

**TKR COLLEGE OF ENGINEERING & TECHNOLOGY
(AUTONOMOUS)**

Accredited by National Board of Accreditation (NBA)

**ACADEMIC REGULATIONS OF UG COURSES
FOR THE YEAR 2017-2018**



Survey No. 8/A, Medbowli, Meerpet, Balapur Mandal, R.R.Dist. Telangana - 500 097

Phone: 040-65587536

E-mail: principal@tkrcet.ac.in,

Website: www.tkrct.ac.in

T.K.R COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous)

ACADEMIC REGULATIONS FOR B.TECH. R17 (REGULATIONS)

APPLICABLE FOR REGULAR STUDENTS OF B.TECH. WITH EFFECT FROM ACADEMIC YEAR 2017-2018.

1.0 Under-Graduate Degree Programme in Engineering & Technology (UGP in E & T)

1.1 T K R College of Engineering & Technology (TKRCET) offers a VIII-Semesters or (4-year) **Bachelor of Technology (B.Tech.)** degree programme, under Choice Based Credit System (CBCS) at its Autonomous College with effect from the academic year 2017-2018 in the following branches of Engineering:

S.No.	Branch
1.	Civil Engineering
2.	Electrical & Electronics Engineering
3.	Mechanical Engineering
4.	Electronics & Communication Engineering
5.	Computer Science & Engineering
6.	Information Technology

2.0 Eligibility for admission

2.1 Seats in each programme in the college are classified into CATEGORY-A (70% of intake), CATEGORY-B (30% of intake) and CATEGORY-C (20% of intake) as Lateral Entry.

2.2 Admission to the CATEGORY-A (70% of Intake) shall be made either on the basis of the merit rank obtained by the qualified candidate in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.

2.3 CATEGORY-B (30% of Intake) will be filled by the college as per the guidelines of the Competent Authority.

2.4 CATEGORY-C (20% of intake) as Lateral Entry students into the course shall be admitted to the third semester directly based on the rank secured by the candidate in Engineering

Common Entrance Test (ECET) in accordance with the instructions received from the convener, ECET and competent authority.

2.5 The medium of Instructions for the entire under graduate programme in Engineering & Technology will be **English** only.

2.6 **It is mandatory for every student to go with an undertaking that he will follow and abide by the rules of T K R College of Engineering & Technology.**

3.0 B.Tech. Programme structure

3.1 A Student after securing admission shall pursue the under graduate programme in B.Tech for a minimum period of VIII-semester, (4 academic years) and a maximum period of 8 academic years starting from the date of commencement of first semester, failing which the student shall forfeit seat in B.Tech course. **Each semester is structured to provide 24 credits from I semester to IV semester and 27 credits from V semester to VII semester, and VIII semester with 24 credits totaling to 201 credits** for the entire B.Tech. Programme.

Each student shall secure 192 credits (with CGPA ≥ 5.0) required for the completion of the undergraduate programme and award of B.Tech. Degree.

A Student who opts for 27 credits from V semester to VII semester, is permitted to drop the professional electives of VIII semester by satisfying the requisite award of CGPA ≥ 8.0 and secure minimum number of required credits till completion of VII semester.

3.2 **UGC/AICTE** specified definitions/descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/norms, which are listed below.

3.2.1 Semester scheme

Each under graduate programme is of VIII semesters (4 academic years) with academic year being divided into two semesters. Each Semester will have maximum of 22 weeks and a minimum of 18 weeks i.e., (≥ 90 instructional days). Each semester will have “Continuous Internal Evaluation (CIE)” and “Semester End Examination (SEE)”. Choice Based Semester System (CBSS) is implemented as given by UGC and curriculum/course structure as suggested by AICTE, which are followed from time to time.

3.2.2 Credit Courses

All subjects/courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one Period/hour/week/semester for theory/lecture (L) courses.
- One credit for two Periods/hours/week/semester for laboratory/practical (P) courses or tutorials (T).

Courses like Environmental Science, Professional Ethics, Gender Sensitization lab and other student activities like NCC/NSO and NSS are identified as mandatory courses. These courses will not carry any credits.

3.2.3 Subject-Course Classification

All courses offered for the under graduate programme in E & T (B.Tech. degree programmes) are following all the guidelines issued by AICTE/UGC, in implementing the course classification for Choice Based Credit System are as given in the below table. The Classification is made with the following nomenclatures The Foundation Course (FnC), Core Courses (CoC), Elective Courses (EIC), Minor Courses (MrC) and Mandatory Courses.

S. No.	Classification		Course Work - Subject Area	Range of Total Credits (%)	
	AICTE	UGC		Min	Max
1	HS	Foundation Courses	Humanities and Social Sciences including	5	10
2	BS		Basic Sciences(BS) including Mathematics, Physics, Chemistry, Biology;	15	20
3	ES		Engineering Sciences (ES), including Materials, Workshop, Drawing, Basics of Electrical/ Electronics/ Mechanical/Computer Engineering	15	20
4	PC	Core Courses	Professional Subjects-Core (PC), relevant to the chosen specialization/branch; (May be split into Hard (no choice) and Soft (with choice), if required	30	40
5	PW		Project Work, Seminar and/or Internship in Industry or elsewhere.	10	15
6	PE	Elective Courses	Professional Subjects – Electives (PE), relevant to the chosen specialization/ branch;	10	15
7	OE		Open Subjects- Electives (OE), from other technical and/or emerging subject areas;	5	10

3.2.4 Subject Code Classification

The Subject Codes of various branches in R17 Regulations are formulated using the following Procedure

“Regulation, Branch, Semester, AICTE Classification, S.No.”

Regulation

Will hold its nomenclature with capital Alphabets A-Z i.e., R17-A,R18-B,R19-C...so on.

Branch**UG Branch:**

1-Civil Engineering; 2-Electrical & Electronics Engineering; 3-Mechanical Engineering; 4-Electronics & Communication Engineering; 5-Computer Science & Engineering; 6-Information Technology;

PG Specialization with Branch:

12-Power Electronics; 25- Computer Science & Engineering; 35-Software Engineering; 14-Master of Business Administration.

Semester: 1, 2,3,4,5,6,7,8.

AICTE Classification:

HS (Humanities & Sciences); BS (Basic Sciences); ES (Engineering Sciences); PC (Professional Core); PE (Professional Elective); PW (Project Work); OE (Open Elective);

S.No: it indicates the number of subjects offered in that semester from 1-9.

Example:

A21BS3 this is subject code for Engineering Physics-I of I semester Electrical & Electronics Engineering of UG Course; Wherein **A** is the R17 Regulation; **2** is the branch code of Electrical & Electronics Engineering; **1** is the Semester; **BS-** is the AICTE Classification given for Engineering Physics-I; **3** is the S.No. of the Subject in that semester.

4.0 Course registration

- 4.1 A 'faculty advisor or counselor' shall be assigned to a group of 20 students, who will advise students about the under graduate programme, its course structure and curriculum, choice/option for subjects/courses, based on their competence, progress, pre-requisites and interest.
- 4.2 The academic section of the college invites '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 SEE s (Semester End Examinations) of the 'preceding semester'**.
- 4.3 A student can apply for on-line registration, **only after** obtaining the written approval from faculty advisor/counselor, which should be submitted to the college academic section through the Head of the Department. A copy of the same shall be retained with Head of the Department, faculty advisor/counselor and the student.
- 4.4 **A student is offered with an extra credit Course in V VI VII semesters under choice based credit system.**

- 4.5 A student is permitted to register for 8 subjects/courses with respect to 5-6 theory subjects/course and 3-2 practical subjects/courses for every semester.
- 4.6 If the student submits ambiguous choices or multiple options or erroneous entries during on-line registration for the subject(s)/course(s) under a given/specified course group/category as listed in the course structure, only the first mentioned subject/course in that category will be taken into consideration.
- 4.7 Subject/course options exercised through on-line registration are final and **cannot** be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head of the department, with due notification and time-framed schedule, within the **first week** after commencement of class-work for that semester.
- 4.8 **Open electives:** The students have to choose one open elective (**OE-I**) in **V semester**, one (**OE-II**) in **VI semester**, (**OE-III**) in **VII semester** from the list of open electives given. However, the student cannot opt for an open elective subject offered by their own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.
- 4.9 **Professional electives:** students have to choose professional elective (**PE-I**) in **V semester**, (**PE-II,III**) in **VI Semester**, professional electives (**PE-IV,V,VI**) in **VII semester**, Professional electives (**PE-VII,VIII,IX**) in **VIII semester**, form the list of professional electives given. However, the students may opt for professional elective subjects offered in the related area.

5.0 Subjects/courses to be offered

- 5.1 A typical section (or class) strength for each semester shall be 60.
- 5.2 A subject/ course may be offered to the students, only if a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).
- 5.3 More than **one faculty member** may offer the **same subject** (lab/practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on – ‘**first come first serve** basis and CGPA criterion’ (i.e. the first focus shall be on on-line entry from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student)
- 5.4 If more entries for registration of a subject come into picture, then the Head of Department concerned shall decide, whether or not to offer such a subject/ course for **two (or multiple) sections**.

- 5.5 An Elective Course is offered to the students if and only if a minimum of 1/3 strength of the sanctioned intake is opted.

6.0 Attendance requirements

- 6.1 A student shall be eligible to appear for the semester end examinations, if student acquires a minimum of 75% of attendance in aggregate of all the subjects/courses including days of internal examinations (excluding attendance in mandatory courses; Environmental Science, Professional Ethics, Gender Sensitization Lab, NCC and NSS) for that semester.
- 6.2 For Mandatory Courses like NCC and NSS a 'Satisfactory Participation Certificate' shall be issued to the students from the authorities concerned only after securing $\geq 65\%$ attendance in such a course. Also, submission of Report on the activities is mandate for securing attendance during the allocated periods.
- 6.3 Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on valid grounds, like Natural Calamity, Medical Emergency, any sudden demise of own family members based on the students representation with supporting evidence/certificates.
- 6.4 A stipulated fee shall be payable towards condoning of shortage of attendance.
- 6.5 Shortage of attendance **below 65%** in aggregate shall, **in no case be condoned.**
- 6.6 **Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester.**
- 6.7 The students who are detained due to lack of attendance should seek re-admission into that semester as and when offered, and re-register all the courses offered in that semester.
- 6.8 A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class, till completion of VIII semester, even on payment of requisite fees.

7.0 Academic requirements

The following academic requirements have to be satisfied, **in addition to the** attendance requirements mentioned in item no 6.

- 7.1 A student shall be deemed to have satisfied the minimum academic requirements if he has earned the credits allotted to each subject/course, secures not less than **35% marks (24 out of 70)** in the semester end examination, and a minimum of **40%** of marks in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing 'C' grade or above in that subject/course.
- 7.2 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to UG mini-project and seminar, if student secures not less than **50%**

marks (i.e. 50 out of 100 marks) in each of them. The student would be treated as failed, if student (i) does not submit a report on UG mini-project, or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the VII semester, or (iii) secures less than 50% marks in UG mini-project/seminar evaluations.

Student may reappear once for each of the above evaluations, when they are scheduled again; if student fails in such ‘one reappearance’ evaluation also, student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

7.3 Promotion Rules:

S.No.	Promotion	Conditions to be fulfilled
1.	I semester to II semester	The student should study Regular course of I semester by satisfying attendance requirements.
2.	II Semester to III Semester	The student should study Regular course of II Semester, by satisfying attendance requirements. and also the student should secure at least 24 credits out of 48 credits i.e., 50 % credits II Semester from all the regular and supplementary examinations which are relevant to him, whether the student takes those examinations or not.
3.	III Semester to IV Semester	Regular course of study of III Semester, by satisfying attendance requirements.
4.	IV Semester to V Semester	Regular course of study of IV semester, by satisfying attendance requirements, and must have secured at least 58 credits out of 96 credits i.e., 60% credits up to IV semester from all the relevant regular and supplementary examinations, whether the students takes those examinations or not.
5.	V Semester to VI Semester	Regular course of study of V Semester, by satisfying attendance requirements.

6	VI Semester to VII Semester	Regular course study of VI semester, by satisfying attendance requirements. Must have secured at least 86 credits out of 144 credits i.e., 60 % credits up to VI Semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	VII Semester to VIII Semester	Regular course of study of VII Semester, by satisfying attendance requirements.

Promotion Rules for Lateral Entry Students

S.No.	Promotion	Conditions to be fulfilled
01	III Semester to IV Semester	Regular course of study of Second Year first semester, by satisfying attendance requirements
02	IV Semester to V Semester	Regular course of study of IV Semester by satisfying attendance requirements and a minimum of 17 credits from one regular and one supplementary examinations of III semester irrespective of the candidate takes the examination or not.
03	V Semester to VI Semester	Regular Course of Study of V Semester by satisfying attendance requirements
04	VI semester to VII Semester	Regular Course of study of VI Semester by satisfying academic requirements and a minimum of 50 credits from two regular and two supplementary examinations of III Semester; two regular and one supplementary examinations of IV Semester; one regular and one supplementary examination of V Semester.
05	VII Semester to VIII Semester	Regular course of study of VII Semester by satisfying the academic requirements.

- 7.4 A student shall register for subjects covering 192 credits as specified and listed in the course structure, fulfills all the attendance and academic requirements for 192 credits, 'earn all 192 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 programme.
- 7.5 A student who secures 177 credits with an aggregate of 8.0 CGPA is eligible to avail the exemption of registering the three professional electives that are offered in VIII semester only. A student who secures 174 credits with an aggregate of 8.0 CGPA is eligible to avail exemption of registering two professional electives that are offered in VIII semester only. A student who secures 171 credits with an aggregate CGPA of 8.0 is eligible to avail exemption of registering one professional elective offered in VIII semester only. However, the performance of student in the earlier individual semesters, with the corresponding SGPA and CGPA for which grade cards have already been given will not be altered/modified.
- 7.6 If a student registers for some more '**extra subjects**' (in the parent department or other departments/branches of Engg.) other than those listed subjects totaling to 192 credits as specified in the course structure of his department, the performance in those '**extra subjects**' (although evaluated and graded using the same procedure as that of the required 192 credits) will not be taken into account while calculating the SGPA and CGPA. For such '**extra subjects**' registered, % of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1-7.5 above.
- 7.7 A student eligible to appear in the end semester examination for any subject/course, but absent from it or failed (thereby failing to secure '**c**' grade or above) may reappear for that subject/course in the supplementary examination as and when conducted. In such cases, CIE assessed earlier for that subject/course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- 7.8 A student **detained in a semester due to shortage of attendance, may be re-admitted when the same semester is offered in the next academic year for fulfilment of academic requirements.** The academic regulations under which the student has been readmitted shall be applicable. However, no grade allotments or SGPA/CGPA calculations will be done for the entire semester in which the student has been detained.
- 7.9 A student **detained due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits.** The academic regulations under which student has been re-admitted shall be applicable to him.

8.0 Evaluation – Distribution and Weightage of marks

- 8.1 The performance of a student in every subject/course (including Practical) will be evaluated for 100 marks each, with 30 marks allotted for CIE (Continuous Internal Evaluation) and 70 marks for SEE (Semester End Examination).

8.2 For theory subjects, during a semester there shall be two mid-term and two minor examinations. Each mid-term examination consists of one objective paper and one descriptive paper carrying 15 marks for descriptive and 5 marks for objective paper with the time duration of 1 hour 20 minutes. Each minor examination consists of objective paper/Assignment with 10 marks with a time duration of 60 minutes/one period. The syllabus for first minor examination shall be from unit 1 and first mid examination will be 50% of syllabus. The second minor examination will have syllabus as the partial syllabus from 3rd unit i.e., (2nd half of portion other than covered in mid-1) and 4th unit i.e., 1st half of portion). The syllabus for second mid examination will be remaining 50% of syllabus. The marks secured by the student in each mid-term examination will be evaluated for 20 marks, subsequently each minor examination will be evaluated for 10 marks each. **The total marks secured by the student for the whole CIE (Continuous Internal Evaluation) will be the average of 2 mid-terms and 2 minor examinations.** If any student is absent/ would like to seek improvement from/in any subject of a mid-term examination, an on-line test will be conducted for him by the examination branch of the college, which will be scheduled after completion of both mid-term and minor examinations. The details of the end semester examination question paper pattern is as follows,

- The end semester examinations will be conducted for 70 marks consisting of two parts viz. i) **Part –A** for 20 Marks, ii) **Part –B** for 50 marks.
- Part –A is compulsory question which consists of ten sub-questions. All questions carry equal marks.
- Part-B consists of five questions (number from 2 to 6) carrying 10 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.

8.3 For practical subjects there shall be a continuous internal evaluation during the semester for 30 marks and 70 marks for end semester practical examinations. The duration for both Internal and External Practical Examination is for 3 hours. For 30 marks of Internal Evaluation of practical subjects, day to day evaluation in laboratory will be assessed for 15 marks and internal practical examination will be assessed for 15 marks. The internal practical examination will be conducted by the concerned laboratory subject teacher (Internal Examiner) only. The external practical examination will have 2 examiners, one is external examiner and the other is internal examiner. The external examiner will be appointed by the examination branch of the college.

8.4 For the subjects having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing) and estimation, the distribution shall be 30 marks for continuous internal evaluation (15 marks for day to day evaluation and 15 marks for internal examination) and 70 marks for semester end examination. **There shall be two**

internal examinations in a semester and the average of the two shall be considered for the award of marks for internal examinations.

- 8.5** There shall be a UG mini-project work to be undertaken by the student during the break of VI and VII semester. The UG mini-project work should be carried out by student with an Industry of their specialization. The report on completion should be submitted in the starting of Academic year of VII Semester. The report shall be evaluated by departmental committee comprising of external examiner, Head of the Department, project supervisor, and a senior faculty member of the department. There shall be no internal evaluation of UG mini-project. The external Examiner will be appointed by the examination cell.
- 8.6** The student has to undergo a seminar presentation during his VIII semester, and submit a technical report of presentation. For the seminar the student shall collect the information on a specialized topic of their specialization. The submitted technical report will be evaluated by the departmental committee comprising of Head of the Department, seminar supervisor, and a senior faculty member. The technical report will be evaluated for 50 marks. There shall be no internal evaluation for seminar and semester end examination.
- 8.7** The student has to attend the Comprehensive Viva-Voce during VIII Semester. The Comprehensive Viva-Voce shall be conducted by a Committee consisting of Head of the Department and two senior faculty members of the Department. The Comprehensive Viva-Voce is intended to assess the students understanding of the subjects he studied during the B.Tech course of Study. The Comprehensive Viva-Voce is evaluated for 100 marks by the committee, there are no Internal marks for the Comprehensive Viva-Voce
- 8.8** The student during his VIII semester has to register for a UG project, and subsequently get the permission for implementing the project by the departmental committee. The evaluation process of the UG project is done for 200 marks. Out of which 50 marks are allotted for internal evaluation, 150 marks for external evaluation (viva voce). The end semester examination of UG major project shall be conducted by the same committee as appointed for the UG mini-project. In addition the UG major project supervisor shall also be included in the committee. The topics for UG mini-project work, seminar, and major project work shall be different from one another. The evaluation of UG major project will be done at the end of VIII semester.
- 8.9** The laboratory marks, sessional marks, and the end examination marks awarded by the college are subject to scrutiny and scaling, if necessary, by a committee, constituted in this regard, with a university representative/under the guidance of Director of Evaluation of the affiliating university. The recommendations of the committee are final and binding. The laboratory records, internal examination scripts and external examination scripts shall be preserved as per the rules and shall be produced before the committee as and when required.
- 8.10** A student has to secure at least 40% i.e., 40 marks for 100 marks in mandatory courses like environmental science, professional ethics and gender sensitization lab.
- 8.11** For mandatory courses like NCC/NCO, NSS the student should sustain his attendance by participating in the activities of the particular course $\geq 65\%$ as minimum and obtain a 'satisfactory' participation certificate from the concerned authorities.

8.12 For all non-credit courses and mandatory courses no marks or letter grade is allotted.

9.0 Grading Procedure

9.1 Marks will be awarded to the student in order to indicate the performance in each theory subject, laboratory/practicals, seminar, UG mini project and UG major project. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item no. 8 above, a corresponding letter grade shall be given.

9.2 As measure of the performance of a student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE/JNTUH guidelines) and corresponding percentage of marks shall be followed.

% of marks secured in a subject/course	Letter Grade	Grade Points
90% to 100%	O (Outstanding)	10
80 and less than 90%	A ⁺ (Excellent)	9
70 and less than 80%	A (Very Good)	8
60 and less than 70%	B ⁺ (Good)	7
50 and less than 60%	B (Average)	6
40 and less than 50%	C (Pass)	5
Below 40%	F (Fail)	0
Absent	Ab	0

** Awarding of Letter Grade will be done to the benefit of the student.

9.3 A student obtaining 'F' grade in any subject shall be deemed to have 'failed' and is required to reappear as a 'supplementary student' in the semester end examination, as and when offered. In such cases internal marks in those subjects will remain same as those obtained earlier.

9.4 A student who has not appeared for examination in any subject 'Ab' grade will be allocated in that subject, and student shall be considered 'failed'. Student will be required to reappear as a 'supplementary student' in the semester end examination, as and when offered.

9.5 A letter grade will not indicate any specific percentage of marks, but states only the range of marks he/she obtained.

9.6 A student earned grade point (GP) in each subject/course, on the basis of the letter grade secured in that subject/course. The corresponding 'credit points' (CP) are computed by

multiplying the grade point with credits for that particular subject/course.

Credit points (CP) = grade points (GP) x credits... for a course

9.7 The student passes the subject/course only when **GP ≥ 5 ('C' grade or above)**

9.8 The semester grade point average (SGPA) is calculated by dividing the sum of credit points ($\sum CP$) secured from all subjects/course registered in a semester, by the total number of credits registered during the semester. SGPA is rounded off to **two decimal places**. SGPA is thus calculated as

$$\text{SGPA} = \{\sum_{i=1}^N C_i G_i\} / \{\sum_{i=1}^N C_i\} \dots \text{for each semester,}$$

where 'i' is the subject indicator index (takes into account all subjects, in a semester) 'N' is the no. of subjects registered for the semester (as specifically required and listed under the course structure of the parent department) C_i is the no. of credits allotted to the i^{th} subject, and G_i represents the grade points (GP) corresponding to the letter grade awarded for the i^{th} subject.

9.9 The cumulative grade point average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in **all** registered courses in **all** semesters, and the total number of credits registered in **all** the semesters. CGPA is rounded to **two** decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$\text{CGPA} = \{\sum_{j=1}^M C_j G_j\} / \{\sum_{j=1}^M C_j\} \dots \text{for all semesters registered}$$

(i.e., up to and inclusive of S semesters, $S \geq 2$),

where 'M' is the **total** no. of subjects (as specifically required and listed under the course structure of the parent department) the student has '**registered**' i.e., from 1st semester onwards up to and inclusive of the 8th semester, 'j' is the subject indicator index (takes into account all subjects from 1 to 8 semesters), c_j is the no. of credits allotted to the j^{th} subject, and G_j represents the grade point (GP) corresponding to the letter grade awarded for that j^{th} subject. After registration and completion of first year first semester, the SGPA of that semester itself can be taken as the CGPA, as there are no cumulative effects.

Illustration of calculation of SGPA

Course/subject	Credits	Letter Grade	Grade points	Credit Points
Course1	4	A	8	4 x 8 = 32
Course2	4	O	10	4 x 10 = 40
Course3	4	C	5	4 x 5 = 20
Course4	3	B	6	3 x 6 = 18
Course5	3	A ⁺	9	3 x 9 = 27
Course6	3	B ⁺	7	3 x 7 = 21
	21			158

$$\text{SGPA} = 158/21 = 7.52$$

Illustration of calculation of CGPA:

Course/subject	Credits	Letter Grade	Grade points	Credit Points
I year I semester				
Course1	4	A	8	4 x 8 = 32
Course2	4	O	10	4 x 10 = 40
Course3	4	C	5	4 x 5 = 20
Course4	3	B	6	3 x 6 = 18
Course5	3	A ⁺	9	3 x 9 = 27
Course6	3	B ⁺	7	3 x 7 = 21
II semester				
Course7	4	B	6	4 x 7 = 28
Course8	4	O	10	4 x 10 = 40
Course3	4	C	5	4 x 5 = 20
Course4	3	B	6	3 x 6 = 18
Course5	3	A ⁺	9	3 x 9 = 27
Course6	3	B ⁺	7	3 x 7 = 21
	Total Credits = 42			Total Credit Points = 312

$$\text{CGPA} = 312/42 = 7.42$$

- 9.10** For merit ranking or comparison purposes or any other listing, **only** the ‘**rounded off**’ values of CGPAs will be used.
- 9.11** For calculations listed in regulations 9.6 to 9.9, performance in failed subjects/courses (securing **F grade**) will also be taken into account, and the credits of such subjects/courses will also be included in the multiplications and summations. After passing the failed subjects(s) newly secured grade points will be taken into account for calculation of SGPA and CGPA. However, mandatory courses will not be taken into consideration for calculations of CGPA and SGPA.

10.0 Passing standards

- 10.1** A student shall be declared successful or ‘passed’ in a semester, if student secures a GP \geq 5(‘C’ grade or above) in each and every subject/course in that semester (i.e. when student gets an SGPA \geq 5.00 at the end of that particular semester); and a student shall be declared successful or ‘passed’ in the entire under graduate programme, only when gets a CGPA \geq 5.00 for the award of the degree as required.
- 10.2** After the completion of each semester, a grade card or grade sheet (or transcript) shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (Course code, title, no. of credits, and grade earned etc.), credits earned, SGPA, and CGPA.

11.0 Declaration of results

11.1 Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9

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

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

12.0 Award of degree

12.1 A student who registers for all the specified subjects/courses as listed in the course structure and secures the required number of 192 credits (with CGPA \geq 5.0), within 8 academic years from the date of commencement of the first academic year, shall be declared to have **'qualified'** for the award of the B.Tech. Degree in the chosen branch of Engineering as selected at the time of admission.

12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.

12.3 Students with the final CGPA (at the end of the under graduate programme) \geq 8.00, and fulfilling the following condition will be awarded **'first class with distinction'**.

"Should have secured a CGPA \geq 8.00, for each year of course study consistently and without any fail marks for any subject in any of the semester.

Students with final CGPA (at the end of the under graduate programme) \geq **6.50 but $<$ 8.00**, shall be placed in **'first class'**.

Students with final CGPA (at the end of the under graduate programme) \geq **5.50 but $<$ 6.50**, shall be placed in **'second class'**.

Students with final CGPA (at the end of the under graduate programme) \geq 5.00 but $<$ 5.50, and all other students who qualify for the award of degree (as per 12.1) with **final CGPA \geq 5.00 but $<$ 5.50**, shall be placed in **'pass class'**.

A student with final CGPA (at the end of the under graduate programme) $<$ 5.00, **will not be eligible** for the award of the degree.

12.4 Students fulfilling the conditions listed under 12.3 along with the condition that **at the end of each of the 8 sequential semesters, starting from first year first semester onwards"**. will alone be eligible for award of **'rank'** and **'gold medal'**.

13.0 Withholding of results

13.1 If the student has not paid the fees to the college at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student

may be withheld, and student will not be allowed to go into the next semester. The award or issue of the degree may also be withheld in such cases.

14.0 Transitory regulations

- 14.1 A student who has discontinued for any reason, is liable to completely pay his balance annual fees, from the discontinued year to completion of four year course.
- 14.2 A student who is detained due to lack of credits or lack of attendance has to follow the existing regulations of the year re-admitted, with additional/substitute subjects if necessary.

15.0 Students transfers

- 15.1 There shall be no branch transfers after the completion of admission process.
- 15.2 There shall be no transfers from one college/stream to another within the constituent colleges and units of affiliating university (JNTUH). However if the student is of TKRCET then he is permitted to transfer from Non Autonomous mode to Autonomous mode subjected to the approval of Academic Council of the same affiliating university.
- 15.3 The students seeking transfer under ceiling admission category/special category to this college from any of the JNTUH affiliated Autonomous colleges or from various other Universities/institutions (National Importance, Autonomous) have to pass the failed subjects which are equivalent to the subjects of TKRCET and also pass the subjects of TKRCET which the students have not studied at the earlier institution/university. Further, though the students have passed some of the subjects at the earlier institution/university, if the same subjects are being offered in different semesters of TKRCET, the students have to study those subjects in TKRCET in spite of the fact that those subjects are repeated.
- 15.4 The transferred students from other Universities/institutions to TKRCET, shall be provided a chance of writing online internal examination **for the failed subjects/and or subjects not studied** as per the clearance (equivalence) letter issued by the university/institution, at the end of the semester as per the prescribed schedule by the college examination cell.

16.0 Scope

- 16.1 The academic regulations should be read as whole, for the purpose of any interpretation.
- 16.2 In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Chairman, Governing Body of TKRCET is final.
- 16.3 The College may change or amend the academic regulations, course structure or syllabi, at any time, and the changes or amendments made shall be applicable to all students with effect from the date of notification by the college authorities.

MALPRACTICES RULES

DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/Improper conduct	Punishment
	If the candidate	
1. (a)	Possesses or carries accessible in the examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the examination hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that Semester. The hall ticket of the candidate is to be cancelled.
3.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate, who has been impersonated, shall be cancelled.

		All the subjects of the examination (including practical and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester. The candidate is also debarred for two consecutive semesters from class work and all end examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case will be registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester. The candidate is also debarred for two consecutive semesters from class work and all end examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the Chief Superintendent/Assistant – Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk-out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester

	<p>outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.</p>	<p>The candidates also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case will be registered against them.</p>
7.	<p>Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester. The candidate is also debarred for two consecutive semesters from class work and all end examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.</p>
8.	<p>Possesses any lethal weapon or firearm in the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester. The candidate is also debarred and forfeits the seat.</p>

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 college expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester. The candidate is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to the police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the PRINCIPAL/DIRECTOR for further action to award suitable punishment.	

