

# TECHNOLOGY INSTITU SETHU



# SETHU INSTITUTE OF TECHNOLOGY

An Autonomous Institution / Accredited with 'A' Grade by NAAC Approved by AICTE, New Delhi & Permanently Affiliated to Anna University. Chennai. Pulloor - 626 115, Kariapatti, Virudhunagar Dt. Tamilnadu.

**REGULATIONS 2019** 



# SETHU INSTITUTE OF TECHNOLOGY

**An Autonomous Institution** 

UG Regulations 2019

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# 2019 REGULATIONS for B.E. / B.Tech. Degree Programmes

These regulations are applicable to all candidates admitted into B.E. / B.Tech. Degree Programmes from the academic year 2019–2020.

#### 1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

## In these regulations, unless the context otherwise specifies:

- i. "University" means Anna University, Chennai.
- ii. "Programme" means UG Degree Programme that is B.E./ B.Tech. Degree Programme.
- iii. "Branch" means specialization or discipline of B.E./B.Tech. Degree Programme like Mechanical Engineering, Information Technology, etc.,
- iv. "Course" means a theory or practical subject that is normally studied in a semester, like Mathematics, Physics, etc.,
- v. "Credit" means a numerical value allocated to course units to describe the student's workload required per week.
- vi. "Grade" means the letter grade assigned to each course based on the range of marks specified.
- vii. "Grade point" means a numerical value (0to10) allocated based on the grade assigned to each course.
- viii. "CBCS" means Choice Based Credit System.
- ix. "Controller of Examinations" means the authority of the Institution who is responsible for all the activities of the Examinations of this Institute.
- x."**Head of the Institution**" means the Principal of the College / Institution / who is responsible for all the academic activities of the College / Institution and for implementation of relevant rules of this Regulations.
- xi. "Head of the Department" means Head of the Department concerned.

## 2. QUALIFICATIONS FOR ADMISSION

#### 2.1. Admission to First Semester

The candidates seeking admission for the first semester to the eight semester B.E. / B.Tech., degree programme:

i. Should have passed the Higher Secondary Examinations of (10+2) in the academic stream with Mathematics, Physics and Chemistry as main courses of study conducted by the Government of Tamilnadu or an examination accepted by the syndicate of Anna University as equivalent there to. They should also satisfy other eligibility rules as prescribed by the Anna University and Director of Technical Education, Government of Tamil Nadu, Chennai, from time to time.

#### (OR)

ii. Should have passed the Higher Secondary Examination of Vocational Stream (Vocational groups in Engineering/Technology) as prescribed by the Government of Tamil Nadu.

#### 2.2. Lateral Entry Admission

- i. The candidates who possess the Diploma in Engineering / Technology awarded by the State Board of Technical Education, Tamil Nadu or its equivalent are eligible to apply for admission to the third semester of B.E. / B.Tech., in the branch corresponding to the branch of study as per the norms of Directorate of Technical Education, Government of Tamilnadu (OR)
- ii. The candidates who possess the Degree in Science (B.Sc.) (10+2+3 stream) with mathematics as a course at the B.Sc. level are eligible to apply for admission to the third semester of B.E. / B.Tech., Such candidates shall undergo two additional Engineering courses in the third and fourth semesters or fourth and sixth semesters respectively as prescribed by the respective Chairman of Board of Studies.

# 2.3. Admissions under NRI/Foreign Nationals (FN)/Overseas Citizens of India (OCI)/Persons of Indian Origin (PIO)/Children of Indian Workers in Gulf Countries (GIWGC)

Candidates must have passed the qualifying examination i.e (10+2) of Indian system or its equivalent (completed 12 years of school education). Candidates must have studied in English Medium or should have proficiency in English language. The candidate should have passed in all subjects and scored a minimum average of 50 percentage in Mathematics, Physics and Chemistry put together in qualifying examinations. For NRI candidates the eligibility criteria shall be as per the norms of Directorate of Technical Education, Government of Tamilnadu. The list of qualifying examinations for the candidates in the category of Foreign Nationals (FN) / Overseas Citizens of India (OCI) / Persons of Indian Origin (PIO) / Children of Indian Workers in Gulf Countries (GIWGC) is given in annexure I.

#### 3. UG PROGRAMMES OFFERED

The following Programmes and Branches of study approved by Anna University, Chennai, and All India Council for Technical Education, New Delhi, are offered by the College.

TABLE I: PROGRAMMES OFFERED

PROGRAMME	BRANCH	
<b>B.E.</b>	Mechanical Engineering Computer Science and Engineering Electronics and Communication Engineering Electrical and Electronics Engineering Civil Engineering Agriculture Engineering Biomedical Engineering	
B.Tech.	Information Technology Chemical Engineering	

#### 4. STRUCTURE OF PROGRAMMES

Choice Based Credit System (CBCS), is the solution for the transformation from the traditional teacher oriented education to a student-centered education. Taking responsibility for their own education in this way, students can benefit the most from all the available resources. The semester system accelerates the teaching-learning process and enables vertical and horizontal mobility in learning.

The credit based semester system provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching. The choice based credit system facilitates the students to take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.

Each course is normally assigned certain number of credits with 1 credit per lecture / tutorial period per week, 1 credit for 2 periods of laboratory/ practical / project work per week. A period shall have a minimum of 50 minutes.

The curriculum of every programme is designed with total number of credits ranging from 170 to 180.

## 4.1. Categorization of Courses

Every B.E./B.Tech Degree Programme will have a curriculum with Syllabi consisting of theory and Practical courses that shall be categorized as given in Table.II

TABLE-II: CATEGORY OF COURSES

Course Category	Range of Total credits
Humanities and Social Science	12-14
Basic sciences	24-29
Engineering Sciences	17-25
Professional Core	62-77
Professional Electives	18
Open Electives	12
Project work	15
Mandatory Courses	Non-Credit

**Humanities and Science Courses** are to be studied compulsorily by the students of all the branches. Environmental Sciences, English, Professional Ethics and Project Management and Finance Courses fall under this category.

**Basic sciences and Engineering Sciences Courses** are to be studied compulsorily by the students of all the branches.

**Professional Core Courses (PCC)** are to be studied compulsorily by a student in his/her chosen discipline of study. It also includes the Employability Enhancement Courses such as Project, Seminar, Skill development courses and In-plant Training/Internship. The communication proficiency courses are introduced in order to provide necessary skills for employability and also as per the guidelines of various statutory bodies, skill development courses like Communication Skills for Professionals and Interpersonal Skills for Professionals are provided to the students. These courses mainly focus skill development through practical sessions.

**Professional Elective Courses (PEC)** are the advanced courses which provide an expanded scope of a given programme. The student can choose professional electives offered by the Department.

**Open Elective Courses(OEC)** are the Inter-disciplinary courses. The students can choose the open elective courses offered by other departments.

**Mandatory Courses (MAC)** are to be studied compulsorily by all B.E./B.Tech students, irrespective of the branch. Mandatory courses are non-credit courses and these courses are listed in Table-III and securing a pass is necessary for the award of degree. The details of assessment for the Mandatory Courses are given in Annexure–II.

TABLE - III: LIST OF MANDATORY COURSES

Name of the course	Semester
Induction Programme	I Semester
Biology for Engineers	III / IV Semester
Gender Equality	III / IV Semester
Indian Constitution and Essence of Indian	VI Semester
Traditional Knowledge	
Professional Ethics and Human Values	VII / VIII Semester
Personality and Social Development Courses	
Skill Development Courses	

The courses shall be so designed that the candidate at the end of the programme would have been trained not only in his / her relevant professional field but also would have developed as a socially conscious human being.

#### 4.2. Knowledge / Skill Enhancement Courses

- **I. Internship :** One or two credits shall be assigned to two weeks of field training / Internship / Industrial /Practical Training / summer project, undergone in a Company / Organization / Reputed institutions. One week or 40 hours of internship shall be equivalent to one credit.
- **ii. Industry Designed Courses:** The courses designed in collaboration with the industry / research organizations / higher learning institutions shall be offered by the Department to the students. Credits shall be assigned based on the number of Lecture / Tutorial / Practical hours.
- **iii. R&D Project -I :** One or two credits shall be assigned for R&D Project -I that can be taken-up by a student who can take extra work load. The student shall carry out a part of funded research and development project, Consultancy project, Industry Institute Interaction activities or any other internal revenue generation activities of the Institution during his/her 2<sup>nd</sup> or 3<sup>rd</sup> year of the programme, under the guidance of a faculty for a period of five to six months duration, including the summer or winter vacation periods. The student shall work with the R&D Supervisor with the prior approval of the Head of the Institution through Head of the Department.
- **iv. R&D Project II:** Three credits shall be assigned for R&D Project -II that can be takenup by a group of students. It shall be for national /international level project design and development contest conducted by reputed institution/organization. The students can takeup this with the prior approval of the Head of the Institution through Head of the Department.

- **v. Self Learning online Courses:** Students can register online learning Courses offered by SWAYAM and other reputed online platforms with the approval of Head of the Department. The course content and credit weightage are decided by course offering Institution/Organization.
- **vi. Elective Courses in PG Curriculum :** UG students can opt for elective courses prescribed in the curriculum of appropriate PG programme if he/she has CGPA of 8 and above upto 5<sup>th</sup> semester as professional elective course. The student opting for PG elective has to obtain prior permission from the Head of the Institution before course registration. A faculty coordinator shall be nominated by the PG Programme Head for each PG elective course.
- **vii. Engineering Aptitude Proficiency:** The students are expected to enhance their Engineering Aptitude Proficiency through self-learning. The students can opt to appear for Graduate Aptitude Test in Engineering (GATE), an all-India examination or Comprehensive Engineering Aptitude Test (CEAT), a college level examination.

Graduate Aptitude Test in Engineering (GATE) is an all-India examination that primarily test the comprehensive understanding of various undergraduate subjects in engineering and science. The assessment carried out in the GATE is considered as a comprehensive test in engineering subjects in relevant discipline. A student can earn additional credits if he/she obtains qualifying marks and above in his/her discipline and category in GATE examination. (or)

Comprehensive Engineering Aptitude Test (CEAT) is college level examination that primarily test the comprehensive understanding of various undergraduate subjects in engineering and science. The assessment carried out in the CEAT is considered as a comprehensive test in engineering subjects in relevant discipline. A student can earn additional credits if he/she obtains qualifying marks and above in his/her discipline and category in CEAT examination.

- **viii. Certificate Course :** One credit or two credits shall be allotted for globally acclaimed technical certificate Course facilitated by the Institution like CISCO, Oracle, EMC<sup>2</sup> etc. Credits shall be assigned based on the number of Lecture / Tutorial / Practical hours.
- ix. Self Learning Elective Courses: A student can register one additional programme elective course or open elective course already existing in curriculum as a self-learning course in a semester from 5<sup>th</sup> semester onwards.
- **4.3**. The student can replace professional / open elective courses or/and earn additional credits through Knowledge / Skill Enhancement courses upto a maximum of 20% of the total credits
- **4.4.** If necessary, additional credits earned through Knowledge/Skill Enhancement courses can be withdrawn from CGPA calculation. The student has to submit an exemption

request to Controller of Examinations with the approval of Head of the Department before the registration of end semester examination of the final semester of the programme. In any case, the additional credits withdrawn by the student will not be considered further.

**4.5.** The medium of Instruction, Examinations and Project report shall be English.

#### 5. COURSE REGISTRATION

- **5.1** Through Faculty advisor/Mentor, student can get information about academic program, eligibility, prerequisite and availability of courses that can be registered for the particular semester by considering the academic background and career objectives of the student.
- **5.2.** Student shall register for a set of courses for the semester based on the advice of the Faculty advisor/Mentor.
- **5.3.** All the students have to register for the courses on or before the seventh working day of the current semester.
- **5.4.** The student has the option of registering additional courses or dropping existing courses with the approval of the HOD and the total number of credits of such courses ranges from minimum of 16 to maximum of 36, however the minimum clause is not applicable to 8<sup>th</sup> semester.
- **5.5.** The student can register professional / open elective course in self learning mode, from 5<sup>th</sup> semester onwards, if the course is not offered by the Department in a particular semester.
- **5.6.** If a student finds that he/she has registered for the additional courses than his/her capability to study in a semester, he/she can withdraw one or more of courses within 15 days of the commencement of the semester.
- **5.7.** The maximum / minimum number of students to be registered in each course shall depend upon the infrastructure availability which shall be decided by the Head of the Department / the Head of the Institution.
- **5.8.** If a student has failed in any course, he/ she has the option to re-register the particular course in the subsequent semesters, however If a student has failed in a professional elective or open elective, the student may register for the same or any other professional elective or open elective course in the subsequent semester.
- **5.9.** Each student shall register for all the courses prescribed in the curriculum of first two semesters of the concerned programme.

#### 6. DURATION OF THE PROGRAMME

- **6.1.** The minimum and maximum period of the B.E./B.Tech.Degree Programme for various category are given below
  - For HSC candidates minimum of 8 semesters and maximum of 10 semesters
  - Lateral Entry Diploma / B.Sc. Candidates minimum of 6 semesters and maximum of 8 semesters

However in any case not more than 14 Semesters for HSC candidates and not more than 12 semesters for Lateral Entry Diploma/B.Sc. Candidates.

- **6.2.** For the purpose of regulations, the academic year will be divided into two semesters, the winter semester normally spanning from June to November and the summer semester from December to May. The courses in the curriculum of the winter semester shall be conducted in winter semester only and that of the summer semester shall be conducted in summer semester only.
- **6.3.** Each semester shall normally consist of 450 periods of each 50 minutes. In any contingent situation, the number of working days per semester shall not be less than 65 days. The Head of the Institution / Head of the Department shall ensure that every teacher imparts instruction as per the number of hours / periods specified in the syllabus and that the teacher teaches the full content of the specified syllabus for the course being taught.
- **6.4.** The Head of the Institution may instruct the Head of the Departments to conduct additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods for each course. But for the purpose of calculation of attendance requirement or writing the end semester examinations (as per clause 7) by the students, the periods conducted for each course within the given academic schedule as specified in the curriculum for each course alone shall be taken into account and the percentage of attendance of each course shall be calculated accordingly. The academic schedule normally commences from the opening/reopening day specified by the Head of the Institution for a particular semester and ends with the previous working day of the end semester theory examination.

# 7. REQUIREMENTS FOR COMPLETION OF A SEMESTER

- **7.1.** A candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester
  - 7.1.1. Ideally every candidate is expected to attend all classes and secure 100% attendance. However, in order to allow for certain unavoidable reasons, a candidate is expected to have atleast 75% attendance in each course he/she registered in the particular semester, except self-learning courses.
  - 7.1.2. A candidate who could not secure 75% attendance in each course he/she registered (except self-learning courses) in the current semester but has secured 65%

and above due to medical reasons (hospitalization / accident / specific illness) or participation in extracurricular activities shall be permitted to appear for the current semester examinations with the approval of the Head of the Institution on payment of condonation fee fixed by the authorities from time to time. Medical / Participation certificate needs to be submitted along with the leave application.

- **7.1.3.** The conduct of the candidate is satisfactory.
- **7.2.** Candidates who do not complete the semester as per clause 7.1 shall not be permitted to appear for the examinations at the end of the semester and he/she has to register for the courses again.

## 8. REQUIREMENTS FOR APPEARING FOR END SEMESTER EXAMINATIONS

A candidate shall normally be permitted to appear for the end semester examinations of the current semester if only,

- a) he/she satisfies the requirements prescribed above in clause 7.1
- b) he/she has paid the examination fees and has registered for the examinations for all the courses of the current semester and all the arrear courses, if any.

Registration is mandatory for the current semester examinations as well as for the arrear examinations, failing which the candidate will not be permitted to register for any course in the next semester. A candidate, who has already appeared for any course in a semester and passed in the examination, is not entitled to reappear for the same course for improvement of grades/marks.

#### 9. PROVISION FOR WITHDRAWAL FROM END SEMESTER EXAMINATIONS

- **9.1.** A candidate may, for valid reasons, be granted permission to withdraw from appearing for the end semester examination in any course or courses for only one semester examination during the entire duration of the degree programme.
- **9.2.** Withdrawal application shall be valid only if the candidate is otherwise eligible to write the examination and should be submitted to the Head of the Institution prior to the last examination of that semester recommended by the Head of the Department.
- **9.3.** Withdrawal shall not be treated as an attempt for the purpose of classification (vide clause 17).
- **9.4.** Withdrawal is permitted for the end semester examinations in the eighth semester, only if the period of study the student concerned does not exceed 5 years as per clause 17.1

#### 10. TEMPORARY BREAK OF STUDY FOR A PROGRAMME

- 10.1. A candidate is normally not permitted to temporarily break the study. However, if a candidate intends to temporarily discontinue the programme in the middle for valid reasons (such as accident or hospitalization due to prolonged ill health) and to rejoin the programme in later semester, he/she shall apply in advance to the Principal, through the Head of the Department, stating the reasons there of, in any case, not later than the last date for registering for that semester examination.
- **10.2.** Break of Study shall be granted only once for a maximum of one year during the entire period of study of the degree programme however, in extraordinary situation the candidate may apply for additional break of study not exceeding another one year by paying prescribed fee for break of study.
- **10.3.** The candidate permitted to rejoin the programme after break shall be governed by the rules and regulations in force at the time of rejoining.
- **10.4.** The duration specified for passing all the courses, for the purpose of classification vide clause 17.1 and 17.2, shall be increased by the period of such break of study permitted.
- **10.5.** The total period of completion of the programme reckoned from the commencement of the semester to which the candidate was admitted shall not exceed the maximum period specified in clause 6 irrespective of the period of break of study in order to qualify for the award of the degree.
- **10.6.** If any candidate is detained for want of requisite attendance or due to disciplinary action, the period elapsed in that semester shall not be considered as permitted 'Break of Study'.

#### 11. SYSTEM OF EXAMINATION

- **11.1.** Performance in each course of study shall be evaluated based on continuous internal assessment throughout the semester and end semester examination at the end of the semester. However, Skill development courses, knowledge/skill enhancement courses and mandatory courses shall be assessed based on continuous internal assessment only.
- 11.2. The end semester examination for theory course having 3 and more credits, and practical course (including project work) shall be evaluated for a maximum of 100 marks.
  - **11.2.1.** For all theory courses the continuous internal assessment will carry 40 marks while the end semester examination will carry 60 marks.
  - **11.2.2.** For all practical courses / project work / multidisciplinary project (phase I & II) the continuous internal assessment will carry 50 marks while the end semester examination will carry 50 marks.

- **11.3.** The duration of end semester examination for theory course is normally based on number of credits with one hour of examination per credit. However, it is not applicable for integrated courses.
- **11.4.** The end semester examination (theory and practical)shall normally be conducted between October and December during the winter semesters and between April and June during the summer semesters.
- 11.5. The end semester examination for project work /multi disciplinary project shall consist of evaluation of the final report submitted by the student or students of the project group (not exceeding 4 students and in case of multidisciplinary project not less than 5 students, at least from three different branches) by an external examiner followed by a viva-voce examination conducted separately for each student by a committee consisting of the external examiner, the guide of the project group and an internal examiner.
- 11.6. Students are prohibited from entering into the examination hall / laboratories with any book or any portion of books, manuscript, or paper of any description or communicating with or copying from each other or communicating with anyone outside the examination hall / laboratories. Programmable calculator, Cell phones and other electronic gadgets shall not be permitted inside the examination hall / laboratories. However any required codebooks and data sheets / books, if necessary, may be permitted inside the examination hall / laboratories with the approval of the Chief Superintendent / Examiners. The students are warned that any form of malpractice will be dealt severely. The disciplinary action will be taken by the college authorities after conducting an enquiry. The punishment may even be cancelling all the end semester examinations written by the student in the particular semester and debarring permanently from all the end semester examinations in the particular semester.
- 11.7. The hall ticket must be produced by all the students at the time of writing the examination. If a student fails to produce the hall ticket on any grounds, he/she should get a duplicate Hall ticket from the Controller of Examinations office through the Chief Superintendent /Examiner by paying the duplicate hall ticket fee.
- **11.8.** Examiners for setting end semester examination question papers for theory courses, evaluating end semester examination answer scripts, conducting practical examinations and evaluating project works shall be appointed by the Controller of Examinations after obtaining approval from the Chairperson, Academic Council of the College.

# 12. PROCEDURE FOR AWARDING MARKS FOR CONTINUOUS INTERNAL ASSESSMENT (CIA)

# 12.1. Theory Courses

For all the theory courses the continuous internal assessment shall be for a maximum of 40 marks (consisting of 30 marks for tests, 5 marks for Quiz / online quiz and 5 marks for

assignment / Seminar). Minimum of three tests shall be conducted and the average of 3 tests marks will be considered for 30 marks of CIA. All marks put together (maximum 40) should be rounded off to the nearest integer.

The apportionment of continuous internal assessment marks for theory courses shall be as follows:

TABLE - IV: CONTINUOUS INTERNAL ASSESSMENT APPORTIONMENT

Sl No.	Component	Max. Marks
1.	Tests	30
2.	Quiz /Online Quiz	5
3.	Assignment / Seminar / Project	5
	Total	40

- 12.1.1. In order to motivate the students, as per the guidelines of UGC, various components of internal assessment may be adopted such as group discussion, paper reading, viva-voce, technical seminar, online tests etc. In line with the UGC guidelines, the Internal Assessment Suggestion Committee (vide clause 19) can recommend alternate continuous internal assessment system to the Head of the Institution. The alternate continuous internal assessment system should contain at least 2 tests.
- 12.1.2. If any course requires alternate internal assessment system, the faculty member, who is handling the course, should submit a request to the Dean Academics through the HoD for the alternate continuous internal evaluation system, within two days of the commencement of classes in a particular semester. The Dean Academics shall convene the Internal Assessment Suggestion Committee and the Committee shall scrutinize the request and recommend suitable alternate continuous internal assessment system for approval of the Head of the Institution.

#### 12.2. Practical Courses

- **12.2.1.** For all practical courses the continuous assessment shall be for a maximum of 50 marks which includes 20 marks for the Record (conduct of experiments, observation and result in regular class work), 10 marks for viva in regular class work and 20 marks for model examination. All marks put together (maximum 50) should be rounded off to the nearest integer.
- **12.2.2.** In line with the UGC guidelines, the Internal Assessment Suggestion Committee (vide clause 19) can recommend alternate continuous internal assessment system to the Head of the Institution. The alternate continuous internal assessment system (vide clause12.1.2) shall be incorporated after the approval of the Head of the Institution.

# 12.3. Project Work/Product Development Project / Multidisciplinary Project / Creative Thinking and Innovation / Summer Internship / Technical Seminar

- **12.3.1.** The HOD/Head of the Institution shall constitute a separate review committee for Project work and Technical Project/Product Development / Multidisciplinary project. There shall be three assessments during the semester by the review committee. The student shall make a presentation on the progress made by him / her before the committee.
- **12.3.2.** A candidate may be permitted to work on the project in an Industry / Research Organization, on the recommendations of the HoD, with the approval of the Head of the Institution, if necessary. These candidates will have to produce a certificate of authorization from the Industry/Research Organization where the project is done
- **12.3.3.** Multidisciplinary Project shall be carried out by the students of different branches and it shall be offered at the Institute level. The students who have more than 7 CGPA up to 5<sup>th</sup> semester are eligible to carry out multi-disciplinary project. There shall be two phases in multi-disciplinary project, Phase I and Phase II.

TABLE - V : ASSESSMENT APPORTIONMENT FOR PROJECT WORK / PRODUCT DEVELOPMENT PROJECT /MULTIDISCIPLINARY PROJECT

Internal		External					
			End Semester Examinations				Total
Review I	Review II	Review III	Thesis /	Vi	va - Voce (	30)	Marks
			Report	Internal	External	Supervisor	
50		20	10	10	10	100 Marks	

## 12.4. Creative Thinking and Innovation

The above course promotes the creative thinking and innovation skills among the students. The student shall conceive conceptual idea to solve the real world problem which can be converted into project or patent in future. The conceptual idea shall be presented by the students of different branches or same branch and the final report submitted by the group (not exceeding 4 students). It shall be evaluated by the committee constituted by Head of the Department / Head of the Institution

# 12.5. Summer Internship / Technical Seminar

The student shall submit report for the above courses and make a presentation. The committee constituted by the Head of the Department/ Head of the Institution shall evaluate the report and presentation with suitable rubrics approved by the Head of the Institution.

#### 12.6. Integrated Courses (Theory Courses with Laboratory Component)

The theory and the practical components of the integrated courses shall be evaluated individually for those courses by assigning the weightage for each component in accordance with the credit ratio and this is applicable to both continuous internal assessment and end semester examination. The pass marks obtained in either theory or practical part of the integrated course shall be maintained till the entire course is passed by a student.

### 12.7. Communication Proficiency Courses

For the assessment of Communication proficiency courses, a committee shall be constituted by the Head of the Institution which shall suggest the suitable assessment system based on the activities performed by the students.

#### 12.8. Knowledge / Skill Enhancement Courses

- **12.8.1. Internship :** Internship shall carry 100 marks and shall be evaluated through internal assessment only. At the end of Industrial / Practical training/ Internship/summer project, the candidate shall submit a certificate from the organization where he/she has undergone training and a brief report. The evaluation will be made based on the report and a viva-voce examination conducted by a three member Departmental Committee constituted by the Head of the Department / Head of the Institution.
- **12.8.2. Industry Designed Courses:** The industry or the faculty coordinator of the course (in coordination with the industry) shall frame the assessment procedure and conduct the relevant assessment accordingly. The faculty coordinator nominated by the Head of the Department shall be responsible for the coordination with the industry and for the completion of the assessment and submitting the marks to the Controller of examinations through the Head of the Department.
- **12.8.3. R&D Project-I**: R&D Project-I shall be evaluated by a review committee consisting of the R&D Supervisor and a senior faculty member, nominated by the Head of the Department / Head of the Institution, in the related field of the project. There shall be three assessment during the period of the project. At the end of the project period, the marks shall be awarded by the same committee for the report and the viva-voce.
- **12.8.4. R&D Project-II**: R&D Project-II shall be evaluated by a review committee consisting of the Head of the Department of the students, R&D Supervisor and a senior faculty member, nominated by the Head of the Department / Head of the Institution. There shall be three assessment during the period of the project. At the end of the project period, the marks shall be awarded by the same committee for the report and the viva-voce.
- **12.8.5. Self Learning Online Courses:** Self Learning online Courses are assessed and evaluated by the certification Institute/ organization or by the Institution. A committee

constituted by the Head of the Institution shall assign number of credits based on the duration of the course and award the grade for these courses based on the quality of the online courses, the assessment procedure and the performance of the student.

#### 12.8.6. Self Learning Elective Courses / Elective Courses in PG Curriculum:

The above courses shall be evaluated in two phases (i) Continuous Internal Assessment vide clause 12.1 and (ii) Comprehensive Assessment shall be conducted internally for 60 marks.

# 12.8.7. Engineering Aptitude Proficiency / Comprehensive Engineering Aptitude Test (CEAT):

The candidates who secure the qualifying marks and above in GATE shall be awarded 'O' grade with the weightage of 5 credits.

The candidates who secure the qualifying marks and above in CEAT shall be awarded 'O' grade with the weightage of 3 credits.

No grade shall be awarded below qualifying marks in GATE / CEAT examination. No separate internal assessment and End Semester Examination will be conducted.

**12.8.8. Certificate Courses :** Certificate Courses will have only one performance test for the purpose of awarding grades. A committee constituted by the Head of the Institution shall assign the credit weightage of the course based on duration of the course and grade is awarded based on the performance test conducted by the certifying organization or by the Institution, duration of the certificate course and by giving due weightage for the certificate.

## 12.9. Mandatory Courses

All mandatory courses are assessed by continuous internal assessment only. The procedure for assessment of the courses are given in Annexure I.

#### 12.10. Attendance and Continuous Assessment Record

Every teacher is required to maintain an Attendance and Continuous Assessment Record which consists of attendance marked or each lecture or practical or project work classes, the tests & assignment marks and record of class work (topics covered) separately for each course. This should be submitted to the HoD concerned at the end of every month for checking the syllabus coverage and the record of test marks and attendance. The HoD will put his/her signature and date after due verification. At the end of the semester, the HoD should verify the register and keep this document in his/her safe custody for five years. The register will have to be produced for scrutiny by the Head of the Institution or any inspecting authority whenever called for. The faculty handling courses for a particular programme from other departments (e.g. English, Mathematics, Science, etc.) shall submit the records to the HoD of the faculty concerned.

#### 13. PASSING REQUIREMENTS

- **13.1.** A candidate who secures not less than 50% of cumulative passing requirement mark (Continuous internal assessment + End semester examination) prescribed for the courses with a minimum of 45% marks prescribed for the end semester examination in both theory and practical courses (including project work) shall be declared to have passed the examination.
- **13.2.** If a candidate fails to secure a pass in a particular course in end semester examination, it is mandatory that he/she shall register and reappear for the end semester examination in that course during the next semester when examination is conducted for that course. He/she should continue to register the course as well as examination and reappear for the examination till he/she secures a pass, subjected to the stipulated period (vide clause 6.1).
- **13.3.** The internal assessment marks obtained by the candidate in the first appearance shall be retained and considered valid for all subsequent attempts till the candidates secures a pass. However the cumulative passing requirement mark shall be considered either end semester mark alone or cumulative pass requirement mark (end semester + continuous internal assessment mark) whichever is higher from 8<sup>th</sup> semester onwards.

#### 14. AWARD OF LETTER GRADES

**14.1.** All assessments of a course will be done on absolute mark basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain number of points, will be awarded as per the range of marks obtained by the candidate in each course as detailed below:

TABLE VI - LETTER GRADING

Letter Grade	<b>Grade Points</b>	Max. Marks
O (Outstanding)	10	91-100
A+ (Excellent)	9	81-90
A (Very Good)	8	71-80
B+ (Good)	7	60-70
B (Above average)	6	50-59
RA (Reappearance Registration)	0	< 50
SA (Shortage of Attendance)	0	
AB (Absent)	0	

'RA' denotes Reappearance registration is required for that particular course, 'SA' denotes Shortage of Attendance (as per clause 7) and hence prevented from writing the end semester examination.

The Grade point average (GPA) for each semester is calculated using the formula

) for each semester is of 
$$\frac{\sum_{i=1}^{n} C_{i}GP_{i}}{\sum_{i=1}^{n} C_{i}}$$

The Cumulative Grade Point Average (CGPA) is calculated from the first semester to final semester using the formula

$$CGPA = egin{array}{c} \sum_{i=1}^{N} C_i GP_i \ \hline \sum_{i=1}^{N} C_i \end{array}$$

C<sub>i</sub> - is the Credits assigned to the course

**GP**<sub>i</sub> - is the point corresponding to the grade obtained for each Course

**n** - is number of all Courses successfully completed during the particular semester in case of GPA

N – is number of all courses successfully completed during all the semesters in case of CGPA

"RA", "SA" and "AB" grades will be excluded for calculating GPA and CGPA.

The GPA and CGPA are computed only for the candidates with a pass in all the courses.

The **GPA** and **CGPA** indicate the academic performance of a candidate at the end of a semester and at the end of successive semesters respectively.

The formula for the conversion of CGPA to equivalent percentage of marks shall be as follows:

Equivalent Percentage of Marks = CGPAX10

A grade sheet for each semester shall be issued containing Grade obtained in each course, GPA and CGPA

#### 14.2. Grade Sheet

A grade sheet for each semester shall be issued containing the following information after the publication of the results

- 1. The credits registered and earned by the student
- 2. Grade obtained in each course
- 3. Additional credit earned through special courses

- 4. Grade Point Average of the semester and Cumulative Grade Point Average earned up to the semester
- 5. Month and year of appearance
- 6. Procedure for calculation of GPA and CGPA

#### 15. ELIGIBILITY FOR THE AWARD OF DEGREE

## A candidate shall be declared to be eligible for the award of the Degree if he/she has

- Successfully completed the course requirements by earning required no. of credits specified in the curriculum and passed all the prescribed courses in the Curriculum including mandatory courses corresponding to his/her Programme within the stipulated time (vide clause 6.1)
- No disciplinary action is pending against him/her.
- Successfully completed the field visit / industrial training, if any, as prescribed in the curriculum.
- Successfully completed any additional courses prescribed by the Dean-Academics, whenever any candidate is readmitted.
- The award of the Degree shall be approved by the syndicate of the University

#### 16. REVALUATION

- **16.1.** A candidate can apply for direct revaluation or revaluation with photocopy of his/her end semester examination answer paper in a theory course, within a week from the declaration of results on payment of the prescribed fee.
- **16.2.** Direct Revaluation application form must be submitted to the Controller of Examinations through the HoD. The Controller of Examinations will arrange for the revaluation and the results will be intimated to the candidate concerned.
- **16.3.** A candidate shall apply for the Photocopy of his/her end semester examination answer script on payment of the prescribed fee and apply for revaluation through revaluation with Photocopy application form to the Controller of Examinations within a week after the photocopy of the answer script is received.
- **16.4.** A candidate can apply for direct revaluation/revaluation with photocopy of answer scripts for not exceeding 5 subjects in a semester at a time. Revaluation is not permitted for practical courses and for project work.
- **16.5. Review:** Candidates not satisfied with Revaluation can apply for Review of his/her examination answer script for theory courses, on payment of a prescribed fee with proper application to Controller of examinations through the Head of the Institution. Candidates those applied for Revaluation are eligible to apply for Review.

#### 17. CLASSIFICATION OF THE DEGREE AWARDED

- 17.1. A candidate who qualifies for the award of the Degree (vide clause 15) after having passed the examination in all the courses as per the requirement of the curriculum in his/her first appearance within five years [within four years in case of lateral entry] securing a CGPA of not less than 8.5 shall be declared to have passed the examination in First Class with Distinction. For this purpose the withdrawal from examination (vide clause 9) will not be construed as an appearance. Further, the authorized break of study (vide clause 10) is permitted in addition to four years (three years in the case of lateral entry) for award of First Class with Distinction.
- 17.2. A candidate who qualifies for the award of the Degree (vide clause 15) having passed the examination in all the courses the requirement of the curriculum within five years [within four years in case of lateral entry], securing a CGPA of not less than 7 shall be declared to have passed the examination in First Class. For this purpose the withdrawal from examination (vide clause 9) will not be construed as an appearance. Further, the authorized break of study (vide clause 10) is permitted in addition to four years (three years in the case of lateral entry) for award of First Class.
- **17.3.** All other candidates (not covered in clauses 17.1 and 17.2) who qualify for the award of the degree (vide Clause 15) shall be declared to have passed the examination in Second Class.
- **17.4.** A candidate who is absent in the end semester examination in a course / project work after having enrolled for the same shall be considered to have appeared in that examination for the purpose of classification.

#### 18. FACULTY ADVISOR / MENTOR

To help the students in planning their courses of study and for general advice on the academic programme, the HoD of the students will attach a certain number of students to a teacher of the Department who shall function as Faculty Advisor / Mentor for those students throughout their period of study. Such faculty Advisors shall advise the students and monitor the courses undergone by the students, check the attendance and progress of the students attached to him/her and counsel them periodically. If necessary, the Advisor / Mentor may also discuss with or inform the parents about the progress of the students.

#### 19. INTERNAL ASSESSMENT SUGGESTION COMMITTEE

The Internal Assessment Suggestion Committee for first year courses shall consist of the HoDs of Science & Humanities, HoD of Mechanical Engineering, HoD of Computer Science & Engineering and HoD of Electrical & Electronics Engineering as members of the Committee and the Dean Academics as the Convenor.

The Internal Assessment Suggestion Committee for higher semester UG COURSES (3<sup>rd</sup> to 8<sup>th</sup> Semester) shall consist of the HoDs of all Engineering Departments, HoD of Mathematics and HoD of English as members of the Committee and the Dean Academics as the Convener.

- **19.1.** Dean Academics may invite any number of faculty members from the college who are expert in the particular subject(s) as special invitees to the committee.
- **19.2.** The committee shall suggest alternate continuous internal assessment system for the particular course(s) for which request has been made.
- **19.3.** The committee shall scrutinize and recommend suitable alternate continuous internal assessment system within a week to the Head of the Institution for ratification.
- **19.4.** The Head of the Institution shall carefully examine the recommendation of the Committee and ratify the recommendation before the commencement of the first Class Committee Meeting (vide clause 20). The Head of the Institution may approve or reject the alternate continuous internal assessment system and the approval is up to the discretion of the Head of the Institution.
- **19.5.** The alternate continuous internal assessment system shall be incorporated after the approval of the Head of the Institution.

#### 20. CLASS COMMITTEE

A Class Committee consists of teachers of the concerned class, student representatives and a Chairperson who is not teaching the class. It is like the 'Quality Circle' with the overall goal of improving the teaching-learning process. The functions of the class committee include

- Solving problems experienced by students in the classroom and in the laboratories
- Clarifying the regulations of the programme and the details of rules therein
- Informing the student representatives about the academic schedule including the dates of assessments and the syllabus coverage for each assessment
- Informing the student representatives about the details of regulations regarding the weight age used for each assessment. In the case of practical courses (laboratory / project work/ seminar etc.) The breakup of marks for each experiment / exercise / module of work, should be clearly discussed in the class committee meeting and informed to the students.
- Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any
- Identifying the weak students, if any, and requesting the teachers concerned to provide some additional help or guidance or coaching to such weak students.

- **20.1.** The class committee for a class under a particular programme is normally constituted by the Head of the Department. However, if the students of different programmes are mixed in a class, the class committee is to be constituted by the Head of the Institution.
- 20.2. The class committee shall be constituted on the first working day of any semester or earlier.
- **20.3.** At least 6 student representatives shall be included in the class committee.
- **20.4.** The Chairperson of the class committee may invite the Faculty advisor(s) and the Head of the department to the meeting of the class committee.
- **20.5.** The Head of the Institution may participate in any class committee of the institution.
- **20.6.** The Chairperson is required to prepare the minutes of every meeting, submit the same to the Head of the Department within two days of the meeting and arrange to circulate among the concerned students and teachers. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the management through the Head of the Institution.
- **20.7.** The first meeting of the class committee shall be held within two weeks from the date of commencement of the semester in order to inform the students about the nature and weightage of assessments within the framework of the Academic Regulations. Two or three subsequent meetings may be held at suitable intervals. During these meetings the student members, representing the entire class, shall meaningfully interact and express the opinions and suggestions of the class to improve the effectiveness of the teaching-learning process.

#### 21. DISCIPLINE

Every student is required to be disciplined and behave with propriety both inside and outside the Institution and not indulge in any activity which will bring down the prestige of the Institution. The Head of the Institution shall constitute a disciplinary committee to enquire into acts of indiscipline and disciplinary action will be taken based on the recommendations of the committee. If a student indulges in malpractice in any of the end semester/internal examination he/she shall be liable for punitive action as prescribed by the Institution (from time to time). The disciplinary action is subject to review by the Head of the Institution, in case the student represents the case to the Head of the Institution.

#### 22. REVISION OF REGULATIONS AND CURRICULUM

The Academic Council of the College reserves the right to revise or change or amend the regulations, the scheme of examinations, the curriculum and the syllabi from time to time if found necessary.

Any condition which has not been covered in the above regulations may be referred in the Academic Council for a decision.

#### 23. SPECIAL CASES

In the event of any clarification in the interpretation of the above rules and regulations, they shall be referred to the Standing Committee. The members of the Standing committee shall be nominated by the Chairperson of the Academic Council. The Standing Committee will offer suitable interpretations / clarifications / amendments required for special cases and get them ratified in the next meeting of the Academic Council, if necessary. The decision of the Academic Council will be final.

TABLE VI – MINIMUM TOTAL CREDITS FOR B.E./B.Tech. DEGREE PROGRAMMES

Sl.	l. Name of the Programme		Minimum Total Credits *		
No.	Name of the Programme	Regular	<b>Lateral Entry</b>		
1.	B.E. Mechanical Engineering	178	134		
2.	B.E. Computer Science and Engineering	175	131		
3.	B.E. Electronics and Communication Engineering	175	131		
4.	B.E. Electrical and Electronics Engineering	175	131		
5.	B.Tech. Information Technology	175	131		
6.	5. B.E. Civil Engineering         178         134		134		
7.	B.Tech. Chemical Engineering	175	131		
8.	B.E. Agriculture Engineering	172	128		
9.	B.E. Biomedical Engineering	177	133		

<sup>\*</sup> Minimum Total Credits to be earned by the student admitted to the particular UG Programme to become eligible for the award of Degree as per Clause15 of Regulations2019(UG).

#### **ANNEXURE - I**

# LIST OF QUALIFYING EXAMINATIONS FOR FOREIGN NATIONALS / PIO / OCI / CIWGC

Candidates must have passed the qualifying examination i.e (10+2) of Indian System or its equivalent (completed 12 years of school education). Candidates must have studied in English medium or should have proficiency in English language. The candidate should have passed in all subjects and scored a minimum average of 50 percentage in Mathematics, Physics and Chemistry put together in qualifying examinations.

- GCE Examination of U.K. with pass grades in five subjects at the Ordinary Level (O level) and two subjects at the Advanced Level (A Level).
- Higher School Certificate Examination, University of Cambridge Local Examinations Syndicate, U.K.
- International Baccalaureate Examination of Geneva. High School Graduation from accredited Institutions of USA.
- 12 Years High School Diploma from China
- 12 Years High School Graduation Diploma of International School, Bangkok / Grade 12 Examination of Ruam Rudee International School, Bangkok / 12 Years High School Diploma of Adventist English School, Bangkok Mathayom VIII, Final Examination of Upper Secondary Education Course; Final Examination of Secondary Education Course; Mathayom Suksa, 5 Pre- University Final Examination (12 Year Course) in Ministry of Education, Thailand.
- 12 Years High School Graduation Diploma from Myanmar
- 12 Years Bhutan Higher Secondary Education Certificate
- 12 Years High School Graduation Diploma from Syria
- 12 Years of Secondary Stage qualifications of National Examination Board / Council of Ministries of Education from Kenya, Nigeria, Sudan, Tanzania and Uganda
- 12 Years General Secondary School Certificate of Ministry of Education, Sultanate of Oman and Yemen
- SMA/SLTA/Senior High School/Secondary School Advanced stage exams from Indonesia
- Intermediate Science Course, Kathmandu University, Kathmandu, Nepal
- Intermediate / Senior Secondary / Higher Secondary / 12 Years High School Diploma / Certificate Level Examination of the approved Board / Council of Secondary Education from Bangladesh, Sri Lanka, Iran, Iraq, Bahrain, Kuwait, Jordan, Saudi Arabia, UAE and other Gulf Countries.
- Sijil Tinggi Persekolahan Malaysia (STPM) of Ministry of Education, Malaysia / Matriculation Science Course of National University of Malaysia / 12 Years Matriculation Science Certificate of University of Malaya & University of Science, Malaysia.

# ANNEXURE – II

#### **MANDATORY COURSES**

# 19UGM131 Induction Programme

When new students enter an institution, they come with diverse thoughts, backgrounds and preparations. It is important to help them adjust to the new environment and inculcate in them the ethos of the institution. Its purpose is to make the students feel comfortable in their new environment, open them up, set a healthy daily routine, create bonding in the batch as well as between faculty and students, develop awareness, sensitivity and understanding of the self, people around them, society at large, and nature.

Induction programme shall be conducted for the first year students at the entry level and it shall be conducted for three weeks or 90 hours. The following activities may be conducted during the induction programme.

- Physical Activity
- Creative Arts and Culture
- Mentoring & Universal Human Values
- Familiarization with College, Dept./Branch
- Literary Activity
- Proficiency Modules
- Lectures & Workshops by Eminent People
- Visits in Local Area
- Extra-Curricular Activities in College
- Feedback and Report on the Program

# 19UGM231 Biology for Engineers

The assessment for the above course shall be conducted like theory course vide clause 11 & 12, however the end semester examination evaluated by the Internal Examiners only

# 19UGM431 Gender Equality / 19UGM631 Indian Constitution and Essence of Indian Traditional Knowledge / 19UGM831 Professional Ethics & Human Values

The procedure for internal assessment of the above courses is given below.

Sl. No.	Letter Grade	Max. Marks
1.	Tests (at least 2 tests)	50
2.	Group Discussion	30
3.	Assignment / Seminar	20
	Total	100

## Personality & Social Development and Skill Development Courses

To fulfill the requirement to receive degree, student should earn 100 activity points from Mandatory courses in which minimum 50 points from Personality and Social Development courses and 50 points from Skill Development Courses

#### 19UGM731 Personality and Social Development

A student shall participate any kind of Personality and Social Development Activities as a bonafide student of Sethu Institute of Technology

Nature of Activity	Activity Points			
Participation	1 point for two hours of participation			
r articipation	4 points for one day of participation			
Prize Winning				
Institute level	5 points			
State / Zonal / University level	6 points			
National level	8 points			
International level	10 points			

#### SPORTS AND OTHER EXTRA-CURRICULAR ACTIVITIES PSD01

**Nature of Activity** 

: Indoor Events / Outdoor Events – Athletics, other extra-curricular activities such as Music, Dance, Essay writing, Quiz, Debate, and any other extracurricular activity in Intra Institute level, Inter Institute level, University Zonal level, University level, National level and International level.

**Authorizing Person** 

: Institute Physical Education Director(s) / Fine Arts Club Convenor

Scrutinizing Authority: Head of the Department of the student concern

#### NATIONAL SERVICE SCHEME PSD02

**Nature of Activity** 

: Any type of social service activity conducted by NSS

**Authorizing Person** 

: Institute NSS Coordinator(s)

Scrutinizing Authority: Head of the Department of the student concern

#### PSD03 **CLUB ACTIVITIES**

**Nature of Activity** 

: Membership in any of the Clubs such as ECO Club, Red Ribbon Club, YRC, Photography Club, Rotract Club etc., Any type of Club activity conducted by clubs, one student can participate one or more club activities to accumulate marks under

this category.

**Authorizing Person** 

: Club Coordinator

Scrutinizing Authority: Head of the Department of the student concern

#### PSD04 RURAL INTERNSHIP

**Nature of Activity** : Participation in any type of rural development activity. 35 points for

one week of rural internship programme.

**Authorizing Person**: Institute NSS Coordinator / Club Coordinator / Class Advisor

Scrutinizing Authority: Head of the Department of the student concern

#### **Guidelines for Personality and Social Development**

• Participation in Sport events / Extra-curricular events/Club events from first semester to seventh semester may be considered

• The participation / prize winning certificates in any Extra-curricular competition shall be submitted to the Faculty in-charge of Extra-curricular Activities / HoD.

#### 19UGM732 SKILLS DEVELOPMENT

A student shall participate any kind of Personality and Social Development Activities as a bonafide student of Sethu Institute of Technology

Nature of Activity	Activity Points
Doutionation	1 point for two hours of participation
Participation	4 points for one day of participation
Prize Wi	nning
Institute level	5 points
State / Zonal / University level	6 points
National level	8 points
International level	10 points
For SD02 & SD04	50 points
Certificate / Eligible score obtained	

#### SD01 CO - CURRICULAR ACTIVITIES

Nature of Activity: Participation in Symposiums, conferences, Journal article

Publication Mini-Project Contest, professional society activities, value added courses and Trainings in Intra Institute level, InterInstitute level, University level, National level & International

level

**Authorizing Person** : Class Advisor

Scrutinizing Authority: Head of the Department of the student concern

#### SD02 ENGLISH PROFICIENCY CERTIFICATION

Nature of Activity: Participation in training programmes for English Proficiency

**Authorizing Person**: Class Advisor

**Scrutinizing Authority:** Head of the Department of the student concern / Dean Training—TPC

#### SD03 SOFT SKILLS AND APPTITUDE

Nature of Activity : Participation in training programmes in Personality developments

& soft Skills programme and Analytical and Problem Solving Skills

programme

**Authorizing Person** : Class Advisor

Scrutinizing Authority: Head of the Department of the student concern / Dean Training - TPC

#### SD04 APTITUDE PROFICIENCY CERTIFICATE

**Nature of Activity** : Participation in training programmes for GRE, GMAT, CAT,

CMAT, etc.,

**Authorizing Person**: Career Guidance Cell Institute Coordinator **Scrutinizing Authority**: Head of the Department of the student concern

#### SD05 INTELLECTUAL PROPERTY RIGHTS

**IPR** obtained or registered with the approval of the Head of the Department concern and also with the affiliation of Sethu Institute of Technology will be eligible to get pass in Skill Development Category of Non – CGPA Mandatory Courses

#### SD06 RURAL PROJECT

Rural Projects shall be carried out by the students of different branches or same branch. The final report submitted by the student or students of the project group (not exceeding 4 students). The project shall be evaluated by the committee constituted by Head of the Department / Head of the Institution and award activity points. The maximum activity points for a Rural Project is 60.

# **Guidelines for Skill Development**

- Any type of Co- Curricular events may be registered by students from first semester to seventh semester.
- The participation/ Prize winning certificate in any Co-curricular competition shall be submitted to the Faculty in-charge of Co-curricular Activities / HOD.



# SETHU INSTITUTE OF TECHNOLOGY

**An Autonomous Institution** 

PG Regulations 2019

# SETHU INSTITUTE OF TECHNOLOGY

An Autonomous Institution | Accredited with 'A' grade by NAAC Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

# **2019 REGULATIONS for M.E. Degree Programmes**

These regulations are applicable to all candidates admitted into M.E. Degree Programmes from the academic year 2019–2020.

#### 1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these regulations, unless the context otherwise specifies:

- i. "University" means Anna University, Chennai.
- ii. "Programme" means P.G Degree Programme that is M.E. Degree Programme
- iii. **"Branch"** means specialization or discipline of M.E.Degree Programme, like CAD/CAM, Communication Systems, etc.
- iv. "Course" means a theory or practical subject that is normally studied in a semester, like Mathematics.
- v. "Credit" means a numerical value allocated to course units to describe the student's workload required per week.
- vi. "Grade" means the letter grade assigned to each course based on the range of marks specified.
- vii. "Grade point" means a numerical value (0 to10) allocated based on the grade assigned to each course.
- viii. "CBCS" means Choice Based Credit System.
- ix. "Controller of Examinations" means the authority of the Institution who is responsible for all the activities of the Examinations of this Institute.
- x. "Head of the Institution" means the Principal of the College / Institution / who is responsible for all the academic activities of the College / Institution and for implementation of relevant rules of this Regulations.
- xi. "Head of the Department" means Head of the PG Programme concerned.

#### 2. ADMISSION

Candidates seeking admission to the first semester of the M.E. Degree programme shall be required to have passed an appropriate degree examination recognized by the University as specified under eligible qualification for admission or any appropriate degree accepted by Syndicate of the University/ Directorate of Technical Education, as equivalent thereto.

#### 3. PROGRAMMES OFFERED

Candidates seeking admission to the first semester of the M.E. Degree programme shall be required to have passed an appropriate degree examination recognized by the University as specified under eligible qualification for admission or any appropriate degree accepted by Syndicate of the University/ Directorate of Technical Education, as equivalent thereto.

## 3.1. PROGRAMMES AND BRANCHES OF STUDY

The following Programmes and branches of study approved by Anna University, Chennai, and All India Council for Technical Education, New Delhi, are offered by the College. The eligible qualifications for admission to the respective Programmes are also listed below:

TABLE I - ELIGIBLE QUALIFICATION FOR PG ADMISSIONS

Department	Programme	mme Eligible Qualification	
MECHANICAL ENGINEERING	M.E CAD/CAM	B.E., B.Tech  1. Mechanical Engg. 2. Automobile Engg. 3. Manufacturing Engg. 4. Production Engg. 5. Aerospace Tech. 6. Industrial Engg. 7. Mechatronics Engg. 8. Marine Engg. 9. Aeronautical Engg.	
COMPUTER SCIENCE AND ENGINEERING	ME - Computer Science and Engineering	B.E., B.Tech  1. Electronics and Communication Engg. 2. Information Technology 3. Computer Science and Engg. 4. Software Engineering.  M.Sc (5 years Integrated) 5. Information Technology 6. Computer Science 7. Software Engineering	

Department	Programme	Eligible Qualification
COMPUTER SCIENCE AND ENGINEERING	ME - Computer Science and Engineering	8. B.Sc (3 years) in Information Technology/ Computer Science & M.Sc (2 Years) in InformationTechnology/ Computer Science 9. M.C.A (10+2+3+3) years pattern
		10. M.C.A Lateral 2 years after 10+2+3 years degree in B.C.A or B.Sc (Information Technology / Computer Science)
ELECTRONICS AND COMMUNICATION ENGINEERING	ME - Communication Systems	B.E./B.Tech. 1. Electronics and Communication Engineering 2. Electronics Engineering
ELECTRICAL AND ELECTRONICS ENGINEERING	ME - Power Electronics and Drives	<ul> <li>B.E./B.Tech.</li> <li>1. Electrical and Electronics Engg.</li> <li>2. Electronics and Communication Engg.</li> <li>3. Electronics Engg.</li> <li>4. Electronics and Instrumentation Engg.</li> <li>5. Instrumentation and Control Engg.</li> <li>6. Instrumentation Engg.</li> </ul>
CIVIL ENGINEERING	M.E - Structural Engineering	B.E./B.Tech. Civil Engg.

Candidates admitted shall be available in the Department/ College during the entire duration of working hours of the College. The candidates shall not attend any other Full-Time Programme(s) / course(s) or take up any Full-Time job / Part-Time job in any Institution or Company during the period of the Programme. Violation of the above rules will result in cancellation of admission to the PG Programme.

#### 4. STRUCTURE OF PROGRAMMES

Choice based credit system (CBCS), is the solution for this type of transformation from the traditional teacher oriented education to a student-centered education. Taking responsibility for their own education in this way, students can benefit the most from all the available resources. The semester system accelerates the teaching-learning process and enables vertical and horizontal mobility in learning.

The credit based semester system provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching. The choice based credit system facilitates the students to take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.

Each core and elective course is normally assigned certain number of credits with 1 credit per lecture/ tutorial period per week, 1 credit for 2 periods of laboratory / practical / seminar / project work per week.

The curriculum of every programme is designed with total number of credits 70.

#### 4.1. CATEGORIZATION OF COURSES

Every Programme will have a curriculum and syllabi consisting of Programme core courses, Programme elective courses, Open elective, Audit course, Mandatory course and project works.

**Professional Core Courses:** Every candidate shall be required to opt for all the core courses of his/her specialization compulsorily as a requirement for completion of the programme.

**Professional Elective Courses (PEC):** PG students can opt for elective courses prescribed in the curriculum of other PG programmes based on their areas of interest and they are permitted to select one such elective course as open elective during the entire period of the programme. The students have to register for the elective courses through the Elective Course Registration Form before the commencement of the concerned semester. Each elective course carries 3 credits. If sufficient numbers of students do not opt for particular elective course other elective course shall be offered instead of.

**Open Elective (OEC):** are the Inter-disciplinary courses. The students can choose the open elective courses offered by other departments.

**Audit Course:** are to be studied compulsorily by all M.E students, irrespective of the specialization without any credit

**Self Learing Elective Course:** A student can register one additional programme elective course or open elective course already existing in curriculum as a self-learning course and not exceeding the credit maximum limit per semester.

**Mandatory Courses (MAC)** are to be studied compulsorily by all M.E students, irrespective of the specialization

The different courses shall be so designed that the candidate, at the end of the Programme, would have been trained not only in his / her relevant professional field but also would have developed as a socially conscious human being.

# 4.2. Knowledge / Skill development Courses

**R&D Project :** One credit or Two credits shall be assigned for R&D Project that can be take-up by a student who can take extra work load. The student shall carry out a part of funded research and development project, Consultancy project, Industry Institute Interaction activities or any other internal revenue generation activities of the Institution during period of the programme, under the guidance of a faculty for a period of five to six months duration, including the summer or winter vacation periods. The student shall work with the R&D Supervisor with the prior approval of the Head of the Institution through the Programme Head.

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**Advanced R&D project:** Four credits shall be assigned for advanced R&D Project that can be taken-up by a student who can take extra work load from 3<sup>rd</sup> semester onwards. The periods of the project may be one or two semesters which may lead to a quality publication/patent filling or project proposal to funding agencies.

**Research Publications:** If a student has a publication in SCI listed journals which has impact factor of 1.5 and above, his/her proficiency in publishing paper shall be consider for 3 credits. The committee nominated by the Head of the Institution shall evaluate the quality of the journal and the paper. Based on the recommendation of the committee, the quality of the journal and the paper, 'S' grade will be awarded

**Internship:** One or two credits shall be assigned to two weeks of field training / Internship / Industrial / Practical Training /summer project, undergone in a Company / Organization / Reputed institutions. One week or 40 hours of internship shall be equivalent to one credit.

**Self Learning online Courses:** Students can register advanced online learning Courses offered by SWAYAM and other reputed online platforms with the approval of PG Programme Head.

**Certificate Course:** One or two credits shall be allotted for globally acclaimed technical certificate Course facilitated by the Institution like OCJP, CISCO, NASTRON, PTC etc. Credits shall be assigned based on the number of Lecture / Tutorial / Practical hours.

**Self Learning Elective Courses:** A student can register one additional programme elective course or open elective course already existing in curriculum as a self-learning course in a semester.

The student can replace professional / open elective courses or/and earn additional credits through Knowledge / Skill Enhancement courses up to a maximum of 20% of the total credits.

If necessary, additional credits earned through Knowledge/Skill Enhancement courses can be withdrawn from CGPA calculation. The student has to submit an exemption request to Controller of Examinations with the approval of Head of the Department before the registration of end semester examination of the final semester of the programme. In any case, the additional credits withdrawn by the student will not be considered further.

**4.3.** The medium of instruction, examinations and project report shall be English.

#### 5. COURSE REGISTRATION

**5.1.** Through Programme Head, student can get information about academic program, eligibility, prerequisite and availability of courses that can be registered for the

particular semester by considering the academic background and career objectives of the student.

- **5.2.** Student shall register for a set of courses for the semester based on the advice of the Programme Head.
- **5.3.** All the students have to register for the courses of next semester before the commencement of End semester examination of previous semester.
- **5.4.** The student has the option of registering additional courses or dropping existing course. Total number of credits of such courses can not exceed six credits per semester.
- **5.5.** If a student finds that he/she has registered for additional courses than his/her capability to study in a semester, he/she can withdraw one or more of courses within 15 days of the commencement of the semester.
- **5.6.** The maximum number of students to be registered in each course shall depend upon the infrastructure available and the minimum number of students registered for the course shall be resolved by the Programme Head.
- **5.7.** If a student has failed in any course, he/ she has the option to re-register the particular course in the subsequent semesters, however If a student has failed in a professional elective or open elective, the student may register for the same or any other professional elective or open elective course in the subsequent semester.

#### 6. DURATION OF THE PROGRAMME

- **6.1.** The period of the M.E. Degree. Programme is minimum of 4 semesters and maximum of 6 semester, However in any case not more than 8 semesters.
- **6.2.** For the purpose of regulation, the academic year will be divided into two semesters, the winter semester normally spanning from June to November and the summer semester from December to May. The courses in the curriculum of the winter semester shall be conducted in winter semester only and that of the summer semester shall be conducted in summer semester only.
- **6.3.** Each semester shall normally consist of a minimum of 350 periods of 50 minutes each.
- **6.4.** The Head of the Institution/Principal may conduct additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods. But for the purpose of calculation of attendance requirement or writing the end semester examinations (as per clause 6) by the students 350 periods conducted within the specified academic schedule alone shall be taken into account and the overall percentage of attendance shall be calculated accordingly.

## 7. REQUIREMENTS FOR COMPLETION OF A SEMESTER

- **7.1.** A candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester and be permitted to appear for the examinations of that semester.
  - 7.1.1 Ideally every candidate is expected to attend all classes and secure 100% attendance. However, in order to allow for certain unavoidable reasons, a candidate is expected to have at least 75% attendance in each course he/she registered in the particular semester, except self-learning courses.
  - 7.1.2 A candidate who could not secure 75% attendance in each course (except self-learning courses) he/she registered in the current semester but has secured 65% and above due to medical reasons (hospitalization / accident / specific illness) or participation in extracurricular activities shall be permitted to appear for the current semester examinations with the approval of the Principal on payment of condonation fee fixed by the authorities from time to time. Medical / Participation certificate needs to be submitted along with the leave application.
  - 7.1.3 The conduct of the candidate is satisfactory.
- **7.2.** Candidates who do not complete the semester as per clause 7.1 shall not be permitted to appear for the examinations at the end of the semester and he/she has to register for the courses again.
- **7.3.** If a candidate fails to submit the report / dissertation on project work on or before the specified deadline, he/she is deemed to have failed in the Project Work / Dissertation and shall re-enroll the same in subsequent semester. This applies to both Phase-1 and Phase-2.
- **7.4.** Every candidate shall publish his/her project in conference/ journal and shall submit the certificate/journal paper copy at the time of project viva voce.

## 8. REQUIREMENTS FOR APPEARING FOR END SEMESTER EXAMINATIONS

A candidate shall normally be permitted to appear for the end semester examinations of the current semester if only,

- a) he/she satisfies the requirements prescribed above in clause 7.1 and
- b) he/she has paid the examination fees and has registered for the examinations for all the courses of the current semester and all the arrear courses, if any.

Registration is mandatory for the current semester examinations as well as for the arrear examinations, failing which the candidate will not be permitted to move on to the higher semester. A candidate, who has already appeared for any course in a semester and passed in the examination, is not entitled to reappear for the same course for improvement of grades/marks.

#### 9. PROVISION FOR WITHDRAWAL FROM END SEMESTER EXAMINATIONS

- **9.1.** A candidate may, for valid reasons, be granted permission to withdraw from appearing for the examination in any course or courses for only one semester examination during the entire duration of the degree programme. Application for withdrawal is permitted only once.
- **9.2.** Withdrawal application shall be valid only if the candidate is otherwise eligible to write the examination and should be submitted to the Head of the Institution prior to the last examination of that semester recommended by the PG Programme Head.
- **9.3.** Withdrawal shall not be treated as an attempt for the purpose of classification (vide clause 17).
- **9.4.** Withdrawal is permitted for the end semester examinations in the final semester, only if the period of study the student concerned does not exceed 3 years as per clause 17.1

#### 10. TEMPORARY BREAK OF STUDY FROM A PROGRAMME

- **10.1.** A Candidate is normally not permitted to temporarily break the study. However, if a candidate intends to temporarily discontinue the programme in the middle for valid reasons (such as accident or hospitalization due to prolonged ill health) and to rejoin the programme in a later semester, he/she shall apply in advance to the Head of the Institution, through the Head of the Department, stating the reasons thereof, in any case, not later than the last date for registering for that semester examination.
- **10.2.** Break of Study shall be granted only once for a maximum of one year during the entire period of study of the degree programme however, in extraordinary situation the candidate may apply for additional break of study not exceeding another one year by paying prescribed fee for break of study.
- **10.3.** The candidate permitted to rejoin the programme after break shall be governed by the rules and regulations in force at the time of rejoining.
- 10.4 The duration specified for passing all the courses, for the purpose of classification vide clause 17.1 and 17.2 shall be increased by the period of such break of study permitted.
- **10.5.** The total period of completion of the programme reckoned from the commencement of the semester to which the candidate was admitted shall not exceed the maximum period specified in clause 6 irrespective of the period of break of study in order to qualify for the award of the degree.
- **10.6.** If any candidate is detained for want of requisite attendance or due to disciplinary action, the period elapsed in that semester shall not be considered as permitted 'Break of Study'.

#### 11. SYSTEM OF EXAMINATION

- 11.1. Performance in each course of study shall be evaluated based on Continuous Internal Assessment throughout the semester and End Semester Examination at the end of the semester. However, knowledge /skill enhancement courses and mandatory courses shall be assessed based on continuous internal assessment only.
- 11.2. The end semester examination of each course, both theory and practical (including project work) shall be evaluated for a maximum of 100 marks.
  - 11.2.1. For all theory courses, the continuous internal assessment will carry 40 marks while the end semester examination will carry 60 marks. For all practical courses, the continuous internal assessment will carry 50 marks while the end semester examination will carry 50 marks.
  - 11.2.2. Every candidate shall be required to undertake suitable project work (individually) of Phase-1 and Phase-2 in an industrial/research organisation or in the department in consultation with the PG Programme Head. Also he/she shall be required to undergo three reviews in each of the relevant semesters, and present the progress of the project work. In case of project work at industrial/ research organization, the project work shall be jointly supervised by a faculty supervisor and an expert from the organization. The continuous internal assessment shall be evaluated for 50 marks for phase-1 and Phase-2. The project report and final viva voce shall be evaluated for 50 marks for phase-1 and phase-2.
- **11.3.** The end semester examination (theory and practical) of 3 hours duration shall normally be conducted between October and December during the winter semesters and between April and June during the summer semesters.
- **11.4.** The project work phase I, Phase II, shall be evaluated based on the project report submitted by the candidate and Viva-voce examination conducted by a committee consisting of an external examiner, internal examiner and the supervisor of the candidate.
  - **11.4.1.** The Project Report shall be evaluated for 20 marks and the final Viva Voce marks shall be evaluated for 30 marks for phase 1 and phase 2.
- 11.5. Students are prohibited from entering into the examination hall / laboratories with any book or any portion of books, manuscript, or paper of any description or communicating with or copying from each other or communicating with anyone outside the examination hall / laboratories. Programmable calculator, Cell phones and other electronic gadgets shall not be permitted inside the examination hall / laboratories. However any required codebooks and data sheets / books, if necessary, may be permitted inside the examination hall / laboratories with the approval of the Chief Superintendent / Examiners. The students are warned that any form of malpractice will be dealt severely. The disciplinary action will be taken by the college authorities after conducting an enquiry. The punishment may even

be cancelling all the end semester examinations written by the student in the particular semester and debarring permanently from all the end semester examinations in the particular semester.

- 11.6. The hall ticket must be produced by all the students at the time of writing the examination. If a student fails to produce the hall ticket on any grounds, he/she should get a duplicate Hall ticket from the Controller of Examinations office through the Chief Superintendent / Examiner by paying the duplicate hall ticket fee.
- 11.7. Examiners for setting end semester examination question papers for theory courses, evaluating end semester examination answer scripts, conducting practical examinations and evaluating project works shall be appointed by the Controller of Examinations after obtaining approval from the Chairperson, Academic Council of the College.

# 12. PROCEDURE FOR AWARDING MARKS FOR CONTINUOUS INTERNAL ASSESMENT

#### 12.1. THEORY COURSES

For all the theory courses the continuous internal assessment shall be for a maximum of 40 marks (consisting of 25 marks for 2 tests, 5 marks for assignment and 10 marks for technical seminar). Minimum of two tests shall be conducted and the average of 2 tests marks will be considered for 25 marks of CIA. All marks put together (maximum 40) should be rounded off to the nearest integer

TABLE II - THE APPORTIONMENT OF CONTINUOUS ASSESSMENT MARKS FOR THEORY COURSES

S.No.	Components	Max. Marks
1	Tests	25
2	Assignments	5
3	Technical Seminar	10
TOTAL		40

- 12.1.1. In order to motivate the students, as per the guidelines of UGC, various components of internal assessment may be adopted such as group discussion, quiz and online tests etc. In line with the UGC guidelines, the Internal Assessment Suggestion Committee (vide clause 19) can recommend alternate continuous internal assessment system to the Head of the Institution. The alternate continuous internal assessment system should contain at least 2 tests.
- **12.1.2.** If any course requires alternate internal assessment system, the faculty member, who is handling the course, should submit a request to the Dean Academics through the PG Programme Head for the alternate continuous internal evaluation system, within two days of the commencement of classes in a particular semester. The head of Institution shall convene the Internal Assessment Suggestion Committee and the

Committee shall scrutinize the request and recommend suitable alternate continuous internal assessment system for approval by the Head of the Institution.

#### 12.2. PRACTICAL COURSES

- **12.2.1.** For all practical courses the continuous assessment shall be for a maximum of 50 marks which includes 20 marks for the Record (conduct of experiments, observation and result in regular class work), 10 marks for viva in regular class work and 20 marks for model examination. All marks put together (maximum 50) should be rounded off to the nearest integer.
- **12.2.2.** In line with the UGC guidelines, the Internal Assessment Suggestion Committee (vide clause 19) can recommend alternate continuous internal assessment system to the Head of the Institution. The alternate continuous internal assessment system (vide clause 12.1.2) shall be incorporated after the approval of the Head of the Institution.

#### 12.3. PROJECT WORK / R&D PROJECT

**12.3.1.** The PG programme Head shall constitute review committees for project work for phase-1, and phase-2. There shall be three reviews during the semester by the review committee. The candidate shall make a presentation on the progress made by him / her before the committee. The apportionment of continuous assessment marks for the project work (phase I & phase II) and R&D project is as follows.

TABLE III - ASSESSMENT APPORTIONMENT FOR PROJECT WORK

Internal			External				Total
Review Review Review			End Semo				
I	II	III	Thesis Submission	Viva-Voce (30)			
_				Internal	External	Supervisor	100
50			20	10	10	10	Marks

- **12.3.2.** A candidate may be permitted to work on the project in an Industrial/Research Organization, on the recommendations of PG Programme Head, with the approval of the Head of the Institution, if necessary. These candidates will have to produce a certificate of authorization from the Industry / Research Organization where the Project is done.
- **12.3.3.** R&D Project review committee consisting of the R&D Supervisor and a senior faculty member, nominated by the Head of the Institution, in the related field of the project. There shall be three assessments during the period of the project. At the end of the project period, the marks shall be awarded by the same committee for the report and the viva-voce.

# 12.4. KNOWLEDGE/ SKILL ENHANCEMENT COURSE / MANDATORY COURSE / AUDIT COURSE

All Knowledge/ Skill Enhancement Course / Mandatory Course / Audit Course shall have Internal assessment only. The committee constituted by the PG Programme Head / Head of the Institution shall suggest suitable assessment procedure.

#### 12.5. ATTENDANCE AND CONTINUOUS ASSESSMENT RECORD

Every teacher is required to maintain an Attendance and Continuous Assessment Record which consist of attendance marked for each lecture or practical or project work classes, the tests & assignment marks and record of class work (topics covered) separately for each course. This should be submitted to the PG Programme Head concerned at the end of every month for checking the syllabus coverage and the record of test marks and attendance. The PG Programme Head will put his/her signature and date after due verification. At the end of the semester, the PG Programme Head should verify the register and keep this document in his/her safe custody for five years. The register will have to be produced for scrutiny by the Head of the Institution or any inspecting authority whenever called for. The faculty handling courses for a particular programme from other departments (e.g. Mathematics) shall submit the records to the HOD of the faculty concerned.

A candidate may be permitted to work on the project in an Industrial/Research Organization, on the recommendations of PG Programme Head, with the approval of the Head of the Institution, if necessary. These candidates will have to produce a certificate of authorization from the Industry / Research Organization where the Project is done.

R&D Project review committee consisting of the R&D Supervisor and a senior faculty member, nominated by the Head of the Institution, in the related field of the project. There shall be three assessments during the period of the project. At the end of the project period, the marks shall be awarded by the same committee for the report and the viva-voce.

## 13. PASSING REQUIREMENTS

- **13.1.** A candidate who secures not less than 50% of total marks (continuous internal assessment + end semester examination) prescribed for the courses with a minimum of 50% of the marks prescribed for the end semester examination in both theory and practical courses (including project work), shall be declared to have passed the examination.
- **13.2.** If a candidate fails to secure a pass in a particular course in end semester examination, it is mandatory that he/she shall register and reappear for the end semester examination in that course during the next semester when examination is conducted in that course; he/she should continue to register the course as well as examination and reappear for the examination till he/she secures a pass, subjected to the stipulated period (vide clause 6.1).

**13.3.** The internal assessment marks obtained by the candidate in the first appearance shall be retained and considered valid for all subsequent attempts till the candidate secures a pass.

#### 14. REVALUATION

- **14.1.** A candidate can apply for direct revaluation or revaluation with photocopy of his/her end semester examination answer paper in a theory course, within a week from the declaration of results on payment of the prescribed fee.
- **14.2.** Direct Revaluation application form must be submitted to the Controller of Examinations through the PG programme Head. The Controller of Examinations will arrange for the revaluation and the results will be intimated to the candidate concerned.
- **14.3.** A candidate shall apply for the Photocopy of his/her end semester examination answer script on payment of the prescribed fee and apply for revaluation through Revaluation with Photocopy application form to the Controller of Examinations within a week after the photocopy of the answer script is received.
- **14.4.** A candidate can apply for direct revaluation/revaluation with photocopy of answer scripts for not exceeding 5 subjects in a semester at a time. Revaluation is not permitted for practical courses and for project work.
- **14.5. Review:** Candidates not satisfied with Revaluation can apply for Review of his/her Examination answer paper in a theory course, within the prescribed date on payment of a prescribed fee with proper application to Controller of examination through the Head of the Institution. Candidates applying for Revaluation only are eligible to apply for Review.

#### 15. AWARD OF GRADES

**15.1.** All assessments of a course will be done on absolute mark basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain number of points, will be awarded as per the range of marks obtained by the candidate in each course as detailed below:

TABLE IV - LETTER GRADING

Letter Grade	<b>Grade Points</b>	Marks Range
O (Outstanding)	10	91 - 100
A+ (Excellent)	9	81 - 90
A (Very Good)	7	71 - 80
B+ (Good)	8	60 - 70
B (Above average)	6	50 - 59
RA (Reappearance Registration)	0	<50
SA (Shortage of Attendance)	0	
AB (Absent)	0	

'RA' denotes Reappearance registration is required for that particular course, 'SA' denotes Shortage of Attendance (as per clause 7) and hence prevented from writing the end semester examination.

The Grade point average (GPA) for each semester is calculated using the formula

$$\mathbf{GPA} = \frac{\sum_{i=1}^{N} CiGPi^{n}}{\sum_{i=1}^{n} Ci}$$

The Cumulative Grade Point Average (CGPA) is calculated from the first semester to final semester using the formula

$$\mathbf{GPA} = \frac{\sum_{i=1}^{N} \operatorname{CiGPi}^{N}}{\sum_{i=1}^{N} \operatorname{Ci}}$$

 $C_i$  - is the Credits assigned to the course GPi - is the point corresponding to the grade obtained for each Course

 ${\bf n}$  - is number of all Courses successfully completed during the particular semester in case of GPA

N- is number of all courses successfully completed during all the semesters in case of CGPA

"U", "I", "AB" and "W" grades will be excluded for calculating GPA and CGPA.

The GPA and CGPA are computed only for the candidates with a pass in all the courses.

The GPA and CGPA indicate the academic performance of a candidate at the end of a semester and at the end of successive semesters respectively.

The formula for the conversion of CGPA to equivalent percentage of marks shall be as follows:

Equivalent Percentage of Marks = CGPA X 10

A grade sheet for each semester shall be issued containing Grade obtained in each course, GPA and CGPA

#### 15.2. GRADE SHEET

A grade sheet for each semester will contain the following information after the publication of the results.

- 1. The credits registered and earned
- 2. Grade obtained in each course
- 3. Grade Point Average of the semester and Cumulative Grade Point Average earned up to the semester
- 4. Month and year of appearance
- 5. Procedure for calculation of GPA and CGPA

## 16. ELIGIBILITY FOR THE AWARD OF DEGREE

A candidate shall be declared to be eligible for the award of the Degree if he/she has

- Successfully completed the course requirements and passed all the prescribed courses in the Curriculum corresponding to his/her Programme within the stipulated time (vide clause 6.1).
- No disciplinary action is pending against him/her.
- Successfully completed the field visit / industrial training, if any, as prescribed in the curriculum.
- Successfully completed any additional courses prescribed by the Dean-Academics, whenever any candidate is readmitted.
- The award of the Degree shall be approved by the syndicate of the University.

## 17. CLASSIFICATION OF THE DEGREE AWARDED

- 17.1. A candidate who qualifies for the award of the Degree (vide clause 16) after having passed the examination in all the courses as per the requirement of the curriculum in his/her first appearance within three years securing a CGPA of not less than 8.5 shall be declared to have passed the examination in First Class with Distinction. For this purpose, the withdrawal from examination (vide clause 9) will not be construed as an appearance. Further, the authorized break of study (vide clause 10) is permitted in addition to two years for award of First Class with Distinction.
- 17.2 A candidate who qualifies for the award of the Degree (vide clause 16) having passed the examination in all the courses the requirement of the curriculum within two to three years, securing a CGPA of not less than 7 shall be declared to have passed the examination in First Class. For this purpose, the withdrawal from examination (vide clause 9) will not be construed as an appearance. Further, the authorized break of study (vide clause 10) is permitted in addition to four years (three years in the case of lateral entry) for award of First Class.
- 17.3 All other candidates (not covered in clauses 16.1 and 16.2) who qualify for the award of the degree (vide Clause 15) shall be declared to have passed the examination in Second Class.

**17.4.** A candidate who is absent in the end semester examination in a course / project work after having enrolled for the same shall be considered to have appeared in that examination for the purpose of classification.

#### 18. FACULTY ADVISOR / MENTOR

To help the students in planning their courses of study and for general advice on the academic Programme, the PG Programme Head will attach a certain number of students to a teacher of the Department who shall function as Faculty Advisor for those students throughout their period of study. Such Faculty Advisor shall advise the students and monitor the courses undergone by the students, check the attendance and progress of the students attached to him/her and counsel them periodically. If necessary, the faculty advisor may also discuss with or inform the parents about the progress of the students.

## 19. INTERNAL ASSESSMENT SUGGESTION COMMITTEE

The Internal Assessment Suggestion Committee for PG COURSES shall consist of the HODs of PG Courses and HOD of Mathematics as members of the Committee and the Dean Academics as the Convenor.

- **19.1.** Dean Academics may invite any number of faculty members from the college who are expert in the particular subject(s) as special invitees to the committee.
- **19.2.** The committee shall suggest alternate continuous internal assessment system for the particular course(s) for which request has been made.
- **19.3.** The committee shall scrutinize and recommend suitable alternate continuous internal assessment system within a week to the Head of the Institution for ratification.
- 19.4. The Head of the Institution shall carefully examine the recommendation of the Committee and ratify the recommendation before the commencement of the first Class Committee Meeting (vide clause 20). The Head of the Institution may approve or reject the alternate continuous internal assessment system and the approval is up to the discretion of the Head of the Institution.
- **19.5.** The alternate continuous internal assessment system shall be incorporated after the approval of the Head of the Institution.

#### 20. CLASS COMMITTEE

A Class Committee consists of teachers of the concerned class, student representatives and a Chairperson who is not teaching the class. It is like the 'Quality Circle' with the overall goal of improving the teaching-learning process. The functions of the class committee include

- Solving problems experienced by students in the class room and in the laboratories
- Clarifying the regulations of the programme and the details of rules therein

- Informing the student representatives about the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
- Informing the student representatives about the details of regulations regarding the weightage used for each assessment. In the case of practical courses (laboratory / project work / seminar etc.) the breakup of marks for each experiment/ exercise/ module of work, should be clearly discussed in the class committee meeting and informed to the students.
- **20.1.** The class committee for a class under a particular programme is normally constituted by the PG Programme Head. However, if the students of different programmes are mixed in a class, the class committee is to be constituted by the Head of the Institution.
- **20.2.** The class committee shall be constituted on the first working day of any semester or earlier.
- **20.3.** At least 2 student representatives shall be included in the class committee.
- **20.4.** The Chairperson of the class committee may invite the Faculty advisor(s) and the Head of the department to the meeting of the class committee.
- **20.5.** The Head of the Institution may participate in any class committee of the institution.
- **20.6.** The Chairperson is required to prepare the minutes of every meeting, submit the same to the Head of the Department within two days of the meeting and arrange to circulate among the concerned students and teachers. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the management through the Head of the Institution.
- **20.7.** The Head of the Institution may participate in any class committee of the institution. the The first meeting of the class committee shall be held within two weeks from the date of commencement of the semester in order to inform the students about the nature and weightage of assessments within the framework of the Academic Regulations. Two or three subsequent meetings may be held at suitable intervals. During these meetings the student members, representing the entire class, shall meaningfully interact and express the opinions and suggestions of the class students to improve the effectiveness of the teaching-learning process.
  - Identifying the weak students, if any and requesting the teachers concerned to provide some additional help or guidance or coaching to such weak students.

#### 21. DISCIPLINE

Every student is required to be disciplined and behave with propriety both inside and outside the Institution and not indulge in any activity which will bring down the prestige

of the Institution. The Head of the Institution shall constitute a disciplinary committee to enquire into acts of indiscipline and disciplinary action will be taken based on the recommendations of the committee. If a student indulges in malpractice in any of the end semester / internal examination he / she shall be liable for punitive action as prescribed by the Institution (from time to time). The disciplinary action is subject to review by the Head of the Institution, in case the student represents the case to the Head of the Institution.

## 22. REVISION OF REGULATIONS AND CURRICULUM

The Academic Council of the College reserves the right to revise or change or amend the regulations, the scheme of examinations, the curriculum and the syllabi from time to time if found necessary.

Any condition which has not been covered in the above regulations may be referred in the Academic Council for a decision.

## 23. SPECIAL CASES

In the event of any clarification in the interpretation of the above rules and regulations, they shall be referred to the Standing Committee. The members of Standing committee shall be nominated by the Chairperson of the Academic Council. The Standing Committee will offer suitable interpretations/ clarifications /amendments required for special cases on such references and get them ratified in the next meeting of the Academic Council. The decision of the Academic Council will be final.

TABLE V – MINIMUM TOTAL CREDITS FOR M.E DEGREE PROGRAMMES

S.No.	Name of the Programme	<b>Minimum Total Credits</b>
1	M.E CAD/CAM	70
2	M.E. Computer Science and Engineering	70
3	M.E Communication Systems Engineering	70
4	M.E. Power Electronics and Drives	70
5	M.E Structural Engineering	70

<sup>\*</sup> Minimum Total Credits to be earned by the student admitted to the particular PG Programme to become eligible for the award of Degree as per Clause 15 of Regulations 2019 (PG).