ACADEMIC REGULATIONS 2015 FOR CBCS BASED M.TECH PROGRAMME

(Effiective for the students admitted into I year from the academic year 2015-16 and onwards)

The M.Tech degree of **S R Engineering College, Warangal** shall be conferred on candidates who are admitted to the programme and who fulfill all the academic requirements for the award of the Degree.

1.0   ELIGIBILITY FOR ADMISSIONS

Admission to the above programme shall be made subject to eligibility, qualification and specialization as prescribed by the University from time to time.

Admissions shall be made on the basis of merit/rank obtained by the candidates at the qualifying Entrance Test conducted by the University or on the basis of any other order of merit as approved by the University, subject to reservations as laid down by the Govt. from time to time.

2.0   AWARD OF M. Tech. DEGREE

2.1   A student shall be declared eligible for the award of the M. Tech. Degree, if he pursues a course of study in not less than two and not more than four academic years. However, he is permitted to write the examinations for two more years after four academic years of course work, failing which he shall forfeit his seat in M. Tech. programme.

2.2   The student shall register for all 88 credits and secure all the 88 credits.

2.3   The minimum instruction days in each semester are 90.

3.0   COURSES OF STUDY

The following specializations are offered at present for the M. Tech. programme of study.

1. Power Electronics
2. Advanced Manufacturing Systems
3. Electronics Design Technology
4. Embedded Systems
5. Software Engineering
6. Computer Science and Engineering

3.1 **Departments offering M. Tech. Programmes with specializations are noted below:**

EEE	Power Electronics
ME	Advanced Manufacturing Systems
ECE	Embedded Systems
	Electronics Design Technology
CSE	Computer Science and Engineering
	Software Engineering

4   Course Registration

4.1   A 'Faculty Advisor or Counselor' shall be assigned to each student, who will advise him on the Post Graduate Programme (PGP), its Course Structure and Curriculum, Choice/Option for Subjects/ Courses, based on his competence, progress, pre-requisites and interest.

4.2   Academic Section of the College invites 'Registration Forms' from students with in 15 days from the commencement of classwork through 'ON-LINE SUBMISSIONS', 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'.

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

4.4   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.

4.5   Subject/ Course Options exercised through ON-LINE Registration are final and CANNOT be changed, nor can they be inter-changed; further, alternate choices will also not be considered. However, if the Subject/ Course that has already been listed for Registration (by the Head of Department) in a Semester could not be offered due to any unforeseen or unexpected reasons, then the Student shall be allowed to have alternate choice -either for a new Subject (subject to offering of such a Subject), or for another existing Subject (subject to availability of seats), which may be considered. Such alternate arrangements will be made by the Head of Department, with due notification and timeframed schedule, within the FIRST WEEK from the commencement of Class-work for that Semester.

5   ATTENDANCE

The programmes are offered on a unit basis with each subject being considered a unit.

5.1   Attendance in all classes (Lectures/Laboratories etc.) is compulsory. The minimum required attendance in each theory / Laboratory etc. is 75% including the days of attendance in sports, games, NSS activities for appearing for the End Semester examination. A student shall not be permitted to appear for the Semester End Examinations (SEE) if his attendance is less than 75%.

5.2   Condonation of shortage of attendance in each subject up to 10% (65% and above and below 75%) in each semester shall be granted by the College Academic Committee.

5.3   Shortage of Attendance below 65% in each subject shall not be condoned.

5.4   Students whose shortage of attendance is not condoned in any subject are not eligible to write their end semester examination of that subject and their registration shall stand cancelled.

5.5   A prescribed fee shall be payable towards condonation of shortage of attendance.

5.6   A Candidate shall put in a minimum required attendance at least three (3) theory subjects in I Year I semester for promoting to I Year II Semester. In order to qualify for the award of the M.Tech. Degree, the candidate shall complete all the academic requirements of the subjects, as per the course structure.

5.7   A student shall not be promoted to the next semester unless he satisfies the attendance requirement of the present Semester, as applicable. They may seek readmission into that semester when offered next. If any candidate fulfills the attendance requirement in the present semester, he shall not be eligible for readmission into the same class.

6   EVALUATION

The performance of the candidate in each semester shall be evaluated subject-wise, with a maximum of 100 marks for theory and 100 marks for practicals, on the basis of Internal Evaluation and End Semester Examination.

6.1   For the theory subjects/ courses 60 marks shall be awarded for the performance in the Semester End Examination and 40 marks shall be awarded for Continuous Internal Evaluation (CIE). Each mid-term examination shall be conducted for a total duration of 120 minutes with 4 questions to be answered out of 6 questions. The two Mid Term-Examinations are conducted, one in the middle of the Semester and the other, immediately after the completion of Semester instructions and 75 % of the marks shall be taken from the better of these two examinations and 25 % from the other examination as the final marks secured by the Student towards Continuous Internal Evaluation in that

Theory Subject/ Course. The Semester End Examination shall be conducted for 3 hours with 5 questions to be answered out of 8 questions.

6.2   For practical subjects, 60 marks shall be awarded for performance in the Semester End Examinations and 40 marks shall be awarded for day-to-day performance as Internal Marks.

6.3   For conducting laboratory end examinations of all PG Programmes, one internal examiner and one external examiner are to be appointed by the Controller of Examinations, two weeks before for commencement of the lab end examinations. The external examiner should be selected from outside the College.

6.4   There shall be two seminar presentations during I year I semester and II semester. For seminar, a student under the supervision of a faculty member, shall collect the literature on a topic and critically review the literature and submit it to the department in a report form and shall make an oral presentation before the Departmental Academic Committee consisting of Head of the Department, Supervisor and two other senior faculty members of the department. For each Seminar there will be only internal evaluation of 50 marks. A candidate has to secure a minimum of 50% of marks to be declared successful. If he fails to fulfill minimum marks, he has to reappear during the supplementary examinations.

6.5   There shall be a Comprehensive Viva-Voce in II year I Semester. The Comprehensive Viva-Voce is intended to assess the students' understanding of various subjects he has studied during the M. Tech. course of study. The Head of the Department shall be associated with the conduct of the Comprehensive Viva-Voce through a Committee. The Committee consisting of Head of the Department, one senior faculty member and an external examiner. The external examiner shall be appointed by the Controller of Examinations. For this, the Head of the Department shall submit a panel of 3 examiners. There are no internal marks for the Comprehensive Viva-Voce and evaluates for maximum of 100 marks. A candidate has to secure a minimum of 50% of marks to be declared successful. If he fails to fulfill minimum marks, he has to reappear during the supplementary examinations.

6.6   A candidate shall be deemed to have secured the minimum academic requirement in a subject if he secures a minimum of 40% of marks in the Semester End Examination and a minimum aggregate of 50% of the total marks in the Semester End Examination and Continuous Internal Evaluation taken together.

6.7   In case the candidate does not secure the minimum academic requirement in any subject (as specified in 6 .6) he has to reappear for the Semester End Examination in that subject.

6.8   A candidate shall be given one chance to re-register for the subjects if the internal marks secured by a candidate is less than 50% and failed in that subject for maximum of two

subjects and should register within four weeks of commencement of the class work. In such a case, the candidate must re-register for the subjects and secure the required minimum attendance. The candidate's attendance in the reregistered subject(s) shall be calculated separately to decide upon his eligibility for writing the Semester End Examination in those subjects. In the event of the student taking another chance, his Continuous Internal Evaluation (internal) marks and Semester End Examination marks obtained in the previous attempt stands cancelled.

6.9   In case the candidate secures less than the required attendance in any subject, he shall not be permitted to write the Semester End Examination in that subject. He shall reregister for the subject when next offered.

7   Examinations and Assessment - The Grading System

7.1   Marks will be awarded to indicate the performance of each student in each Theory Subject, or Lab/Practicals, or Seminar, or Project, etc., based on the % marks obtained in CIE + SEE (Continuous Internal Evaluation + Semester End Examination, both taken together) as specified in Item 6 above, and a corresponding Letter Grade shall be given.

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

% of Marks Secured (Class Intervals)	Letter Grade (UGC Guidelines)	Grade Points
80% and above ($\geq$ 80% , $\leq$ 100%)	O (Outstanding)	10
Below 80% but not less than 70% ($\geq$ 70% , < 80%)	A+ (Excellent)	9
Below 70% but not less than 60% ($\geq$ 60% , < 70%)	A (Very Good)	8
Below 60% but not less than 55% ($\geq$ 55% , < 60%)	B+ (Good)	7
Below 55% but not less than 50% ($\geq$ 50% , < 55%)	B (above Average)	6
Below 50% (< 50%)	F (FAIL)	0
Absent	**Ab**	0

7.3   A student obtaining F Grade in any Subject shall be considered 'failed' and is be required to reappear as 'Supplementary Candidate' in the Semester End Examination (SEE), as

and when offered. In such cases, his Internal Marks (CIE Marks) in those Subjects will remain the same as those he obtained earlier.

7.4   A student not appeared for examination then 'Ab' Grade will be allocated in any Subject shall be considered 'failed' and will be required to reappear as 'Supplementary Candidate' in the Semester End Examination (SEE), as and when offered.

7.5   A Letter Grade does not imply any specific Marks percentage and it will be the range of marks percentage.

7.6   In general, a student shall not be permitted to repeat any Subject/ Course (s) only for the sake of 'Grade Improvement' or 'SGPA/ CGPA Improvement'.

7.7   A student earns Grade Point (GP) in each Subject/ Course, on the basis of the Letter Grade obtained by him 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 Point (GP) x Credits …. For a Course

7.8   The Student passes the Subject/ Course only when he **gets GP $\geq$ 6 (B Grade or above).**

7.9   The Semester Grade Point Average (SGPA) is calculated by dividing the Sum of Credit Points (Σ CP) secured from ALL Subjects/ Courses registered in a Semester, by the Total Number of Credits registered during that Semester. SGPA is rounded off to TWO Decimal Places. SGPA is thus computed as

$$\textbf{SGPA} = \left\{\Sigma_{i=1}^{N} C_i\, G_i\right\} / \left\{\Sigma_{i=1}^{N} C_i\right\} ...... \textbf{ For each Semester},$$

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 ith Subject, and G_i represents the Grade Points (GP) corresponding to the Letter Grade awarded for that ith Subject.

7.10   The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student over all Semesters considered for registration. The CGPA is the ratio of the Total Credit Points secured by a student in ALL registered Courses in ALL Semesters, and the Total Number of Credits registered in ALL the Semesters. CGPA is rounded off to TWO Decimal Places. CGPA is thus computed from the I Year Second Semester onwards, at the end of each Semester, as per the formula

$$\textbf{CGPA} = \left\{\Sigma_{j=1}^{M} C_j\, G_j\right\} / \left\{\Sigma_{j=1}^{M} C_j\right\} ...... \textbf{ for all S Semesters registered}$$

(ie., upto 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' from the 1st Semester onwards upto and inclusive of the Semester S (obviously $M > N$), 'j' is the Subject indicator index (takes into account all Subjects from 1 to S Semesters), C_j is the no. of Credits allotted to the jth Subject, and G_j represents the Grade Points (GP) corresponding to the Letter Grade awarded for that jth Subject. After registration and completion of I Year I Semester however, the SGPA of that Semester itself may be taken as the CGPA, as there are no cumulative effects.

7.11 For Calculations listed in Item 7.6 – 7.10, performance in failed Subjects/ Courses (securing F Grade) will also be taken into account, and the Credits of such Subjects/ Courses will also be included in the multiplications and summations.

8. EVALUATION OF PROJECT/DISSERTATION WORK

Every candidate shall be required to submit a thesis or dissertation on a topic approved by the Project Review Committee.

8.1 A Project Review Committee (PRC) shall be constituted with Head of the Department as Chairperson, Project Supervisor and one senior faculty member of the Departments offering the M. Tech. programme.

8.2 Registration of Project Work: A candidate is permitted to register for the project work after satisfying the attendance requirement of all the subjects, both theory and practical.

8.3 After satisfying 8.2, a candidate has to submit, in consultation with his Project Supervisor, the title, objective and plan of action of his project work to the PRC for approval. Only after obtaining the approval of the PRC the student can initiate the Project work.

8.4 If a candidate wishes to change his supervisor or topic of the project, he can do so with the approval of the PRC. However, the PRC shall examine whether or not the change of topic/supervisor leads to a major change of his initial plans of project proposal. If yes, his date of registration for the project work starts from the date of change of Supervisor or topic as the case may be.

8.5 A candidate shall submit his project status report in two stages at least with a gap of 3 months between them.

8.6 The work on the project shall be initiated at the beginning of the II year and the duration of the project is two semesters. A candidate is permitted to submit Project Thesis only after successful completion of all theory and practical courses with the approval of PRC

not earlier than 40 weeks from the date of registration of the project work. For the approval of PRC the candidate shall submit the draft copy of thesis to the Head of the Department and make an oral presentation before the PRC.

8.7 After approval from the PRC, the soft copy of the thesis should be submitted to the Examination Branch for ANTI-PLAGIARISM for the quality check and the plagiarism report should be included in the final thesis. If the copied information is less than 24%, then only thesis will be accepted for submission.

8.8 Three copies of the Project Thesis certified by the supervisor shall be submitted to the College.

8.9 For Project work Review I in II Year I Sem. there is an internal marks of 50, the evaluation should be done by the PRC for 25 marks and Supervisor will evaluate for 25 marks. The Supervisor and PRC will examine the Problem Definition, Objectives, Scope of Work, Literature Survey in the same domain. A candidate has to secure a minimum of 50% of marks to be declared successful for Project Work Review I. If he fails to fulfill minimum marks, he has to reappear during the supplementary examination.

8.10 For Project work Review II in II Year II Sem. there is an internal marks of 50, the evaluation should be done by the PRC for 25 marks and Supervisor will evaluate for 25 marks. The PRC will examine the overall progress of the Project Work and decide the Project is eligible for final submission or not. A candidate has to secure a minimum of 50% of marks to be declared successful for Project Work Review II. If he fails to fulfill minimum marks, he has to reappear during the supplementary examination.

8.11 For Project Evaluation (Viva Voce) in II Year II Sem. there is an external marks of 150 and the same evaluated by the External examiner. The external examiner shall be appointed by the Controller of Examinations. For this, the Head of the Department shall submit a panel of 3 examiners. The candidate has to secure minimum of 50% marks in Project Evaluation (Viva-Voce) examination.

8.12 If he fails to fulfill as specified in 8.11, he will reappear for the Viva-Voce examination only after three months. In the reappeared examination also, fails to fulfill, he will not be eligible for the award of the degree.

8.13 The thesis shall be adjudicated by one examiner selected by the Controller of Examinations. For this, the Head of the Department shall submit a panel of 3 examiners, eminent in that field, with the help of the guide concerned and Head of the Department.

8.14 If the report of the examiner is not favourable, the candidate shall revise and resubmit the Thesis. If the report of the examiner is unfavourable again, the thesis shall be summarily rejected.

8.15 If the report of the examiner is favourable, Project Viva-Voce examination shall be conducted by a board consisting of the Supervisor, Head of the Department and the external examiner who adjudicated the Thesis.

8.16 The Head of the Department shall coordinate and make arrangements for the conduct of Project Viva- Voce examination.

9. AWARD OF DEGREE AND CLASS

9.1 A Student who registers for all the specified Subjects/ Courses as listed in the Course Structure, satisfies all the Course Requirements, and passes the examinations prescribed in the entire PG Programme (PGP), and secures the required number of **88** Credits (with CGPA $\geq$ 6.0), shall be declared to have 'QUALIFIED' for the award of the M.Tech. Degree in the chosen Branch of Engineering and Technology with specialization as he admitted.

9.2 **Award of Class**

After a student has satisfied the requirements prescribed for the completion of the programme and is eligible for the award of M. Tech. Degree, he shall be placed in one of the following three classes based on the CGPA:

Class Awarded	CGPA
First Class with Distinction	≥ 7.75
First Class	$6.75 \leq CGPA < 7.75$
Second Class	$6.00 \leq CGPA < 6.75$

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

10. WITHHOLDING OF RESULTS

If the student has not paid the dues, if any, to the College or if any case of indiscipline is pending against him, the result of the student will be withheld and he will not be allowed into the next semester. His degree will be withheld in such cases.

11. TRANSITORY REGULATIONS

11.1 If any candidate is detained due to shortage of attendance in one or more subjects, they are eligible for re-registration to maximum of two earlier or equivalent subjects at a time as and when offered.

11.2 The candidate who fails in any subject will be given two chances to pass the same subject; otherwise, he has to identify an equivalent subject as per R15 Academic Regulations.

12 GENERAL

12.1 **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 hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.

12.2 **Credit Point:** It is the product of grade point and number of credits for a course.

12.3 Wherever the words "he", "him", "his", occur in the regulations, they include "she", "her".

12.4 The academic regulation should be read as a whole for the purpose of any interpretation.

12.5 In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Principal/ Academic Council is final.

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