SASTRA UNIVERSITY
(A University under section 3 of the UGC Act, 1956)
TIRUMALAI SAMUDRAM,
THANJAVUR – 613 401, INDIA

B.Tech. / M.Tech. (Integrated)
Degree Programmes

Rules & Regulations
RULES & REGULATIONS FOR B.Tech. & M.Tech. (Integrated)
DEGREE PROGRAMMES

(For students admitted in 2015-16 and afterwards)

1. DEFINITIONS

In these rules and regulations unless the context otherwise requires:

1.1 ‘Programme’ means B. Tech. & M. Tech. (Integrated) degree programme

1.2 ‘Course’ means theory and/or practical subjects that are normally studied in a semester, like Mathematics, Engineering Mechanics, Electrical Machines, C Programming Lab, etc.

2. ELIGIBILITY FOR ADMISSION

2.1 Candidates for admission to the first semester of B.Tech. / M.Tech. (Integrated) degree programmes should have passed the final examination of +2 Higher Secondary Course in the academic stream (with Mathematics, Physics and Chemistry as subjects of study) or vocational stream (with Mathematics as one of the subjects of study) conducted by the Board of Secondary Education, Government of Tamil Nadu or an Examination of any other authority accepted by the Board of Management of SASTRA as equivalent thereto. They shall also satisfy the conditions regarding the minimum marks, age and physical fitness as may be prescribed by the Board of Management of SASTRA from time to time.

2.2 Candidates who have passed the Diploma in Engineering and Technology Examinations conducted by the State Board of Technical Education of Govt. of Tamil Nadu or an examination of any other authority recognised by the Board of Management of SASTRA as equivalent thereto, are eligible to join the third semester (II year) of B.Tech. programme under Lateral Entry Scheme. They also shall satisfy the conditions regarding the minimum marks, age and physical fitness as may be prescribed by the Board of Management of SASTRA from time to time.

2.3 Candidates who have passed the B.Sc. Degree Examinations conducted by the Universities in Tamil Nadu or an examination of any other authority recognised by the Board of Management of SASTRA as equivalent thereto, are also eligible to join the third semester (II year) of B.Tech. programme under Lateral Entry Scheme. They also shall satisfy the conditions regarding the minimum marks, age and physical fitness as may be prescribed by the Board of Management of SASTRA from time to time.

3. DURATION OF THE PROGRAMME

3.1 The undergraduate programme leading to the Degree of Bachelor of Technology shall extend over a period of 8 semesters (4 academic years)

3.2 The integrated programme leading to the degree of Master of Technology shall extend over a period of 10 semesters (5 academic years)
3.3 Each semester shall normally consist of 18 weeks (90 working days) of course work, which consists of theory, laboratory and tutorial classes.

3.4 For those admitted under Lateral Entry Schemes the duration of the undergraduate B.Tech. degree programme shall be six semesters (i.e) 3\textsuperscript{rd} to 8\textsuperscript{th} semester of the regular programme.

3.5 A student admitted to B.Tech. programme is eligible to get B.Tech. (Hons.) degree, subject to the conditions specified in para 10.4 of this regulation.

4. BRANCHES OF STUDY

4.1 SASTRA offers the following B.Tech. / M.Tech. (Integrated) degree programmes:

i. B. Tech. Aerospace Engineering
ii. B.Tech. Bioengineering
iii. B.Tech. Bioinformatics
iv. B.Tech. Chemical Engineering
v. B.Tech. Civil Engineering
vi. B.Tech. Computer Science & Engineering
viii. B.Tech. Electrical & Electronics Engineering
ix. B.Tech. Electronics & Instrumentation Engineering
x. B. Tech. Industrial Biotechnology
xi. B.Tech. Information & Communication Technology
xii. B.Tech. Information Technology
xiii. B. Tech. Mechanical Engineering
xiv. B.Tech. Mechatronics
xv. M.Tech. Advanced Manufacturing (5-year integrated)
xvi. M.Tech. Automobile Engineering (5-year integrated)
xvii. M. Tech. Bioinformatics (5-year integrated)
xviii. M. Tech. Chemical Engineering (5-year integrated)
xx. M.Tech. Construction Engineering & Management (5-year integrated)
xxi. M.Tech. Industrial Biotechnology (5-year integrated)
xxii. M.Tech. Instrumentation & Control (5-year integrated)
xxiii. M.Tech. Medical Nanotechnology (5-year integrated)
xxv. M.Tech. Structural Engineering (5-year integrated)

4.2 The courses of study and credits for each of the semesters of the various B.Tech./M.Tech. (Integrated) degree programmes are given in the relevant syllabus books.
5. **CREDIT SYSTEM**

5.1 To be eligible to receive a B.Tech. / M.Tech. (Integrated) degree a student should have successfully completed a minimum of 207 and 243 credits respectively.

5.2 Each course, has a certain number of credits assigned to it depending upon its lecture, tutorial and laboratory contact periods in a week.

5.3 There are mainly two types of courses that a student has to undergo – lecture courses and practical courses. The practical courses shall include laboratories, workshops and drawing classes. Every course has been assigned a certain number of credits according to the following pattern:

5.3.1 1 credit for each lecture hour / week

5.3.2 1 credit for each tutorial hour / week

5.3.3 1 credit for each practical / drawing session of 2 hours / week

5.3.4 9 credits for B. Tech. project work

5.3.5 12 credits for M. Tech. (Integrated) project work

5.4 Credits for mini project work, seminar and field visits are separately given for the various B.Tech. / M. Tech. (Integrated) degree programmes in the syllabus books.

5.5 The courses offered for the various B.Tech. / M.Tech. (Integrated) degree programmes are categorised as follows:

5.5.1 Core courses are compulsory courses identified by each Department, which give a broad base in the main field of study in the academic programme concerned and the number of credits can vary from 98 to 102.

5.5.2 Dissertation, project and design courses where special emphasis is laid on the application of knowledge to real time problems.

5.5.3 Departmental elective courses offered by the concerned Department for a minimum of 24 credits.

5.5.4 Open elective courses offered by the University for 12 credits.

5.5.5 The number of core courses, Departmental electives and open elective courses are given in the syllabus books of the B.Tech. / M.Tech. (Integrated) Degree programmes.

5.5.6 Students in the B. Tech. programme students have an option of completing their course work requirements by the 7th semester through the Accelerated Course Registration System (ACRS) and devote the eighth semester to do project work in R&D centres or industries in India or in premier institutions abroad. ACRS is meant for high and consistent performers who maintain a minimum CGPA and SGPA of 7.5. Students with history of F or E grades are not eligible.
5.5.7 Students’ at the end of the 5th semester with the minimum CGPA of 7.5, may be permitted to register for courses outside the University in-lieu of the Department Electives with the prior permission of the Dean and the Vice-Chancellor. However, such courses shall be restricted to a maximum of two.

5.5.8 Students’ engaged in research shall be allowed to register for Research Credit in-lieu of one Department Electives with the prior permission of the Research Supervisor, Dean and the Vice-Chancellor. The evaluation for Research Credits shall be done by a panel of faculty appointed by the Dean, Examinations.

5.5.9 A student registered for the B. Tech. / M Tech. (Integrated) programme shall engage in a minimum of 45 hours of community service during the period of study and this shall be non-credited.

6. COMPLETION OF DEGREE PROGRAMMES

6.1 A student earns credits by passing courses every semester. A student, who has registered for B.Tech. degree programme, has to earn 207 credits to be eligible for the award of the degree.

6.2 A student, who has registered for M.Tech.(Integrated) degree programme, has to earn 243 credits to be eligible for the award of the degree.

6.3 The courses will be offered in semester pattern right from the first year. For each course that the student is undergoing during a semester, there is a Continuous Internal Assessment (CIA) mark, for a maximum of 50 marks, based on the student’s performance in the three monthly tests, seminar, quiz, assignment, etc. There will be one examination of 3 hours duration at the end of the semester for each credited course. End-semester examination of laboratory courses will be of 3 hours duration and will be conducted immediately after completion of the course work.

6.4 A letter grade, corresponding to the marks secured by the student is awarded for each course for which a student has registered. On obtaining a pass grade, the student accumulates the course credits as earned credits. A student’s performance is measured by the number of credits that the student has earned and the weighted grade point average.

6.5 A student admitted, as per rule 2.1 should complete the B. Tech. Programme within a period of seven years from the date of admission.

6.6 A student admitted, as per rule 2.1 should complete the M. Tech. (Integrated) Programme within a period of eight years from the date of admission.

6.7 A student admitted, as per rule 2.2 or 2.3 should complete the B. Tech. programme within a period of six years from the date of admission.
7. ACADEMIC SCHEDULE

7.1 Normally odd semester classes will be conducted from July to November of the year. The regular examinations for odd semester courses will be conducted during November–December of the year. Similarly, even semester classes will be conducted during December–April. The regular examinations for even semester courses will be conducted during May–June of the year. The supplementary (arrear) examinations for both even and odd semester courses also will be conducted respectively during December & June of the year immediately after the regular examinations. Students have to register for the regular as well as all the standing arrear subjects in both the end semester examinations.

7.2 The summer term special examination (to be conducted after the even semester May examinations results are announced) during June is restricted to the 8th semester subjects for B.Tech.

8. REQUIREMENTS FOR SUCCESSFUL COMPLETION OF A COURSE & EARNING CREDIT

8.1 Students must attend every lecture, tutorial and laboratory class. However, in order to provide for sickness and such other contingencies, a minimum attendance percentage has been prescribed for each course. Percentage of attendance of a student in a course will be the number of periods attended in that course divided by the number of periods actually conducted from the date of his/her admission and multiplied by 100. A student can appear for an end-semester examination for a particular course only when he/she has put-in a minimum attendance of 80% in that course during a semester.

8.2 A student should necessarily register for the end-semester examinations in all the regular and applicable arrear courses.

8.3 A student who has an attendance between 75 and 80% will be allowed to write the end semester examination provided he pays the condonation fees as prescribed by the University from time-to-time. A student shall be allowed to pay condonation fees only twice during the entire duration of his/her study in the University.

8.4 A student who has an attendance less than 75% in a course during odd/even semester, will not be allowed to appear for the immediate odd/even semester examination in that course. In such a case, the candidate should repeat that course during the next odd/even semester thereby losing one year.

8.5 There is no provision for a student to improve his/her attendance during the same semester.

8.6 Out of a total of 100 marks allotted for each course 50 marks are allotted for continuous internal assessment and 50 marks for the end semester examination.
The break-up for continuous internal assessment marks for any course is as follows:

<table>
<thead>
<tr>
<th><strong>Theory Course</strong></th>
<th><strong>Weightage</strong></th>
<th><strong>Practical Course</strong></th>
<th><strong>Weightage</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>First, Second &amp; Third test (Best two out of three tests will be considered)</td>
<td>40%</td>
<td>Pre-Lab work</td>
<td>10%</td>
</tr>
<tr>
<td>Assignment, Seminar, Quiz, etc.</td>
<td>10%</td>
<td>Experimental work &amp; observations</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Viva-Voce</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50%</strong></td>
<td><strong>Total</strong></td>
<td><strong>50%</strong></td>
</tr>
</tbody>
</table>

A candidate is declared to have passed in a course if he/she secures a minimum aggregate of 50% in the continuous internal assessment marks and the end-semester examination marks put together.

A candidate can be debarred from writing the examinations of a semester for unsatisfactory conduct.

**EVALUATION OF THE ACADEMIC PERFORMANCE & PROMOTION**

Course-wise grades are awarded to the students by adopting the following scheme, based on the aggregate marks scored by the student in the course (which includes internal assessment marks and end-semester examination marks):

<table>
<thead>
<tr>
<th><strong>RANGE</strong></th>
<th><strong>LETTER GRADE</strong></th>
<th><strong>GRADE POINT</strong></th>
<th><strong>DESCRIPTION OF PERFORMANCE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>≥91%</td>
<td>S</td>
<td>10</td>
<td>Outstanding</td>
</tr>
<tr>
<td>≥86% and ≤ 90%</td>
<td>A+</td>
<td>9</td>
<td>Excellent</td>
</tr>
<tr>
<td>≥75% and ≤ 85%</td>
<td>A</td>
<td>8</td>
<td>Very Good</td>
</tr>
<tr>
<td>≥66% and ≤ 74%</td>
<td>B</td>
<td>7</td>
<td>Good</td>
</tr>
<tr>
<td>≥55% and ≤ 65%</td>
<td>C</td>
<td>6</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>≥50% and ≤ 54%</td>
<td>D</td>
<td>5</td>
<td>Pass</td>
</tr>
<tr>
<td>&lt; 50%</td>
<td>F</td>
<td>2</td>
<td>Fail</td>
</tr>
</tbody>
</table>

‘R’ grade is given to a student in a course if he/she has put-in less than 75% of attendance during odd/even semester in that particular course. A student with ‘R’ grade cannot register for higher semester courses and will have to repeat that course with ‘R’ grade during the next odd/even semester thereby losing one year.

A candidate who does not pass a course in the odd/even semester examination should register and take up the subsequent supplementary odd/even semester examination in that course and pass the same.

Some students due to extraneous reasons score less marks in Continuous Internal Assessment (CIA) resulting in failing in the course. There is no provision for a student to improve his/her continuous internal assessment marks. For such candidates who
appears in the subsequent supplementary exams, the following formula will apply:

\[ M = (I+E) \text{ or } 2E, \]  

where \( I \) = CIA marks of the student; \( M \) = Total marks of the students and \( E \) = Marks scored by the student in the end semester supplementary examination.

9.5 The average performance of a student in a particular semester is expressed as Semester Grade Point Average (SGPA). It is calculated for each semester as follows:

Let \( 'C_i' \) be the credit assigned to the \( i^{th} \) course,

Let \( 'P_i' \) be the grade point secured in the \( i^{th} \) course,

Let \( 'n' \) be the number of courses for which the student has registered for the examinations,

\[
S = \frac{\sum_{i=1}^{n} C_i P_i}{\sum_{i=1}^{n} C_i} = \frac{C_1 P_1 + C_2 P_2 + \ldots + C_n P_n}{C_1 + C_2 + \ldots + C_n}
\]

9.6 **Calculation of Cumulative Grade Point Average (CGPA)**

CGPA is calculated from SGPA of the current and previous semesters. Hence, it is an indicator of the performance of a student over the period of study. CGPA is calculated as follows:

Let \( '(SGPA)_i' \) be the SGPA of a student in \( i^{th} \) semester,

Let \( 'N_i' \) be the number of credits taken by the student in \( i^{th} \) semester,

Let \( 'k' \) be the number of semesters that a student has undergone,

\[
C = \frac{\sum_{i=1}^{k} (S_i N_i)}{\sum_{i=1}^{k} N_i} = \frac{S_1 N_1 + S_2 N_2 + \ldots + S_k N_k}{N_1 + N_2 + \ldots + N_k}
\]

10. **CLASSIFICATION OF RESULT**

10.1 Students admitted to the B. Tech. programme, securing a CGPA of 7.5 and above shall be deemed to have passed in first class with distinction provided all the courses are passed in the first attempt in the end semester examinations within the stipulated 8 semesters.

10.2 Students admitted to the M.Tech. (Integrated) programme, securing a CGPA of 7.5 and above shall be deemed to have passed in first class with distinction provided all the courses are passed in the first attempt in the end semester examinations within the stipulated 10 semesters.

10.3 Students admitted to the B.Tech. programme, who have passed all the courses securing a CGPA of 6.0 and above will be declared to have passed in first class provided all the courses are passed within the stipulated 8 semesters or 6 semesters for lateral entry students.

10.4 Students admitted to the M.Tech. (Integrated) programme, who have passed all the
courses securing a CGPA of 6.0 and above will be declared to have passed in first class provided all the courses are passed within the stipulated 10 semesters

10.5 All other students who have passed all the courses securing a CGPA of 5.0 and above will be declared to have passed in second class.

10.6 A student admitted to the B. Tech. programme is eligible to be declared to have passed with Honours provided he / she satisfies the following conditions:

10.6.1 The student should study on his/her own four additional theory courses offered for the programme as elective or from any other B.Tech. programmes of SASTRA, approved by the Head of the Department and included in the list of honours courses declared by the University for the respective semester.

10.6.2 The student should register for the end semester examinations in these four courses and obtain ‘D’ grade or higher grade in the first attempt itself within the stipulated 8 semesters.

10.6.3 The student should have obtained a minimum CGPA of 7.5 at the end of the IV semester examinations and should enrol for the honours programme within the stipulated period from the start of V semester classes.

10.6.4 The student should choose one honours course in each of the V, VI, VII & VIII semesters from the list of honours courses declared by the University for the respective semester and branches.

11. SAVING CLAUSE / AUTHORITY
The Academic Council reserves the right to alter or amend or repeal or annul any or all of the rules and regulations.