial) or two hours of practical / field-work per week.
18.	Credit Point	A product of grade point and number of credits for a course.
19.	Credit Transfer	The procedure of granting credit(s) to student for courses under taken online through MOOC
20.	Cumulative Grade Point Average (CGPA)	A measure of overall cumulative performance of a student over all semesters. It is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.
21.	Curriculum	Curriculum incorporates all the courses that are offered in a specific discipline. It also indicates the planned interaction of students with instructional content, materials and resources.
22.	Degree	A student who fulfills all the programme requirements is eligible to receive a degree.
23.	Department	An academic entity that conducts relevant curricular and co-curricular activities, involving both teaching and non-teaching staff and other resources.

B.Tech R20 Regulations

24.	Detention	Student who does not secure minimum required attendance in AGGREGATE shall be detained OR Student who does not secure minimum credits required for promotion from one year to the next shall be detained.
25.	Dropping of Courses	A student who doesn't want to register certain courses should do so in writing in a prescribed format within the time frame as mentioned in these regulations.
26.	Evaluation	Evaluation is the process of judging the academic work done by the student in his / her courses. It is done through a combination of continuous internal evaluation and semester end examinations.
27.	Grade Point	A numerical weight allotted to each letter grade on a 10-point scale.
28.	Industrial Visit	Visit to a company / firm as per the academic requirement.
29.	Internship	A period of training / work experience offered by an industry / research organization / academic institution for a limited period of time as specified in these regulations. It is a mandatory and credited course for the award of degree.
30.	Laboratory based Course Projects	A student-centric learning methodology wherein students work as individuals or in teams in a laboratory for design, problem- solving, decision making, and investigative activities.
31.	Massive Open Online Courses (MOOC)	Open access online courses aimed at providing ways to learn new skills.
32.	Outcome Based Education	An educational theory wherein each part of an educational system is based around goals (outcomes). Each student should have achieved the goal by the end of the educational experience.
33.	Professional Core Courses	Courses that are fundamental constituents of the respective engineering discipline.
34.	Professional Elective Courses	Courses those are discipline-specific.
35.	Open Elective Courses	Courses of interdisciplinary nature offered to all the students of various programmes across the Institute.
36.	Programme	A set of courses offered by the department leading

B.Tech R20 Regulations

		to the award of degree in that programme.
37.	Programme Outcomes (PO)	Statements describing the essential skill sets that each and every student need to possess at the time of graduation. These skill sets based on the graduate attributes as defined by the National Board of Accreditation (NBA) are in the areas of employability, entrepreneurial, social and behavioral aspects. They are 12 in number for a specific programme and are subjected to modification from time to time as defined by the NBA.
38.	Programme Specific Outcomes (PSO)	Statements that describe what the graduates of a specific programme should be able to do. They can be 1 to 2 in number for a specific programme.
39.	Regulations	The rules and regulations contained herein that are common to all the B.Tech. Programmes offered by the Institute and designated as “NSRIT B.Tech R20 Regulations”

6.0 Academic Calendar

Semester-I	I Spell Instruction Period	8 weeks	19 Weeks
	I Mid Examinations	1 week	
	II Spell Instruction Period	8 weeks	
	II Mid Examinations	1 week	
	Preparation and Practical Examinations	1 week	
Semester End Examinations			2 weeks
Mid Remedial, Supplementary Examinations			2 weeks
Semester-II	I Spell Instruction Period	8 weeks	19 Weeks
	I Mid Examinations	1 week	
	II Spell Instruction Period	8 weeks	
	II Mid Examinations	1 week	
	Preparation and Practical Examinations	1 week	
Semester End Examinations			2 weeks
Mid Remedial, Supplementary Examinations,			2 weeks

7.0 Under-Graduate Degree Programmes on offer:

NSRIT offers 4-Year (8 semesters) Bachelor of Technology (B. Tech.) degree programme, under Choice Based Credit System (CBCS), in the branches as shown in the Table

B.Tech. programmes of study on offer with code

code	Branch
01	Civil Engineering
02	Electrical and Electronics Engineering
03	Mechanical Engineering
04	Electronics and Communication Engineering
05	Computer Science and Engineering
31	Artificial Intelligence and Machine Learning
33	Data Science

Eligibility for admission:

Admission to the B. Tech Programme shall be made subject to the eligibility, qualifications and specialization prescribed by the A.P. State Government/University from time to time. Admissions shall be made either on the basis of the merit rank obtained by the student in the common entrance examination conducted by the A.P. Government/University or on the basis of any other order of merit approved by the A.P. Government/University, subject to reservations as prescribed by the Government/University from time to time.

The eligibility criteria for admission into engineering programmes offered at NSRIT shall be as prescribed by the Government of Andhra Pradesh/University. The criteria are given below:

- ✚ The candidate shall be an Indian National / NRI.
- ✚ The candidate should have completed 16 years of age as on 31st December of the academic year for which the admissions are being conducted.
- ✚ The candidate should have passed the qualifying examination (10+2) or equivalent as on the date of admission recognized by BIE, Andhra Pradesh State.
- ✚ Seats in each programme in the Institute are classified into two categories i.e., **Category – A** and **Category – B** as per the GOs.
- ✚ Category – A Seats
These seats shall be filled through counseling as per the rank secured by a candidate in the Common Entrance Test (EAMCET) conducted by the Government of Andhra Pradesh and as per other admission criteria laid down in the GOs.
- ✚ Category – B Seats

These seats shall be filled by the Institute as per the GOs issued by the Government of Andhra Pradesh from time to time.

✚ Direct Admission to Second Year: (Lateral Entry Scheme)

A candidate shall be admitted into the third semester (II year I semester) based on the rank secured by the candidate in the Engineering Common Entrance Test [ECET (For Diploma Holders)] by the Government of Andhra Pradesh and as per other admission criteria laid down in the GOs.

8.0 Medium of Instruction:

The medium of instruction shall be **English** for all the courses including their content delivery and examinations, seminars, presentations and project evaluation as prescribed in the programme curriculum.

9.0 B.Tech Programme Pattern:

The structure of the B.Tech programmes on offer at NSRIT are based on the Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) as defined by the UGC and the curriculum / course structure as suggested by the AICTE and APSCHE in its Model Curriculum.

Semester Scheme:

- ✚ The B.Tech programmes offered at NSRIT follow semester scheme pattern.
- ✚ The duration of a B.Tech. programme shall be of 4 academic years.
- ✚ Each academic year shall have 2 semesters i.e., odd and even semesters and shall be counted as first semester, second semester, third semester and so on upto eighth semester.
- ✚ Each semester shall consist of 19 weeks or 90 days of academic work excluding examination and evaluation.
- ✚ Each semester is structured to provide credits totaling to 160 credits for the entire B.Tech. programme.
- ✚ Each semester shall have 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)'.
- ✚ Grade points, based on percentage of marks awarded for each course will form the basis for calculation of SGPA (Semester Grade Point Average) and CGPA (Cumulative Grade Point Average).
- ✚ Each student shall secure a total of 160 credits with a CGPA ≥ 5 required for the completion of the UG programme and the award of the B.Tech. degree.
- ✚ Induction program is mandatory for all first year UG students and shall be conducted as per AICTE/UGC guidelines.

A student after securing admission into a B.Tech. Programme at NSRIT shall pursue and acquire the B.Tech. degree in a **minimum period of four academic years i.e., 8 semesters**

and a **maximum period of eight academic years i.e., 16 semesters** starting from the date of commencement of I year I semester, failing which the student shall forfeit the seat in B.Tech. programme.

10.0 Duration of the Academic Programmes:

- Under CBCS, programme duration shall be defined by the period in which a student earns the prescribed credits for the award of B.Tech. degree.
- Hence, it is possible for an outstanding student to qualify for the award of degree in a shorter time than that of the duration specified for the concerned programme. However, the B.Tech. Degree shall be issued at the end of normal duration of the programme i.e., four years.

Normal Duration:

- The duration of the B.Tech. degree programme shall be four years.
- The duration of the B.Tech. Degree programme for students admitted under lateral entry scheme (LES) shall be three years.

Maximum Duration:

- The maximum period in which a student can complete a full time B.Tech. degree programme shall be twice the normal duration of the programme, i.e., eight years (16 semesters) for B.Tech. degree and six years (12 semesters) for students admitted under lateral entry scheme (LES) i.e., (For Diploma Holders) respectively.
- The maximum period for a programme shall also be dictated by the fact that a student has to demonstrate the prescribed minimum academic performance by registering for the prescribed minimum number of credits in every semester, for continuing in the programme. This period can be equal to or lesser than the maximum period indicated as indicated above.

11.0 Courses and Credit Structure:

- Every course in the B.Tech. programme of study has a Lecture-Tutorial- Practical (L-T-P) component attached to it. Based upon the L-T-P structure, the credits are allotted to a course using the criteria as shown in the below table.

Contact hour and credit structure

Type of Course	Component	Contact Hours / Week	Credits (C)
Theory	Lecture (L)	1	1
	Tutorial (T)	1	1
Laboratory	Practical (P)	2	1
Drawing / Design	Drawing / Design (D)	2	1

THEORY / TUTORIAL CLASSES

Each course is prescribed with a fixed number of lecture periods per week. During lecture periods, the course instructor shall deal with the concepts of the course. **For certain courses**, tutorial periods are prescribed in order to give exercises to the students and to closely monitor their learning abilities and achievements.

- ✚ Every course of the B.Tech shall be offered by a specific section / department. The unique short form of the section / department offering the courses are given in the below table.

Science & Humanities	S&H
Civil Engineering	CE
Electrical & Electronics Engineering	EEE
Mechanical Engineering	ME
Electronics & Communication Engineering	ECE
Computer Science & Engineering	CSE

Structure:

- ✚ Every B.Tech programme of study shall be designed to have theory and laboratory courses. In addition, a student shall carry out internship, industry oriented mini-project, project, design sensitization, design thinking and other courses as prescribed in the curriculum of the programmes.
- ✚ Every course offered under a B.Tech. programme shall be placed in one of the course categories with minimum credits as listed in the Table.
- ✚ The course group / category along with their broad classification and description are listed in the Table.

Category of Courses, their Codes and Distribution of Credits

Semester	Credits									Total	%
	I	II	III	IV	V	VI	VII	VIII			
BS	7.5	7.5	3	3	0	0	0	0	21	13.13	
ES	7.5	12	0	4.5	0	0	0	0	24	15.00	
HS	4.5	0	0	3	0	0	3	0	10.5	6.56	
PC	0	0	16.5	9	12	13.5	0	0	51	31.88	
PE	0	0	0	0	3	3	9	0	15	9.37	
OE	0	0	0	0	3	3	6	0	12	7.50	

B.Tech R20 Regulations

SO	0	0	2	2	2	2	2	0	10	6.25
SI	0	0	0	0	1.5	0	3	0	4.5	2.80
PR	0	0	0	0	0	0	0	12	12	7.50
	19.5	19.5	21.5	21.5	21.5	21.5	23	12	160	100

SI- Summer Internship

SO- Skill Oriented

PR- Project

Type of Courses		Course Category	Code	Credits	Credit Composition (%)
Compulsory Courses	Foundation	Engineering Science Courses	ES	24	15
		Basic Science Courses	BS	21	13.13
		Humanities & Social Science	HS	10.5	6.56
	Core	Professional Core Courses	PC	51	31.89
	Project	Project Work, Seminars , Internships	PR	12	7.5
Elective Courses		Professional Elective Courses	PE	15	9.37
		Open Elective Courses	OE	12	7.5
		Summer Internship	SI	4.5	2.80
		Skill Oriented	SO	10	6.25
Mandatory Courses		Audit	AU	Non-Credit	
		Mandatory	MC		
Total				160	100
MOOC		Online	OL	--	
Virtual Laboratories		Online	VL	--	--

Description of Courses

Broad Course Classification	Course Group / Category	Description of Courses
Foundation	Basic Sciences Course	Includes mathematics, physics, chemistry courses
	Engineering Sciences Course	Includes fundamental engineering courses
	Humanities and Social Sciences including Management Course	Includes courses related to humanities, social sciences and management
Core	Professional Core	Includes core courses related to the parent discipline/department/branch of engineering
	Project Work	B.Tech. project (Seminar on Project progress and Thesis presentation)
Elective	Professional Electives	Includes elective courses related to the parent discipline / department / branch of engineering
	Open Electives	Elective courses which include inter-disciplinary courses or courses in an area outside the parent discipline /department/ branch of engineering
Mandatory	---	Mandatory non-credit courses
Audit	---	

12.0 Registration / Dropping/ Offering of Course(S):

Course Registration:

- ✚ All the students must compulsorily register for course work at the beginning of each semester as per the schedule mentioned in the Academic Calendar.
- ✚ It is essential for the students to register for all the prescribed courses in time.
- ✚ The registration shall be organized by the department under the supervision of the Head of the Department.
- ✚ Every course may have one or more of its preceding course(s) as prerequisite(s).
- ✚ A ‘faculty mentor’ shall be assigned to a group of 20 students, who shall advise student about the under-graduate programme, its course structure and curriculum, choice / option for course / courses, based on their competence, progress, pre-requisites if any and interest.
- ✚ The academic section of the college shall invite ‘registration forms’ from students before the beginning of the semester through ‘on-line registration’, ensuring ‘date and time stamping’.
- ✚ The on-line registration requests for any ‘current semester’ shall be completed before the commencement of SEEs (Semester End Examinations) of the ‘preceding semester’.

- ✚ A student shall register courses online with the approval of faculty mentor. A copy of it shall be retained by the student and other copies be submitted online to the concerned HoD, faculty mentor and Dean Academics.
- ✚ A student may be permitted to register for the courses of his / her choice in a semester with credits as prescribed in the course structure of the concerned B.Tech. programme with a deviation of $\pm 22\%$ credits per semester for defining minimum and maximum credits, based on the progress and SGPA / CGPA, and completion of the 'pre-requisites' as indicated for various courses, in the course structure of the programmes and syllabus contents.
- ✚ Choice for 'additional courses' to reach the maximum permissible limit of + 22% credits as specified in the course structure of the concerned programme, must be clearly indicated, which needs the specific approval and signature of the faculty mentor and HoD.
- ✚ Additional courses shall be offered only upon meeting the prerequisites, if any, as mentioned in the programme curriculum.
- ✚ Course options exercised through 'on-line registration' shall be FINAL and cannot be changed or inter-changed; further, alternate choices also shall not be considered.
- ✚ However, if the course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new course (subject to offering of such a course), or for another existing course (subject to the availability of seats). Such alternate arrangements shall be made by the Head of the Department, with due notification and time-frame schedule, within the first week after the commencement of class-work for that semester.
- ✚ IN ABSENTIA registration shall not be permitted under any circumstance.
- ✚ At the time of registration, students should have cleared all the dues of Institute and Hostel (if applicable) in the previous semesters, paid the prescribed fees for the current semester and not been debarred from Institute for a specified period on disciplinary or any other ground.

Open Elective Courses:

- ✚ The students have to choose one open elective course (OE-I) in fifth semester, one (OE-II) in sixth semester, one (OE-III) and (OE-IV) in seventh semester from the list of open electives as prescribed in the course structure of the programme.
- ✚ However, the student cannot opt for an open elective course offered by their own (parent) department, if it is already listed under any category of the courses offered by parent department in any semester.
- ✚ Courses that are already studied by a student cannot be pursued again/repeated even if offered.

Professional Elective Courses:

- ✚ Students have to register for a total of 05 professional elective courses (PE-I to PE-V) from the list of professional elective courses as prescribed in the course structure of the programme.
- ✚ The students have to choose one Professional elective course (PE-I) in fifth semester, PE-II in sixth semester, PE-III, PE-IV and PE-V in seventh semester from the list of open electives as prescribed in the course structure of the programme.
- ✚ Compulsory core courses can be chosen by the students of the respective disciplines only. However, the students of a particular discipline can register for discipline/interdisciplinary courses of other disciplines provided they have met the pre-requisite or when the pre-requisite is waived by Dean of Academics. Courses that are already studied by a student cannot be pursued again/repeated even if offered.

A student shall be permitted to pursue up to a maximum of two elective courses under MOOCs during the Programme. Each of the courses must be of minimum 12 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 BoS in order to earn the 3 credits. The Head of the department shall notify the list of such courses at the beginning of the semester.

Dropping of Courses:

- ✚ Dropping of one or more courses may be permitted, only after obtaining prior approval from the faculty mentor (subject to retaining of minimum credits as prescribed in these regulations), 'within a period of 15 days' from the beginning of the current semester for maintaining studentship.
- ✚ The dropped courses are not recorded in the Grade Card.
- ✚ Student must complete the dropped course by registering them as and when offered in the next semester in order to earn the required credits. This is in addition to the minimum number of credits that are required to continue studentship in a semester. However, the total credits registered in a semester should not exceed the maximum number of credits permitted to register in that semester.

Courses to be offered:

- ✚ A typical section (or class) strength for each semester shall be 60.
- ✚ A course may be offered to the students, only if a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).
- ✚ More than one faculty member may offer the same course in any semester.
- ✚ Laboratory / practical may be included with the corresponding theory course in the same semester.

- ✚ However, in case of elective courses, selection / allotment of courses, based on the choice for students, shall be based on – ‘first come first serve’ basis in the on-line registration mode.
- ✚ If more entries for registration of a course are received, then the HoD concerned shall decide, whether or not to offer such a course for two (or multiple) sections keeping in view the resources available in the department offering the course.

13.0 Attendance requirements and detention policy:

- ✚ A student shall be eligible to appear for end semester examinations if he/she acquires a minimum of 75% of attendance in aggregate of all the subjects in a semester.
- ✚ Shortage of Attendance below 65% in aggregate shall in NO case be condoned.
- ✚ Condonation for shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester may be granted by the College Academic Committee based on the rules prescribed by the Academic Council of the Institute from time to time.
- ✚ A stipulated fee shall be payable towards condonation of shortage of attendance to the college. A student is eligible to write the SEE if he acquires a minimum of 40% in each course and 75% of attendance in aggregate of all the courses.
- ✚ A student will not be promoted to the next semester unless he satisfies the attendance requirements of the present semester, as applicable. They may seek readmission for that semester when offered next.
- ✚ Students, who do not meet the minimum required attendance in a semester, shall be detained in that semester and their registration for that semester shall stand cancelled. They shall not be promoted to the next semester.
- ✚ Students detained in a semester shall seek re-admission into that semester as and when offered again.
- ✚ Academic regulations applicable to the semester in which re-admission is sought shall be applicable to the re-admitted student.
- ✚ In case if there are any professional electives and/or open electives, the same may also be re-registered if offered. However, if those electives are not offered in the later semesters, then alternate electives may be chosen from the same set of elective courses offered under that category.
- ✚ Any student against whom any disciplinary action is pending shall not be permitted to attend semester end examination (SEE) in that semester.

14.0 Minimum Academic Requirements:

- ✚ In addition to the attendance requirements mentioned in 13.0 of these regulations for the award of B.Tech. degree, a student must satisfy the minimum academic requirements as given below:

A student shall be deemed to have satisfied the minimum academic requirements and earn the credits for each theory, practical, design and drawing course in B.Tech. programme, if he secures

- ✓ A **minimum of 35% marks** for each course in the **semester end examination (SEE)**, and
- ✓ A **minimum of 40% marks** for each course considering **both CIE and SEE** taken together.
- ✚ A student shall be deemed to have satisfied the minimum academic requirements and earn the credits allotted to internship, industry oriented mini-project, project, design sensitization and design thinking courses, if he secures
 - ✓ A minimum of 40% of total marks for internship, industry oriented mini-project, project, design sensitization, design thinking courses
- ✚ A student shall be treated as failed, if he
 - ✓ does not submit a report on internship, industry oriented mini-project, project, design sensitization, design thinking courses, or
 - ✓ does not make a presentation of the same before the evaluation committee as per the schedule, or
 - ✓ secures less than 40% marks in overall evaluation.
 - ✓ In case of a student not meeting any of the above points, student may re-appear once for each of the evaluation of internship, industry oriented mini-project, project, design sensitization, design thinking courses, as scheduled by the evaluation committee; if the student fails in such 'one re-appearance' evaluation also, student has to re-appear for the same in the next subsequent semester, as and when it is scheduled.
- ✚ A student shall register for all the courses covering 160 credits as specified and listed in the course structure of the B.Tech. programme, fulfills all the attendance and academic requirements for 160 credits, 'earn all 160 credits' by securing SGPA ≥ 5.0 (in each semester) and CGPA (at the end of each successive semester) ≥ 5.0 to successfully complete the under-graduate.

15.0 Distribution of marks and evaluation methodology:

- ✚ The performance of a student in each semester shall be evaluated course wise with a maximum of 100 marks for theory and 100 marks for practical courses. In addition, design sensitization, design thinking, internship shall be evaluated for 100 marks each and project courses shall be evaluated for 200 marks.

S. No	Components	Internal	External	Total
1	Theory	30	70	100
2	Engineering Graphics/Design/Drawing	30	70	100
3	Practical	30	70	100
4	Internship	50	-	50
5	Skill Oriented	50	-	50
6	Project Work (Seminars on Project Progress)/ (Thesis and Final Presentation)	50	150	200

Theory Courses:

- ✚ The syllabus for the theory courses shall be divided into five units and each unit carries equal weightage in terms of marks distribution.
- ✚ For theory courses, the distribution of marks shall be 30 marks for Continuous Internal Evaluation (CIE) and 70 marks for the Semester End Examination (SEE).

1. Continuous Internal Evaluation (CIE - 30 M):

For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of

1. Objective examination
2. Descriptive examination

The objective examination and descriptive examination shall be for 5 and 20 marks each with a total duration of 1 hour 50 minutes (20 minutes for objective and 90 minutes for descriptive paper). The objective examination is set with 10 multiple choice questions for 5 marks (10 questions $\frac{1}{2}$ marks) and descriptive examination is set with 5 questions, each carries 4 marks, from first 2.5 units for Mid term-I and from next 2.5 units for Midterm-II.

3. Assignment

After every Unit, One Assignment/Tutorial shall be conducted. Two questions from each Unit must be set in Assignment. Assignment/Tutorial consists of Theory, Design, Analysis, Simulation, Algorithms, Drawing, etc. as the case may be. Assignment –I on first 2.5 units for 5 marks, Assignment –II on next 2.5 units for 5 Marks

CIE = Mid + Assignment.

Mid Examination = (Objective examination + descriptive examination)

- ✚ **CIE-I marks** = Mid-I + Assignment -I
- ✚ **CIE-II marks** = Mid-II + Assignment -II
- ✚ **Final Continuous Internal Evaluation Marks** = (Best of CIE-1/CIE-2) marks x 0.8 + Least of (CIE-1/CIE-2) marks x 0.2).

2. Semester End Theory Examinations Evaluation:

- ✚ The semester end examinations will be conducted NSRIT examination section for 70 marks consists of five questions carrying **14 marks each**.
- ✚ Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

Laboratory Courses:

- ✚ For practical subjects there shall be continuous evaluation during the semester for 30 internal marks and 70 end examination marks.

- ✚ The internal 30 marks shall be awarded as follows: day to day work - 10 marks, Record-10 marks and the remaining 10 marks to be awarded by conducting an internal laboratory test.
- ✚ The end examination shall be conducted by the teacher concerned and external examiner appointed by academic council chairman, NSRIT

Design and / or drawing Courses:

- ✚ For the subject having design and / or drawing, (such as Engineering Graphics, Engineering Drawing, Machine Drawing) and estimation, the distribution shall be 30 marks for internal evaluation (15 marks for continuous Assessment (day-to-day work) and 15 marks for internal tests) and 70 marks for end examination.
- ✚ There shall be two internal tests in a Semester for 15 marks each and final marks can be calculated with 80% weightage for better of the two tests and 20% weightage for other test and these are to be added to the marks obtained in day to day work.

16.0 Conduct of Semester End Examinations and Evaluation:

- ✚ Semester End Examination (SEE) shall be conducted by the Controller of Examinations (CoE) by inviting Question Papers from the External Examiners.
- ✚ Question papers may be moderated for the coverage of syllabus, pattern of questions by an examiner appointed by the CoE. The appointed examiner shall prepare a detailed answer key and scheme of valuation and submit it to the CoE.
- ✚ Laboratory SEE shall be conducted involving internal and external examiners as defined in these regulations.

17.0 Internship and Skill Oriented Courses guidelines

Students shall undergo mandatory summer internships for a minimum of six weeks duration at the end of second and third year of the Programme. There shall also be mandatory full internship in VIII semester of the Programme along with the project work

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. Rubrics can be formulated time to time.

There shall be 05 skill-oriented courses offered during III to VII semesters. Among the five skill courses, four courses shall focus on the basic and advanced skills related to the domain courses and the remaining one shall be a soft skills course.

Similarity for Skill oriented program, the report and the model presentation/output of the course shall carry **40% and 60%** weightages respectively. Rubrics can be formulated time to time.

18.0 Project Evaluation

Out of a total of 200 marks for the Project, 50 marks shall be for Internal Evaluation and 150 marks for the End Semester Examination. The End Semester Examination (Viva – Voce) shall be conducted by the Committee. The Committee consists of an external examiner and Supervisor of the Project. The evaluation of project work shall be conducted at the end of the Eighth semester.

The **Internal Evaluation** marks shall be on the basis of **two** seminars given by each student on the topic of his/her project and evaluated by an Internal Committee, consisting of Head of the department, the supervisor of the project and a senior faculty member.

19.0 Scheme for the award of degree:

Award of B.Tech. Degree:

- ✚ A student shall be declared eligible for the award of the B.Tech. degree if he/she fulfils the following academic regulations:
- ✚ Pursued a programme of study for not less than four academic years and not more than eight academic years.
- ✚ Registered for 160 credits and secured a minimum of 160 credits.

NOTE: Students, who fail to fulfill all the academic requirements for the award of the degree within eight academic years from the year of their admission, shall forfeit their seat in B.Tech. programme.

20.0 Performance and Grading System:

- ✚ Performances of students in each of the courses in the programme are expressed in terms of Letter Grades based on an absolute grading system. The 10-point grading system with letter grades and their grade points are shown in the Table 7.

Table 7 Grade and Grade Points

Marks Range Theory/Lab (Max – 100)	Marks Range for subjects with Max – 50	Letter Grade	Description of Grade	Grade Points (GP)
≥ 90	≥ 45	O	Outstanding	10.00
≥ 80 < 90	≥ 40 < 45	A+	Excellent	9.00
≥ 70 < 80	≥ 35 < 40	A	Very Good	8.00
≥ 60 < 70	≥ 30 < 35	B+	Good	7.00

$\geq 50 < 60$	$\geq 25 < 30$	B	Average	6.00
$\geq 40 < 50$	$\geq 20 < 25$	C	Pass	5.00
< 40		F	Fail	--
Not Appeared in the Exam(s)		Ab	Absent	--

- After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of B. Tech. Degree, he shall be placed in one of the following four classes:

CGPA and Class

Class Awarded	CGPA to be secured	Remarks
First Class with Distinction	≥ 7.75	From the CGPA Secured from 160 Credits
First	≥ 6.75	
Second	≥ 5.75 to < 6.75	
Pass	≥ 5.00 to < 5.75	

- For mandatory and audit courses (non-credit), student shall be awarded ‘Satisfactory’ or ‘Not satisfactory’ without any credit. This shall not be counted for the computation of SGPA/CGPA.

21.0 Computation of SGPA and CGPA:

Calculation of semester Grade Point average (SGPA):

- The performance of each student at the end of each semester shall be indicated in terms of SGPA. The SGPA shall be calculated as below:

$$\text{SGPA} = \frac{\text{Total earned weighted grade points in a semester}}{\text{Total credits in a semester}}$$

$$\text{SGPA}(S_k) = \frac{\sum_{i=1}^n C_i * G_i}{C_i}$$

Where C_i is the number of credits of the i^{th} course/subject in a semester and G_i is the grade point scored by the student in the i^{th} course/subject and n is the number of courses/subjects registered in that semester.

NOTE: SGPA is calculated and awarded to those students who pass all the courses in a semester.

Calculation of Cumulative Grade Point Average (CGPA):

The CGPA of a student for the entire programme shall be calculated as given below:

- Assessment of the overall performance of a student shall be obtained by calculating cumulative grade point average (CGPA), which is weighted average of the grade points obtained in all courses during the course of study.

$$\text{CGPA} = \frac{\text{Total earned weighted grade point for the entire program}}{\text{Total credits for the entire program}}$$

$$\text{CGPA} = \frac{\sum_{i=1}^n C_i * G_i}{\sum_{i=1}^n C_i}$$

Where S_i is SGPA of the i^{th} semester and C_i is total number of credits in that semester.

NOTE: Grade lower than C in any course shall not be considered for CGPA calculation. The CGPA shall be awarded only when the student acquires the required number of credits prescribed for the programme.

Illustration of Computation of SGPA and CGPA:

- Illustration of calculation of SGPA:

Course Name	Course Credits (C)	Letter Grade	Grade Point (GP)	Credit Point (CP = C x GP)
Course 1	3	A	8	3 x 8 = 24
Course 2	4	B+	7	4 x 7 = 28
Course 3	3	B	6	3 x 6 = 18
Course 4	3	O	10	3 x 10 = 30
Course 5	3	C	5	3 x 5 = 15
Course 6	4	B	6	4 x 6 = 24
Total Credits	20	Total Credit Points		139

$$\text{Thus, SGPA} = \frac{139}{20} = 6.95$$

✚ Illustration of Calculation of CGPA:

Semester I	Semester II	Semester III	Semester IV
Credit : 19.5 SGPA: 6.9	Credit : 19.5 SGPA : 7.8	Credit : 21.5 SGPA: 5.6	Credit : 21.5 SGPA: 6.0
Semester V	Semester VI	Semester VII	Semester VIII
Credit : 21.5 SGPA : 6.3	Credit : 21.5 SGPA: 8.0	Credit : 23 SGPA: 6.4	Credit : 12 SGPA: 7.5

$$[(19.5 \times 6.9) + (19.5 \times 7.8) + (21.5 \times 5.6) + (21.5 \times 6.0) + (21.5 \times 6.3) + (21.5 \times 8.0) + (23 \times 6.4) + (12 \times 7.5)] / 160$$
$$= 6.754$$

REVALUATION:

- ✚ Revaluation shall not be permitted.

22.0 CREDIT TRANSFER:

- ✚ Credit transfer of a student from other Institution to NSRIT is permitted for undergraduate programme as per the GOs from the Government of Andhra Pradesh.

Credit transfer from another Institution to NSRIT:

A student studying in another Institution can take transfer to NSRIT against notification and orders issued by the Government of Andhra Pradesh, under the following conditions:

- ✓ When a student seeks transfer, equivalent credits shall be assigned to the student based on the equivalent courses studied earlier by the student.
- ✓ The student, when transferred from other Institution, must follow the rules and regulations of NSRIT.
- ✓ To graduate from NSRIT, a transferred student must study at least half of the minimum duration prescribed for a programme at NSRIT.

23.0 WITH-HOLDING OF RESULTS:

- ✚ If a student has not paid the pending fee dues to the institute / if any case of indiscipline / malpractice is pending against him, the results of such student shall be withheld.
- ✚ The issue of the award of the provisional certificate and the B.Tech. Degree is liable to be withheld in such cases.

24.0 DISCIPLINE:

- ✚ Every student is required to observe discipline and decorum both inside and outside the institute and not to indulge in any activity which shall tend to bring down the honor of the institute.
- ✚ If a student indulges in malpractice in any of the theory / practical CIE or SEE, he shall be liable for punitive action as prescribed by the Institute from time to time.

25.0 GENERAL:

- ✚ Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.
- ✚ The academic regulations should be read as a whole for the purpose of any interpretation.
- ✚ In the case of any discrepancy/ambiguity/doubt arising in the above rules and regulations, the decision of the Principal shall be final.
- ✚ The Chairman, Academic Council may change or amend any or all of the academic regulations or syllabi at any time and the changes or amendments made shall be applicable to all the students concerned with effect from the dates as notified by the Institute.

Academic Regulations for B.Tech. - Lateral Entry Scheme (LES)

(Applicable for students admitted from the academic year 2021-2022)

26.0 MINIMUM ACADEMIC REQUIREMENTS:

- ✚ Attendance requirements and detention policy of four year B.Tech. Regular degree programmes as specified in 13.0 of these regulations is adopted for students admitted to B.Tech. degree programme under lateral entry scheme (LES).
- ✚ Academic performance requirements as specified in 14.0 of these regulations are adopted for students admitted to B.Tech. Degree programme under lateral entry scheme (LES).
- ✚ Student who fails to fulfill all the academic requirements for the award of the degree within six academic years from the year of his/her admission, shall forfeit his/her seat in B.Tech. programme and his/her admission stands cancelled.

27.0 PROMOTION POLICY:

Apart from the minimum required attendance conditions as specified in 13.0 of these regulations, the credit conditions to be fulfilled by a student for getting promoted from the current semester to the next semester are given below:

- ✚ For promotion from fourth semester to fifth semester, a student must secure at least **40%** of the total credits up to fourth semester
- ✚ For promotion from sixth semester to seventh semester, a student must secure at least **40%** of the total credits up to sixth semester.

28.0 SCHEME FOR THE AWARD OF DEGREE:

- ✚ Award of B.Tech. Degree: A lateral entry student shall be declared eligible for the award of the B. Tech. degree if he/she fulfils the following academic regulations:
- ✚ Pursued a programme of study for not less than three academic years and not more than six academic years.
- ✚ Registered for 160 credits and secured a minimum of 160 credits.

MALPRACTICE RULES

DISCIPLINARY ACTION FOR IMPROPER CONDUCT IN EXAMINATIONS

S.No.	Nature of Malpractices/Improper conduct	Punishment
	If a student:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the course of the examination (theory or practical) in which he 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)	Expulsion from the examination hall and cancellation of the performance in that course only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that course only of all the students involved. In case of an outsider, he shall be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the 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 the student has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the courses of that Semester/year. The Hall Ticket of the student is to be cancelled and sent to the Controller of Examinations.

B.Tech R20 Regulations

3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student, who has been impersonated, shall be cancelled in all the courses of the examination (including practical's and project work) already appeared and shall not be allowed to appear for examinations of the remaining courses of that semester/year. The student is also debarred for two consecutive semesters from class work and all semester end examinations. The continuation of the course by the student is course to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he shall be handed over to the police and a case is registered against him.
4.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that course and all the other courses the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The student is also debarred for two consecutive semesters from class work and all semester end examinations. The continuation of the course by the student is course to the academic regulations in connection with For feature of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that course.

B.Tech R20 Regulations

6.	Refuses to obey the orders of the Controller of Examinations /Additional Controller of Examinations/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 COE 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 COE 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 Institute premises 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 the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the courses of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they shall be handed over to the police and a police case is registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that course and all the other courses the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The student is also debarred for two consecutive semesters from class work and all semester end examinations. The continuation of the course by the student is course to the academic regulations in connection with forfeiture of seat.

B.Tech R20 Regulations

8.	Possess 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 the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The student is also debarred and forfeits the seat.
9.	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that course and all other courses the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year. The student is also debarred and forfeits the seat. Person(s) who do not belong to the College shall be handed over to police and, a police case shall be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that course and all other courses the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that course and all other courses the student has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the Principal for further action to award suitable punishment.	

1. Malpractice is detected at the spot valuation.
2. The case is to be referred to the malpractice committee. Malpractice committee shall meet and discuss/question the student and based on the evidences, the committee shall recommend suitable action on the student.
3. A notice is to be served to the student(s) involved, through the Principal, to his address and to the student(s) permanent address regarding the malpractice and

seek explanations.

4. The involvement of staff who are in-charge of conducting examinations, invigilators, examiners valuing examination papers and preparing / keeping records of documents related to the examinations in such acts (inclusive of providing incorrect or misleading information) that infringe upon the course of natural justice to one and all concerned at the examinations shall be viewed seriously and recommend for award of appropriate punishment after thorough enquiry.
5. Based on the explanation by the party involved and recommendations of the committee action may be initiated.

Malpractice committee:

Chief Superintendent	Chairman
Controller of Examinations	Member
Invigilator	Member
Concerned Head of the Department	Member

Nadimpalli Satyanarayana Raju Institute of Technology

(AUTONOMOUS)

(Approved by AICTE & Permanently Affiliated to JNTU-Kakinada)

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