

**PSG College of Technology,
Coimbatore**

B.Sc Computer Systems & Design

Regulation 2021

PSG COLLEGE OF TECHNOLOGY, COIMBATORE - 641 004
(Autonomous college affiliated to Anna University, Chennai)

2021 REGULATIONS OF BSc DEGREE PROGRAMMES

(for the batches of students admitted in 2021 - 2022 and subsequently under 2021 regulations under Choice Based Credit System)

NOTE: The regulations hereunder are subject to amendments as may be made by the Academic Council of the College from time to time. Any or all such amendments will be effective from such date and to such batches of students (including those already in the middle of the programme) as may be decided by the Academic Council.

1.(a) PRELIMINARY DEFINITIONS AND NOMENCLATURE

In the following Regulations, unless the context otherwise requires

- (i) **“Programme”** means Degree Programme that is **BSc Degree Programme**.
- (ii) **“Branch”** means specialization or discipline of BSc Degree Programme, like Applied Science and Computer Systems and Design.
- (iii) **“Course”** means a theory or laboratory course that is normally studied in a semester, like Mathematics, Physics, etc.
- (iv) **“University”** means **Anna University, Chennai**.

(b) CONDITIONS FOR ADMISSION

Students for admission to the first semester of the programme leading to the degree of Bachelor of Science (BSc) shall be required to satisfy the conditions of admission thereto prescribed by the University and Government of Tamil Nadu from time to time.

2. DURATION OF THE PROGRAMME

- (i) **Minimum duration:** The programme leading to the Degree of Bachelor of Science (BSc) of the University will extend over a period of 3 academic years i.e., 6 semesters with 2 semesters per academic year. Each semester shall normally consist of 90 working days including examination days.
- (ii) **Maximum duration:** The student shall complete all the passing requirements of the BSc degree programme within a maximum period of 6 years/12 semesters; these periods being reckoned from the commencement of the semester to which the student was first admitted to the programme.

3. BSc DEGREE PROGRAMMES OFFERED

The various BSc degree programmes offered are as listed below:

BSc Applied Science	BSc
Computer Systems and Design	

4. STRUCTURE OF PROGRAMMES

- (i) The course work of the odd semesters will normally be conducted only in odd semesters and that of the even semesters only in even semesters.
- (ii) **Curriculum:** The curriculum will comprise courses of study as given in section 13 infra in accordance with the prescribed syllabi. The hours / week listed in section 13 infra for each of the course refer to periods/week.
- (iii) **Electives:** Every student will be required to opt for electives from the list of electives relating to his/her branch of study as given in section 13 infra, in consultation with the Tutor, the Programme Co-ordinator and the HoD.

In the case of BSc Applied Science branch, a student has to opt for a total of seven electives in three categories (viz: Professional electives: 4, Skill Enhancement Courses: 2 and Open elective: 1) and professional electives and Skill Enhancement Courses chosen by a student shall be from the same cluster of specialization.

Minimum number of credits to be earned for courses under the Open Elective category is 3. Minimum number of credits to be earned for courses under the Professional Electives category is 12.

In the case of BSc Computer Systems and Design, a student has to opt for a total of three Professional electives and one Open elective.

In BSc Computer Systems and Design Degree Programme, minimum number of credits to be earned for courses under the Open Elective category is 4 and minimum number of credits to be earned for courses under the Professional Electives category is 12.

- (iv) **Laboratory courses:** Every laboratory course shall be evaluated based on conduct of experiments/exercises/mini-projects/development of software packages and reports submitted.
- (v) **Project Work:** Every student shall undertake a suitable Project in industry/research organization/department in consultation with the HoD and the faculty guide. In case of Project Work at industrial/research organization, the same shall be jointly supervised by a faculty guide and an expert from the organization.
- (vi) **Course Enrollment and Registration**
 - a) Each student, on admission shall be assigned to a Tutor who shall advise and counsel the student about the details of the academic programme and the choice of courses considering the student's academic background and career objectives.
 - b) Each student shall register for all the courses prescribed in the curriculum pertaining to the first and second semester of student's study.
 - c) From third semester onwards, a student has the option to drop a maximum of two theory courses except Professional Core Courses in a semester and a student has the option to study additionally two theory courses which shall be professional electives. The maximum number of credits the student can register in a particular semester cannot exceed 30 credits including courses for which the student has registered for redoing.
 - d) In case of a student dropping a course of study (other than professional core courses) in one semester, he/she shall register for that course in the next given opportunity and earn necessary attendance in that course exclusively to become eligible to appear for the semester examination in that course.
 - e) The courses to be offered in a semester for students who need to reappear (as per 5 (iv) infra) or having attendance shortage etc., will be decided by HoD.
 - f) After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn Continuous Assessment marks and appear for the end semester examinations.

The enrollment for all the courses of the Semester II will commence 10 working days prior to the last working day of Semester I. The student shall confirm the enrollment by registering for the courses within the first five working days after the commencement of the Semester II.

The enrollment for the courses of the Semesters III to VI will commence 10 working days prior to the last working day of the preceding semester. The student shall enroll for the courses with the guidance of the Tutor. If the student wishes, the student may drop or add courses subject to eligibility within five working days after the commencement of the concerned semester and complete the registration process duly authorized by the Tutor.

- (vii) **Personality and Character Development:** Every student shall enroll in any one of the personality and character development activities (NCC/NSS/YRC/Sports & Games) and undergo training for 40 hours as below:

National Cadet Corps(NCC) will have parades.

National Service Scheme(NSS) will have social service activities in and around the College.

Youth Red Cross (YRC) society activities will include peace time activities like health & hygiene, international friendship, awareness camps etc.

Sports & Games activities will include preparation for inter-collegiate sports events.

While the training activities will normally be during weekends, the camps will normally be during vacation period.

- (viii) **Credit assignment:** Each course is assigned certain number of credits based on the following:

Contact Period per week	Credits
1 Lecture Period	1
2 Tutorial Periods	1
2 Practical Periods(Laboratory / Project Work/ etc.)	1

The Contact Periods per week for Tutorials and Practical can only be in multiples of 2. The exact number of credits assigned to the different courses is shown in section 13.

- (ix) **Minimum credits:** For the award of the degree, the student shall earn the minimum number of total credits as below by passing the prescribed courses of study of the respective programme as given in section 13 infra. The prescribed credit range for the curriculum of various programmes is from 137 to 145.
- (x) **Medium of instruction:** The medium of instruction, examinations, project report etc. shall be English.

5. REQUIREMENTS OF ATTENDANCE AND PROGRESS

- i. A student will be qualified to appear for end semester examinations in a particular course of a semester only if
- a) he / she has satisfied the attendance requirements as per the norms given below:
- Shall secure not less than 75% attendance in that course
 - If a student secures less than 75% attendance but not less than 65% in any course in the current semester due to medical reasons (hospitalization / accident / specific illness) or due to participation in the College / University / State / National / International level Sports events with prior permission from the Chairman, Sports Board and Head of the Department concerned, the student shall be given exemption from the prescribed attendance requirement and the student shall be permitted to appear for the end semester examination of that course.
- b) his / her progress has been satisfactory and
- c) his / her conduct has been satisfactory.
- ii) Students who do not satisfy the requirements that they shall undergo 40 hours of NS/NCC/YRC/sports & games activities (vide section (viii) supra) during the first year have to register and redo in the subsequent semester/s. Further such students are eligible for the award of degree only after they complete the above mentioned requirement
- iii) A student shall normally be permitted to appear for End semester examination of the course if the student has satisfied the attendance requirements (vide Clause 5(i) supra) and has registered for examination in those courses of that semester by paying the prescribed fee.

- iv) a) Students who do not satisfy clause 5(i) supra will not be permitted to appear for the End-semester Examination / Evaluation of that course. The student has to register and redo that course in a subsequent semester when it is offered next, earn necessary attendance and CA mark and appear for end semester examinations.
- b) If the total number of "Redo" courses at the end of any even semester is more than four, the student will not be eligible to register for the next immediate odd and further semester courses.

Such students will be permitted to register for those semester courses only when offered next, subject to fulfillment of the above condition.
- v) A student who has already appeared for a course in a semester and passed the examination is not entitled to reappear in the same course for improvement of letter grades / marks.

6. DISCIPLINE

- i) Every student is required to observe disciplined and decorous behavior both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the college. The Head of the Institution shall constitute a disciplinary committee to enquire into acts of indiscipline and notify the punishment
- ii) If a student indulges in malpractice in any of the examinations, he / she shall be liable for punitive action as decided by the Board of Examiners.

7. PROCEDURE FOR REJOINING THE PROGRAMME

A student who desires to rejoin the programme after a period of discontinuance or who upon his/her own request is permitted by the authorities to repeat the study of any semester, may join the semester which he/she is eligible or permitted to join, only at the time of its normal commencement for a regular batch of students and after obtaining the approval from the Commissioner of Technical Education and the University. No student will however be enrolled in more than one semester at any time.

8. ASSESSMENT AND PASSING REQUIREMENTS

- i) **Assessment:** The assessment will comprise of Final Examination (FE) and /or Continuous Assessment (CA), carrying marks as specified in the scheme in section 13 infra. The CA marks will be awarded on assessing the student continuously during the semester as per guidelines 8(viii) infra. The assessment for all the courses will be done by absolute grading system. However, for the purpose of reporting the performance of a student, letter grades and grade points will be awarded as per section 8(iv) infra.
- ii) **Semester End Examinations:** Semester end examinations will normally be held during October / December and during April / May of each year

A student will be permitted to appear for the final semester examination in a course only if he/she has completed the study of that course.
- iii) **Project Work:** Every student shall submit a report on project work on dates announced by the college / department through the faculty guide to the Head of the Department.
- iv) **Letter Grade and Grade Point:** Each student, based on his / her performance, will be awarded a final letter grade and grade point as given below for each course at the end of each semester by following absolute grading system.

Absolute Grading System

In absolute grading system, the letter grade and grade points are awarded to each student based on the percentage of marks secured by him/her in all courses.

Range of percentage of total marks	Letter grade	Grade Point (g)
90 to 100	O	10
80 to 89	A+	9

70 to 79	A	8
60 to 69	B+	7
50 to 59	B	6
0 to 49 or less than 50% in final examination	RA	0
Withdrawal from examination	W	0
Shortage of Attendance	SA	0

- "RA" denotes Reappearance in a course.

The grades RA and SA will not figure in the grade sheet.

v) Cumulative Grade Point Average:

After the completion of the programme, the Cumulative Grade Point Average (CGPA) from the semester in which the student has joined first to the final semester is calculated using the relationship:

$$CGPA = \frac{\sum g_i * C_i}{\sum C_i}$$

where, g_i is Grade point secured for i^{th} course.

C_i is Credit allotted for the i^{th} course.

vi) Passing a course:

- A student shall be deemed to have passed a theory course with CA and FE components. if
 - he/she secures at least 50% of the total mark in the final examination and
 - the total marks secured by him/her (CA and FE put together) is at least 50% of total marks.
- A student, who is absent or has failed in the semester end examinations in any theory course has to register for the examination in that theory course when it is conducted next time either by retaining or by not retaining the CA marks already earned
 - A student after choosing the option as not retaining CA in second attempt shall have to continue to register for further appearances in that option only till he/she obtains a pass
 - A student after choosing the option as retaining CA in second attempt may continue to appear for further appearances in that option or at any time can switch over to the option not retaining to CA which shall be final till he/she obtains a pass.
- A student, who after having earned necessary attendance, is absent for semester end examination or has failed in any course other than theory course (like Lab, Project work, Summer term courses etc.) with CA and FE components will register for the examinations when it is conducted next time and will be solely assessed in the semester end examinations carrying entire marks of that course.
- A student who has earned necessary attendance in the course Project work but does not submit the report on Project Work on or before the date specified by the college / department, he/she shall be deemed to have failed in the Project work and awarded grade RA and will have to register for the same at the beginning of the subsequent semester, redo and submit the project report at the end of that semester and appear for the final examination, the CA mark earned afresh.
- A student who has earned necessary attendance in the course Project work but whose project report is not accepted for reasons of incompleteness or other serious deficiencies will be treated as 'absent' and will have to register for the same at the

beginning of the subsequent semester, redo and submit the project report at the end of that semester and appear for the final examination, the CA mark earned afresh.

- f. If a student is absent or has failed in an elective course, he/she may register for the same course as detailed in para (b) above or for any other elective course in the subsequent semester.
- h. A student who is not eligible to write end semester examination in any course due to lack of attendance, will be awarded grade SA and the student has to register for that course again, when offered next, attend the classes and fulfill the attendance requirements as per section 5 supra. If the course, in which the student has lack of attendance, is a Professional Elective the student may register for the same or any other Professional Elective course in the subsequent semesters.
- i. A student after registering for a course may withdraw his / her registration between first & second CA Test on valid reasons.
- j. A student who has already appeared for a course in a semester and passed the examination is not entitled to reappear in the same course for improvement of letter grade / marks.
- k. If a student has studied more than four professional elective courses, then four professional elective courses with higher grades alone will be considered for CGPA calculation. The grades obtained in other elective courses will also appear in the mark sheet.
- l. A student who is absent in the end semester examination of a course after registering for the same will be considered to have appeared and failed in that examination and awarded grade RA.

vii) **Supplementary Examinations:**

For Supplementary Examinations/ Examinations for any course under REDO category, absolute grading will be followed.

viii) **Scheme of Evaluation**

a. Theory Courses with Tutorial Component (CA: 50% + FE: 50%)

Total: 100 Marks

CA Distribution:

(i) Assignment (for 1 st semester)	15 Marks
Assignment Presentation (for others)	15 Marks
(ii) Assessment Tutorial I	05 Marks
(iii) Assessment Tutorial II	05 Marks
(iv) Internal Tests: (Average of two tests)	25 Marks
• Test I	25 Marks
• Test II	25 Marks

Final Examination (FE) 50 Marks

Note:

1. For theory courses with tutorial component, separate tutorial note books/files are to be maintained by the students for regular class room tutorials and **two assessment tutorials** have to be conducted and marks entered in e-assessment.
2. During tutorial sessions, the students are to be **guided** to solve problems **with Faculty support**.
3. Assessment tutorials are of **open book type**, one each to be conducted in allotted halls and every student should do it **individually**.

b. Theory Courses with no Tutorial Component (CA: 50% + FE: 50%)

Total: 100 Marks

CA Distribution:

(i) Assignment (for 1 st semester)	15 Marks
Assignment Presentation (for others)	15 Marks
(ii) Objective Test I/Mini Project Assessment I	05 Marks
(iii) Objective Test II/Mini Project Assessment II	05 Marks
(iv) Internal Tests: (Average of two tests)	25 Marks
• Test I	25 Marks
• Test II	25 Marks

Final Examination (FE) 50 Marks

Note:

Two assessments for objective test/Mini Project are to be conducted and evaluated as per the deadline.

c. Laboratory Courses (CA : 100%)

Total : 100 Marks

• **CA Distribution:**

(i) Record / Viva or Test I	25 Marks
(ii) Record / Viva or Test II	25 Marks
(iii) Final Examination	
a) Lab examination	30 Marks
b) Viva Voce / Software Package development	20 Marks

d. Project Work (CA : 50% + FE : 50%)

Total : 100 Marks

• **CA Distribution:**

(i) Review - I	20 Marks
• Guide	10 Marks
• Committee ^{\$}	10 Marks
(ii) Review - II	30 Marks
• Guide	15 Marks
• Committee ^{\$}	15 Marks

• **Final Examination (FE)**

• External	25 Marks
• Thesis Evaluation	10 Marks
• Presentation & Viva Voce	15 Marks
• Internal	25 Marks
• Thesis Evaluation	10 Marks
• Presentation & Viva Voce	15 Marks

^{\$} - In respect of Project Work carried out and reviewed in the departments, the review committee shall comprise of at least three senior faculty nominated by the HoD.

However, in respect of Project Work carried out in industry, the committee nominated for the second review at industry includes one faculty deputed by the department and one mentor from respective industry.

9. QUALIFYING FOR THE AWARD OF DEGREE

A student shall be declared to have qualified for the award of the BSc Degree provided

- i) the student has successfully completed the course requirements and has passed all the prescribed courses of study of the respective programme listed in section 13 within the duration specified in section 2 and
- ii) no disciplinary action is pending against the student.

10. CLASSIFICATION OF DEGREE

A) FIRST CLASS WITH DISTINCTION:

A student who satisfies the following conditions shall be declared to have passed the examination in First class with Distinction.

- * Should have passed the end semester examination in all the courses of all the six semesters in his/her First appearance within four years, which includes authorized break of study of one year. Withdrawal from examination (vide clause 11) will not be considered as an appearance.
- * Should have secured a CGPA of not less than 8.50.
- * Should not have been prevented from writing end semester examination due to lack of attendance in any of the courses.

B) FIRST CLASS:

A student who satisfies the following condition shall be declared to have passed the examination in First Class.

- * Should have passed the end semester examination in all the courses of all six semesters within four years, which includes one year of authorized break of study (if availed) or prevention from writing the end semester examination due to lack of attendance (if applicable)
- * Should have secured a CGPA of not less than 7

C) SECOND CLASS :

All other students (not covered in clauses **A** and **B**) who qualify for the award of the degree shall be declared to have passed the examination in Second class.

D) RANK :

A student shall be eligible for award of ranking only if he/she has passed the examination in first class with distinction or first class in having passed all the courses in first attempt. Those who have availed the provision of break of study / withdrawal will not be eligible for rank.

11. WITHDRAWAL FROM EXAMINATION

- i) A student may, for valid reasons, be granted permission to withdraw from appearing for the examination in any course or courses of only one semester if he/she does not have any history of arrears at the time of request for withdrawal. Prior permission for withdrawal from semester examinations is to be obtained from Principal. Also, only one application for withdrawal is permitted for that semester examination in which withdrawal is sought. Withdrawal may be granted only once during one semester examination throughout the period of study what so ever the reasons may be.
- ii) Withdrawal application shall be valid only if the student is otherwise eligible to write the examination and if it is made prior to the commencement of the examination in that course or courses and also recommended by the Head of the Department.

12. TEMPORARY BREAK OF STUDY

- i) Under Choice Based Credit System, students will have the provision to take a break of study at the beginning of a semester to re-do and complete the arrear courses of previous semesters or on valid reasons (such as accident or hospitalization due to prolonged ill health) and rejoin the programme in a semester which he/she is eligible and he/she shall apply to the Principal through the Head of the Department stating the reasons therefore.
- ii) A student permitted for break of study shall rejoin the programme at the respective semester as and when it is offered after the break subject to the approval of Commissioner of Technical Education and Anna University, Chennai and shall be governed by the rules and regulations in force at the time of rejoining.
- iii) The duration specified for passing all the courses for the purpose of classification (vide sections 10supra) shall be increased by the period of such break of study permitted.
- iv) The total period for completion of the programme reckoned from the commencement of the semester to which the student was first admitted shall not exceed the maximum period specified in section 2 (ii) supra irrespective of the period of break of study in order that he/she may be qualified for the award of the degree.
- v) If any student is detained for want of requisite attendance, progress and conduct, the period spent in that semester shall not be considered as permitted 'Break of Study' and section 12 (iii) supra is not applicable for such cases.