



Pondicherry Engineering College, Puducherry - 605014

(Autonomous Institution affiliated to Pondicherry University)

REGULATIONS for Bachelor of Technology (B.Tech.) Degree Programmes

(For the candidates admitted from the Academic year 2014-15)

(Subject to the approval of Academic Council of PEC)

1. INTRODUCTION

- 1.1 The Regulations presented here are common to all the B.Tech. Degree Programmes of Pondicherry Engineering College (PEC) and binding on all parties concerned, including the Students, Faculty, Staff and Departments
- 1.2 This set of Regulations contains the course structure, curriculum and the provisions governing the policies and procedures of imparting instructions of courses, conducting of examinations and evaluation and certification of students' performance leading to the said Degree Programme(s)
- 1.3 The set of Regulations, on approval by the Academic Council of PEC, may supersede all the corresponding earlier sets of Regulations of the College, along with all the amendments thereto, and shall be binding on all students undergoing the said Degree Programme(s)
- 1.4 This set of Regulations may evolve and get revised/refined or updated or modified or changed through appropriate approvals from the Academic Council, from time to time.
- 1.5 The effect of periodic refinements in the Academic Regulations & Curriculum, on the students *admitted in earlier years*, shall be dealt with appropriately and carefully, so as to ensure that those students are not subjected to any unfair situation whatsoever, although they are required to conform to these revised set of Regulations & Curriculum, without any undue favour or considerations.
- 1.6 All disputes arising from this set of Regulations must be addressed to the Academic Council. The decision of the Academic Council is final and binding on all the parties concerned.
- 1.7 Any legal disputes arising from this set of Regulations shall be limited to the legal jurisdiction determined by the location of the college and not that of any other parties

2. DEFINITIONS

In these regulations, unless the context otherwise requires:

- a) **“University”** means Pondicherry University
- b) **“College” / “PEC”/“Institute”** means ,Pondicherry Engineering College
- c) **“Principal”** means the Principal of Pondicherry Engineering College
- d) **“Programme” / “Degree”** means, UG Degree Programme, (B.Tech. degree programme).
- e) **“Branch”/“Discipline”** means, specialization or discipline of B.Tech. degree programme like Civil Engineering, Information Technology, etc.,
- f) **“Course”/“Subject”** means, a theory subject or practical subject offered in a semester
- g) **“Core Subject”** means, a compulsory subject in the curriculum
- h) **“Elective Subject”** means, an optional subject in the curriculum
- i) **“Co-curricular activities”** means, specific activities that will help the student gain mileage in his professional career
- j) **“Higher Learning Institutions”** means, any State or Central University or Institutes of National importance such as IISc/IITs/IIMs/NITs/IISERs
- k) **“Parent Department”** means, the department that offers the degree programme
- l) **“HoD”** means, Head of the Academic Department
- m) **“Course Instructor”** means, a Faculty teaching a theory / laboratory subject
- n) **“BoS”** means, the Board of Studies for the programmes offered by a department
- o) **“Odd Semester”** means, the Semester that is typically from Mid-June to October
- p) **“Even Semester”** means, the Semester that is typically from December to Mid-April
- q) **“Summer Vacation”** means, the inter semester vacation between Even Semester and Odd Semester
- r) **“Period”** means, Duration of one unit of a theory/practical class (*shown in the time table*) which is normally 50 minutes
- s) **“Enrollment”** means, Enlistment of a student in the rolls of a class in an academic year
- t) **“MoU”** means, Memorandum of Understanding
- u) **“Arrear”** means, a subject in which a student has failed (*has not fulfilled the examination passing criteria*)
- v) **“Lateral Entry Students”** means, Students who are admitted directly into the second year of B.Tech Degree programme after completion of Diploma Course in Engineering
- w) **“He”** includes both genders he and she ; Similarly “him” includes “her” as well

3. QUALIFICATION FOR ADMISSION

All candidates seeking admission to the **First year of B.Tech. Degree** and direct admission to the **Second year of B.Tech Degree** under the **Lateral Entry scheme** shall be required to satisfy the eligibility rules prescribed by the Pondicherry University and Government of Puducherry.

4. BRANCHES OF STUDY

College offers the following eight B.Tech. programmes.

- 1) Civil Engineering (CE)
- 2) Mechanical Engineering (ME)
- 3) Electronics and Communication Engineering (EC)
- 4) Computer Science and Engineering (CS)
- 5) Electrical and Electronics Engineering (EE)
- 6) Electronics and Instrumentation Engineering (EI)
- 7) Chemical Engineering (CH)
- 8) Information Technology (IT)

5. DURATION OF THE PROGRAMME

Duration of the B.Tech. programme shall be Eight Semesters [Four years] (*Six semesters [Three years] for lateral entry students*). The duration of each semester shall normally be 18 weeks. The maximum period to complete the programme shall be 14 consecutive semesters [Seven years] (*12 consecutive semesters [Six years] for lateral entry students*).

6. PROGRAMME STRUCTURE

6.1 Every programme will have a curriculum with courses that are categorized as follows:

- a) Basic Science Courses (BS)
- b) Basic Engineering Courses (BE)
- c) Humanities & Management Courses (HM)
- d) Programme Core Courses (PC)
- e) Programme Electives Courses (PE)
- f) General Elective Courses (Inter-disciplinary) (GE)
- g) Professional Development Courses (PD)
- h) Mandatory Certificate Courses (MC)

6.2 **Highlights of the Curriculum:**

- i) **Curriculum for First Year:** The curriculum in the first year shall have six theory courses and three laboratory courses in the first and second semesters and shall be common for all the B.Tech. programmes. Although, all the B.Tech. programmes have a common

curriculum in the first year, some of the courses offered in the first semester to one group of branches is offered in the second semester to the other group and vice versa. This arrangement is essentially to share the laboratory resources among a larger number of students in the first year and to balance the faculty work load between odd and even semesters. Thus, in the first year, the eight B.Tech. programmes offered in PEC are divided into two Groups, Group-I and Group-II. Civil Engineering, Mechanical Engineering, Computer Science and Engineering, and Information Technology branches are placed in Group-I and the Group II comprises of the remaining four branches namely Electronics and Communication Engineering, Electrical and Electronics Engineering, Electronics and Instrumentation Engineering, and Chemical Engineering.

- ii) **Curriculum for Higher Semesters:** The curriculum from Third Semester through Seventh semester, in general, constitutes five theory courses and three laboratory courses. Eighth Semester would have three theory courses (Elective Courses), one *Project Work* and a *Comprehensive test cum Viva-Voce*. In addition to the above, the curriculum would include one course on *Soft skill Development* in sixth semester, one course on *Professional Ethics and Practice* in seventh semester, *Professional Development Courses* and *Mandatory Certificate Courses*. Curriculum of certain disciplines may have subjects that have both theory and practice components. These courses are grouped into two categories namely '*Practice Oriented Design Courses*' and '*Theory Combined with Practice Courses*' depending upon the weightage given to the theory component and the practice component of each course. The curriculum shall have both Core courses (compulsory courses) and Elective courses. Elective courses are offered from 4th semester through 8th semester. Two types of elective courses are offered namely *Programme Electives* (offered by the parent department) and *General Electives* (offered by departments other than the parent department).

6.3 Credits :

- i) Each course is assigned a number of credits as follows:
- a) 3 credits for all Theory courses
 - b) 2 credits for Laboratory (*denoted as LB*) courses
 - c) 3 credits for *Practice Oriented Design (denoted as POD)* courses
 - d) 3 credits for *Theory Combined with Practical (denoted as TCP)* courses
 - e) 8 credits for Project work
 - f) 1 credit for Comprehensive test cum viva-voce
 - g) 1 credit for Professional ethics and practice
 - h) 1 credit for Soft skill development

- i) 1 credit for *Professional Development Courses*
 - j) 0 credits for *Mandatory Certificate Courses*
 - ii) Total number of credits of all the courses in the curriculum of any programme shall be between **173 and 180**.
 - iii) The number of periods per week shall be *four* for theory subjects (both core and elective) and *three* for laboratory courses.
- 6.4 **Practice Oriented Design Courses:** Some design oriented courses may have both theory and practice components. Such courses are termed as *Practice Oriented Design* (POD) courses and shall have *two* periods of theory and *three* periods of practice per week.
- 6.5 **Theory Combined with Practical Courses:** Some courses may have a major theory part combined with a minor practice part. These courses are called *Theory Combined with Practical* (TCP) courses. These courses will have *three* periods of theory and *two* periods of practice per week.
- 6.6 **Elective Courses :**
- i) **Programme Elective:** *Programme Electives* are the elective courses offered by the parent department. An elective is offered only if fifteen or more number of students registers for the course. Maximum number of students that can register for an elective is limited to seventy five. However, depending upon the demand for a course and the resource availability, The Dean (Academics), in consultation with the concerned HoD, can fix the maximum number of students that can be allowed to register for an elective course.
 - ii) **General Elective:** The Interdisciplinary elective courses are called *General Electives*. Under this scheme, a student from a particular branch of study shall register for general elective courses offered only by departments other than the parent department. *Academic Courses Committee (vide Regulation 20.4)* under the Chairmanship of Dean (Academics) will prepare the list of General electives offered in a semester. These courses shall not have any prerequisites. A student can register for only one general elective course per semester, during 4th, 5th, 6th, 7th, and 8th semesters and has to earn a minimum of six credits during the entire course. A student cannot do more than five general electives in the entire course. Based on the necessity, a department may offer some of the core subjects/ Programme Electives of their department as general electives with the approval of Dean (Academics).
 - iii) Curriculum of all the B.Tech. programmes shall have three elective courses and a project work in the VIII semester. A student can opt for completion of the three elective

courses (*shown in the eighth semester curriculum*) before the eighth semester itself by registering one additional elective course each in IV, V, VI and VII semesters. This option enables the student to spend extra time for the project work in the industry/research organization/higher learning institutions. A student shall be permitted to register for such additional electives only if he does not have any arrear on the date of registration of courses for the concerned semester and should have a CGPA of 8.0 and above till the previous semester.

6.7 Professional Development Courses :

i) Students shall earn a minimum of three credits under *Professional Development Course* category through some specific co-curricular activities that will help the student gain mileage in his professional career. Each of these activities carries one credit. Students should necessarily fulfill the requirement of one credit courses before Seventh Semester. The grades obtained in these three one-credit courses will be included in the 8th semester grade sheet. A representative list of *Professional Development Courses* is given below. However this list may be modified as and when required by the *Academic Courses Committee*.

- a) Industrial Training (*Limited to a maximum of one credit*)
- b) Specific Field Knowledge Training - Lecture / Practice of 15 periods duration conducted by expert faculty from industry / higher learning institutions / R&D establishments / in-house faculty from the college (*No limit on maximum number of credits*)
- c) Seminar related with directed study (*Limited to a maximum of one credit*)
- d) Paper Publication in SCI Journals (*Limited to a maximum of one credit*)
- e) Working Model Development (*Limited to a maximum of one credit – Group of not more than four students*)
- f) Foreign Language Learning Certificate - offered by the college or by a recognized agency duly approved by the college (*No limit on maximum number of credits*)

ii) **Industrial Training:** Industrial Training is considered for one credit only if a student undergoes training in a industry continuously without break for a minimum period of thirty days (or four weeks) during 1st, 2nd or 3rd year vacation periods and submits a training report and certificate to the Head of the Department.

iii) **Specific Field Knowledge Training:** Students can opt for *Specific Field Knowledge Training* of 15 periods duration under Professional Development Courses approved by the *Academic Courses Committee*. *Specific Field Knowledge Training* is generally offered by experts from industry/research organizations/higher learning institutions. However

departments can also offer this training in some specialized topics. A student is also permitted to register for training offered by other departments, provided the student fulfills the necessary pre-requisites.

- iv) If a candidate who registered for a Professional Development Course fails to complete it successfully, it will be automatically treated as withdrawn. The candidate can re-register for the same course and successfully complete it as and when it is offered or may register for some other course and complete the requirement.
- v) Three successfully completed *Professional Development Courses* may be treated as equivalent to one General elective subject. This option can be exercised (*before the registration of eighth semester courses*) by a student who wishes to seek exemption of one general elective course by earning three extra credits through three additional *Professional Development Courses*.

6.8 Mandatory Certificate Courses: A student shall compulsorily undergo any three of the activities designated as *Mandatory Certificate Courses* listed below for completion of the programme. There is no assessment for these courses, however successful completion of these courses is mandatory and is to be substantiated by producing completion certificate from competent authority. The list of activities given below is only a representative list and may be modified as and when required by *Academic Courses Committee*.

S.No.	Mandatory Certificate Courses	Restrictions on the maximum number
1	Industrial Visit	One certificate compulsory
2	Club Activities	Maximum of two certificates
3	Youth Red Cross (YRC)	Maximum of one certificate – Should be completed in First two years
4	National Cadet Corps (NCC)	Maximum of one certificate – Should be completed in First two years
5	National Service Scheme (NSS)	Maximum of one certificate – Should be completed in First two years
6	National Sports Organization (NSO)	Maximum of one certificate – Should be completed in First two years
7	Sports Activities	Maximum of one certificate – Should be completed in First two years
8	Winning prizes in the students symposiums	Maximum of two certificates
9	Presenting papers in the students symposiums	Maximum of two certificates
10	Obtaining overall attendance of 95% and above from First to Seventh semester	Maximum of one certificate

7. REGISTRATION AND ENROLLMENT

- 7.1 All the students of the B.Tech. programme shall register for the courses during a specified period in the beginning of the semester provided he fulfills the eligibility criteria prescribed for enrollment and for registration of courses in that particular semester. The Dean (Academics) shall regulate the registration process.
- 7.2 A student will be eligible for enrolment only if he has cleared all the dues to the Institute, Hostel, and Library up to the end of the previous semester and not been debarred from enrolment by disciplinary action committee of the Institute.
- 7.3 **Eligibility for Registration:** A student is eligible to register for courses in the odd semester of an academic year only if he has earned a prescribed minimum number of credits (listed below) up to the previous semester.

Registration Semester	Prescribed Minimum Credits
Third Semester	25 credits (out of 49)
Fifth Semester	65 credits (out of 92)
Seventh Semester	105 credits (out of 135)

A student who is ineligible to register for courses in a odd semester shall discontinue the programme temporarily and rejoin the odd semester in the following academic year after earning the prescribed minimum number of credits. However, there is no such criterion on the minimum number of credits to be earned by a student to become eligible for registration of courses in the even semesters.

- 7.4 **Pre-Registration:** Programme Elective and General Elective courses will be offered in every semester starting from the fourth semester to the eighth semester. In order to facilitate proper planning of elective courses to be offered in a semester , it is essential for the students to *declare their intent to register* for an elective course well in advance, before the actual start of the semester classes, through the process of *Pre-Registration* , which is mandatory for all the students of third or higher semester. All the students moving to fourth or higher semester are required to have completed the *Mandatory Pre-Registration* of elective courses at least Three weeks before the last day of classes in the current semester. A list of elective courses offered in the next higher semester will be made available to the students One week before Pre-Registration. A student can choose the elective courses in consultation with the concerned *Faculty Adviser (vide Regulation 20.1)*.

- 7.5 The curriculum of any semester will have theory and practical courses prescribed for a specified number of credits. Students shall register for all the prescribed number of credits in the *First, Second and Third* semesters. However, in the *Fourth, Fifth, Sixth, Seventh and Eighth* semesters, the student will have a choice of registering for a higher or a lower number of credits than that is prescribed for that semester. If a student, for some valid reason, finds the theory subject load in a particular semester to be too heavy to handle, he may register for a lesser number of credits by choosing one or two elective courses lesser than what is prescribed for that semester. Similarly, a fast pace learner can register for more number of credits than prescribed by choosing one additional elective course. Only a student who has maintained consistently good academic record by not having any arrear and by scoring a CGPA of 8.0 and above in the previous semesters is entitled to avail the choice of registering for extra elective course in a semester.
- 7.6 ***Dropping of Courses:*** After completing the registration of courses for a particular semester, if for some reason a student wants to drop one or more elective courses, he can do so within three weeks of the commencement of the semester with the written approval of the Faculty Adviser and the Head of the Department. However, a student is not permitted to drop the core courses.

8. TRANSFER OF CREDITS

The courses credited elsewhere, in Indian or foreign University/Institution/ Colleges by students during their study period at PEC may count towards the credit requirements for the award of degree. The credits thus transferred will reduce the number of courses to be registered by the student at PEC. The guidelines for the transfer of credits are as follows:

- 8.1 Students with consistent academic performance (*having a CGPA of 7.0 or above and no arrear*) can credit courses in other institutions during 3rd and 4th year with the approval of the Academic Council of PEC
- 8.2 Students can earn external credits only from Institutions of national importance such as IISc/IITs/NITs/IIMs/IISERs and other Indian or foreign Universities/Institutes/Colleges with which PEC has a MoU (*and MoU must have a specific clause for provision of credit transfer*)
- 8.3 The BoS of the concerned department shall evaluate all the details of a course such as course contents, number of contact hours, course evaluation system, and approval or acceptance letter from the other institution and decide the *Equivalent Course(s)* in PEC curriculum and the number of *Equivalent Credits* the student earns for the course. The BoS shall also evolve a method for calculating the *Equivalent Grades* for the credit transferred

courses by taking into account the course evaluation system followed in the other institution. The BoS shall issue a *Credit Transfer Certificate* mentioning in it the details of *Equivalent Courses*, corresponding *Credits* and *Equivalent Grades* for the credit transferred courses. The complete details will then be forwarded to the Dean (Academics), who in turn will place it in the Academic Council for approval.

- 8.4 Credits and the Grades earned by the student under this Credits Transfer scheme will be reflected in the corresponding *Semester Grade Card* (*vide Regulation 10.4*) issued by PEC by entering the *Equivalent Grades* for the credit transferred subjects.
- 8.5 Credit transfer can be considered only for the courses at the Under Graduate level
- 8.6 The maximum number of credits that can be transferred by a student shall be limited to 45
- 8.7 A student has to get minimum passing grade / marks for such courses for which the credits transfer are to be made
- 8.8 Credits transfers availed by a student shall be properly recorded in *Consolidated Grade Card* (*vide Regulation 18*) issued to the student.

9. ASSESSMENT PROCEDURE - TESTS AND EXAMINATIONS

9.1 Theory Courses:

- i) All theory courses shall be assessed as follows:

Assessment Method	Marks
Continuous Assessment	40
Semester Examination (Duration: 3 Hours)	60
Total	100

- ii) *Continuous Assessment* shall be based on two cycle tests carrying 15 marks each and assignments carrying 10 marks. Performance in the best two of the three tests will be taken for assessment. Assignments shall be in the form of problems, small projects, quizzes, design problems etc., depending upon the subject content.
- iii) The theory courses are grouped into two categories as follows and the pattern of *Semester Examination* question papers will be different for different categories of courses. The curriculum shall clearly state the category of theory courses.
 - a) **Category A** - Conventional courses which is a combination of theory and problems (*denoted as TA*)
 - b) **Category B** - Courses that are fully oriented to Mathematical analysis or problem solving (*denoted as TB*)

iv) The pattern of *Semester Examination* question paper for the **Category A Courses** is as follows:

- a) The duration shall be 3 hours with maximum marks of 60.
- b) Section-A contains 5 compulsory questions each carrying 2 marks. Only one question is selected from each unit. This section carries 10 marks in total.
- c) Section-B contains five questions, one question from each unit with '*either*' '*or*' *choice*. Each question carries eight marks. Based on the necessity each question may contain sub divisions. This section carries 40 marks in total.
- d) Section-C contains one question of problem solving / design problem / case study type (application of theoretical concepts) with '*either*' '*or*' *choice*. This question may be from any one unit or combination of units. Based on the necessity each question may contain sub divisions. This section carries 10 marks.

v) The pattern of *Semester Examination* question papers for the **Category B Courses** is as follows:

- a) The duration shall be 3 hours with maximum marks of 60.
- b) The question paper shall contain Five either or type of problems, one problem from each unit. Each question carries 12 marks. Based on the necessity each question may contain sub divisions.

9.2 Laboratory Courses:

i) All laboratory courses (*denoted as LB*) shall be assessed as follows:

Assessment Method	Marks
Continuous Assessment	60
Semester Examination (Duration: 3 Hours)	40
Total	100

ii) *Continuous Assessment* shall be based on the regular performance of the student in laboratory classes and a model examination conducted at the end of the semester.

The regular performance in the laboratory will be evaluated for 40 marks as detailed below:

Observation and completion of work : 20 marks

Regularity and Record : 20 marks

Performance in the Model examination will be evaluated for 20 marks as detailed below:

Procedure : 5 marks

Laboratory work and calculations : 10 marks

Viva-Voce : 5 marks

iii) The *Semester Examination* of the laboratory courses will be evaluated for 40 marks by a panel of examiners comprising of an internal examiner and an external examiner. The Break-up of marks is as follows:

<i>Procedure</i>	: 10 marks
<i>Laboratory work and calculations</i>	: 20 marks
<i>Viva-Voce</i>	: 10 marks

9.3 Theory Combined with Practical courses:

i) Evaluation method for Theory Combined with Practical (*denoted as TCP*) courses is as follows:

Assessment Method	Marks
Theory Part	70
Practical Part	30
Total	100

ii) The distribution of marks for *theory part* is as follows:

Assessment Method	Marks
Continuous Assessment	20
Semester Examination (Duration: 3 Hours)	50
Total	70

Continuous Assessment shall be based on two cycle tests carrying 10 marks each. Performance in the best two of the three tests will be taken for assessment.

The pattern of *Semester Examination* question papers for the *theory part* of the TCP courses is as follows:

- The duration shall be 3 hours with maximum marks of 50
- The question paper shall contain Five either or type of questions, one question from each unit. Each question carries 10 marks. Based on the necessity each question may contain sub divisions.

iii) The distribution of marks for *practical part* is as follows:

Assessment Method	Marks
Continuous Assessment	15
Model Examination	15
Total	30

The *practical part* is evaluated for 30 marks through *internal assessment*. Out of the total 30 marks, continuous assessment of regular practical work carries 15 marks and a model examination conducted internally at the end of the semester carries 15 marks.

9.4 Practice Oriented Design courses: Practice Oriented Design (*denoted as POD*) courses are treated as either Practical courses or Theory courses. The decision to treat a POD as either

a Practical or a Theory is left to the discretion of the respective Board of Studies. If it is treated as a Practical course then the evaluation procedure for Practical courses shall be followed. If it is considered as a theory course then the evaluation method is as described below:

- a) The question paper shall contain one or two questions of design / problem solving type with 'either' 'or' choice. Accordingly, each question may carry 60 marks or 30 marks.

(OR)

- b) The question paper shall contain Five either or type of problems. Each question carries 12 marks. Based on the necessity each question may contain sub divisions.

9.5 Engineering Graphics / Drawing Courses:

- i) Engineering Graphics / Drawing (*denoted as EGD*) subjects are a type of Practice Oriented Design subjects that are assessed as follows:

Assessment Method	Marks
Continuous Assessment	50
Semester Examination (Duration: 3 Hours)	50
Total	100

- ii) *Continuous Assessment* shall be based on the performance of the student in regular drawing classes and a model examination conducted at the end of the semester. Performance in the regular drawing classes carries 30 marks and the model examination carries 20 marks.

- iii) *Semester Examination* is a theory type examination carrying a total of 50 marks. The pattern of Semester Examination question papers is as follows:

- a) The duration shall be 3 hours with maximum marks of 50.
- b) The question paper shall contain Five either or type of questions, one question from each unit. Each question carries 10 marks. Based on the necessity each question may contain sub divisions.

9.6 Project Work:

- i) The Project work is carried out in two phases, *Phase I* in seventh semester and *Phase II* in eighth semester. The Project work shall be assessed as follows :

Assessment Method	Marks	
	Phase I	Phase II
Continuous Assessment (<i>Internal Evaluation</i>)	100	60
Semester Examination	-	40

(External Evaluation)		
Total	100	100

ii) Marks allocated for *Continuous Assessment* are distributed as given in the following table.

Continuous Assessment	Marks	
	Phase I	Phase II
Guide	40	25
Project Evaluation Committee	60	35
Total	100	60

- a) Guide shall evaluate the student for 40 marks in Phase-I and 25 marks in Phase-II based on the work carried out.
- b) The Project Evaluation Committee comprising of the Head of the Department or his/her nominee (Chairman), Project coordinator (Professor/Associate Professor) and two other faculty members shall evaluate the project for 60 marks in Phase-I and 35 marks in Phase-II. The Project Evaluation Committee is constituted by the Head of the Department with the approval of the Dean (Examination). The distribution of marks for each review is as follows:

Phase I		Phase II	
Project Review	Marks	Project Review	Marks
Preliminary Review	10	Review III	10
Review I	25	Review IV	10
Review II	25	Final Review	15
Total	60	Total	35

The scheme of allocation of marks for each review will be prepared by the Project Evaluation Committee and approved by the Dean (Examinations).

iii) The final *Semester Examination* of the Project Work conducted in Phase II carries 40 marks. The evaluation will be conducted by a panel of examiners comprising of an internal examiner and an external examiner. The Break-up of marks is as follows:

Project report	: 15 marks
Presentation	: 15 marks
Viva-Voce	: 10 marks

9.7 Comprehensive test cum Viva Voce:

i) The evaluation of 'Comprehensive test cum viva voce' course offered in the 8th semester is as follows:

Assessment Method	Marks
Continuous Assessment	60

<i>(Objective type tests)</i>	
Semester Examination <i>(Viva voce)</i>	40
Total	100

ii) *Continuous Assessment* is conducted through three objective type tests. Each test carries 20 marks. All the three tests put together shall cover the syllabi of all the core courses of curriculum. A committee comprising the Head of the Department or his/her nominee and two faculty members of the department shall coordinate the conduct of the comprehensive tests. The Head of the Department shall constitute this committee and take the approval of the Dean (Examinations).

iii) The *Semester Examination* for this course will be a Viva voce examination conducted by a panel of examiners comprising of an internal examiner and an external examiner.

9.8 **One Credit Courses:** The one credit courses namely Professional Development Courses, Soft Skill Development Course and Professional Ethics and Practice course are evaluated through continuous assessment only. The scheme of evaluation for the one credit courses shall be prepared by the respective Department and submitted to the *Academic Courses Committee* for approval.

10. DECLARATION OF RESULTS

10.1 **Examination Passing Criteria:** A student is declared as **passed** in a course if he gets 40% marks and above in the Semester Examination and 50% marks and above overall (Semester Exam marks and Continuous Assessment marks put together).

10.2 **Result Passing Board:** The Dean (Examinations) shall constitute a **Result Passing Board** for each branch of study. The *Result Passing Board* shall meet soon after the valuation of Semester examination answer scripts to analyze the relative performance of students and award appropriate grace marks if necessary for the improvement of the overall result. On finalization of the results by *Result Passing Board*, the Dean (Examinations) shall declare the results.

10.3 **Revaluation:** On declaration results, a student who has failed in a theory subject can get his theory examination answer script revalued by submitting an application to the Dean (examinations) within five days from the announcement of the result. The Dean (Examinations) shall get the answer script revalued by appointing an examiner other than the one who valued the script earlier and revise the grade accordingly.

10.4 **Grade Card:** On declaration of results, Grade Cards will be issued to the students. The Grade Card will contain the list of courses for that semester, the grades obtained by the student, the GPA and the CGPA.

11. AWARD OF GRADES

The assessment of a course will be done on absolute marks basis. However, the performance of a student will be reported in letter grades, each carrying certain grade points, awarded as per the range of total marks (out of 100) obtained by the student as detailed below.

Range of total marks Criterion	Letter Grade	Grade Point (GP)
90 to 100	S	10
80 to 89	A	9
70 to 79	B	8
60 to 69	C	7
55 to 59	D	6
50 to 54	E	5
0 to 49 (Failed)	F	0
Partial Withdrawal from semester examination	W	-
Absent for the semester examination	Z	0

11.1 The total marks shall be computed as sum of marks obtained in the Continuous Assessment and Semester Examination.

11.2 'F' grade denotes failure in the course, 'W' grade indicates authorized partial withdrawal (*vide Regulation 13.2*) and 'Z' grade denotes absent for the Semester Examination. A student who has secured 'F' / 'W' / 'Z' grade shall reappear for the examination in the following semesters. A student who has scored a pass grade cannot reappear for the examination.

11.3 A student securing 'F' or 'W' grade in an elective course may reappear for the examination in the following semester or drop the elective course and subsequently register for another elective course in the following semester in place of the dropped elective course.

11.4 The *Grade Point Average* (GPA) for a particular semester is the ratio of the sum of the products of the number of Credits of a course (C_i) and the Grade Points scored in that course (GP_i), taken for all the courses, to the sum of the number of credits of all the courses (n) registered in that semester.

$$GPA = \frac{\sum_1^n C_i * GP_i}{\sum_1^n C_i}$$

where, n is the number of courses registered in that semester. For a student who has partially withdrawn from writing examinations of courses in a semester, n is counted as total number of courses appeared in that semester minus the number of courses partially withdrawn.

11.5 The *Cumulative Grade Point Average* (CGPA) up to a particular semester is calculated as follows:

$$CGPA = \frac{\sum_1^N C_i * GP_i}{\sum_1^N C_i}$$

where, C_i is the Credit of a course, GP_i is the Grade Point obtained by the student in that course and N is the total number of courses registered up to that semester. For a student who has partially or completely withdrawn from writing examinations of courses in a semester, N is counted as total number of courses registered up to that semester minus the number of courses withdrawn.

12. ELIGIBILITY FOR APPEARING FOR SEMESTER EXAMINATION

12.1 There shall be not any adverse report regarding the conduct of the student to be eligible to appear for the semester examination.

12.2 Although 100% overall attendance in all the courses in a semester is desirable, a student should have not less than 75% overall attendance to become eligible to appear for the examination.

12.3 A student, whose overall attendance falls below 75% but 60% and above in a semester, shall be permitted to appear for semester examination after payment of prescribed condonation fee along with a medical certificate obtained from a medical officer and duly acknowledged by the in-house medical officer of the College.

12.4 A student whose overall attendance in a semester falls below 60% shall not be permitted to appear for the semester examination and shall not be allowed to move to the next semester (*vide Regulation 16*) . A student who is stopped from moving to the higher semester is required to rejoin the course in the same semester in the following academic year.

13. WITHDRAWAL FROM SEMESTER EXAMINATION

- 13.1 **Complete Withdrawal:** A student, who is otherwise eligible to appear for the semester examinations, will be permitted to withdraw from appearing for the entire Semester Examination as one unit (*Complete Withdrawal*) for valid reasons and on the recommendation of the Head of the Department and with the approval of the Dean (Academics). Complete Withdrawal application shall be made before the commencement of the first examination pertaining to the semester. Such withdrawal shall be permitted **only once** during the entire programme. This provision for withdrawal is not allowed for VIII semester examinations.
- 13.2 **Partial Withdrawal:** If a student falls sick in the middle of the Semester Examinations, he can withdraw from one or more subjects on production of valid medical certificate (*Partial Withdrawal*). The student is permitted to exercise this provision of partial withdrawal from the courses in the middle of the semester examinations **only once** in the entire course.
- 13.3 A student who has partially or completely withdrawn from appearing for semester examinations in a particular semester should appear for the examinations of all the withdrawn subjects in the next semester itself.
- 13.4 Other conditions being satisfactory, candidates who withdraw from semester examinations are eligible to be awarded *First Class with Distinction* whereas they are not eligible to be awarded a *rank*.
- 13.5 Only a student who has not failed in any subject in all the previous semesters (*eligibility condition for 'First Class with Distinction' classification*) is eligible to opt for the Withdrawal from the semester examinations.

14. SUPPLEMENTARY EXAMINATIONS

- 14.1 Supplementary examinations will be conducted during the summer vacation of every academic year three weeks after the declaration of even semester examination results. The results of the supplementary examinations will be declared before the date of registration of odd semester courses. Supplementary examinations are conducted only for theory subjects and not for laboratory subjects.
- 14.2 Only the following students are eligible to appear for Supplementary examinations :
- i) Those students who fail to fulfill the eligibility criteria for registration of courses in the subsequent odd semester by not earning the prescribed minimum credits up to that

even semester. These students will get a chance to clear the pending arrears and become eligible for registration of courses in the subsequent odd semester.

ii) Those students who are eligible to move to the seventh semester (*vide Regulation 16*) but having arrears in not more than three subjects up to sixth semester. These students will get a chance to clear the pending arrears and become eligible for campus placements in the fourth year of the B.Tech. programme.

iii) Those students who have *arrear in only one subject* up to that even semester.

14.3 The eligible student shall submit an application for the supplementary examinations along with prescribed examination fee to The Dean (Examinations) within five working days from the date of declaration of even semester examination results.

14.4 The application for the Supplementary Examinations shall be forwarded by the Head of the Department with the recommendations of the Faculty Advisor to the Dean (Examinations) through the Dean (Academics). If necessary, the Faculty Advisor shall recommend / advise the student to attend the remedial classes.

15. TEMPORARY BREAK OF STUDY FROM THE PROGRAMME

A student may be permitted by the Dean (Academics) to withdraw temporarily from the programme for reasons of ill-health or other valid reasons on the recommendation of HoD. A candidate after temporary discontinuance may rejoin the course at the commencement of the semester at which he discontinued. Total period of the completion of the course reckoned from the commencement of the first semester to which the candidate was admitted shall not in any case exceed seven years (*six years for lateral entry students*), including the period of discontinuance.

16. MOVEMENT TO HIGHER SEMESTERS

16.1 A student can move to the next semester provided he has fulfilled the minimum attendance requirement for appearing for the semester examination (*vide Regulation 12*) and the minimum credit requirement for registration of courses (*vide Regulation 7*) in the odd semester.

16.2 The student who has failed to fulfill the above conditions will not be permitted to move to the higher semester and will rejoin the programme after a temporary break.

16.3 A student, after the temporary break, will be permitted to rejoin the programme at the appropriate semester along with the regular students at the time of normal commencement of that semester.

16.4 A student who rejoins the programme after the temporary break shall be governed by the rules, regulations, courses of study and syllabus in force, at the time of his rejoining the course.

17. CLASSIFICATION

After successful completion of the programme, degree will be awarded as per the following classifications based on the final CGPA:

17.1 Students who have successfully completed the programme within eight consecutive semesters (*six consecutive semesters for lateral entry students*) and obtained a final CGPA of **8.5** or above by passing all the courses in the first appearance will be declared as passed in **First Class with Distinction**. Students who have obtained 'F' or 'Z' grade in any of the courses in the entire programme and subsequently passed the examinations with a final CGPA of 8.5 or above are not eligible for **First Class with Distinction** classification. However, those students who have opted for authorized withdrawal from examination (*vide Regulation 13*) or temporary break of study (*vide Regulation 15*) will be eligible for **First Class with Distinction** classification.

17.2 Students who have obtained a final CGPA of **6.5** or above, but below **8.5** will be declared to have passed in **First Class**. Students who have lost the eligibility for **First Class with Distinction** classification (by obtaining 'F' or 'Z' grade in any of the courses in the entire programme and subsequently passing the examinations with a final CGPA of 8.5 and above)-are also declared to have passed in **First Class**.

17.3 Students who have obtained final CGPA below **6.5** will be declared to have passed in **Second Class**.

17.4 **Three Ranks** will be awarded in each branch of study in the order of merit among the students who are declared to have passed in First Class with Distinction. However, a student who has successfully completed the programme after availing the provision of 'Withdrawal from Examinations' (*vide Regulation 13*) and declared to have passed in First Class with Distinction is not eligible for the award of rank. Separate *Rank Certificates* will be issued to the Rank Holders.

18. CONSOLIDATED GRADE CARD

At the end of the programme, all successful students will be issued a consolidated *Grade Card* which will contain the following particulars:

- a) Grades in the subjects of all the semesters with month and year of passing
- b) CGPA
- c) Classification - First class with Distinction / First class / Second class

19. ELIGIBILITY FOR THE AWARD OF DEGREE

A student shall be eligible for the award of the degree of the Bachelor of Technology (B. Tech) only if he:

- a) has earned the required number of credits specified in the curriculum of the relevant branch of study within the maximum duration prescribed.
- b) has no dues to the Institution, Library, Hostels, etc.
- c) has no disciplinary action pending against him.

20. FUNCTIONARIES AND COMMITTEES

20.1 FACULTY ADVISOR

In the first year, the students in every class are divided into three groups, each group having around 20 numbers of students. One *Faculty Advisor* is attached to each one of the groups of students. The faculty advisor, who is a faculty from the parent department, will play a proactive role in closely monitoring the academic performance, attendance and discipline of the students attached to him. Further, The faculty advisor will help the students in planning their courses of study and render general advice regarding either the academic programme or any other activity. The set of students attached to a Faculty Advisor will continue to be under the guidance of the same Faculty Advisor till they complete the programme.

20.2 CLASS ADVISOR

One of the course instructors of a class shall be designated as the *Class Advisor* for that class. The class advisor shall keep track of the general academic performance, discipline and attendance of the students in the class. He will be the *liaison* between the class and the HoD. He shall act as the convener of the Class Committee and minute the proceedings of the class committee meetings. He shall assist the HoD in implementing the suggestions and recommendations of the class committee for improving the overall teaching learning process in the class.

20.3 CLASS COMMITTEE

Every class shall have a class committee consisting of four students (two girls and two boys) from the class, all the faculties handling the subjects for the class and the Head of the Department who is the chairperson of the class committee. One of the faculties will be designated as the ***Class Advisor*** and shall act as the convener of the committee. The first year coordinator shall be the Chairperson for the class committee of the first year classes. The class committees shall be constituted by the respective Head of the Department / the first year coordinator in the first week of the semester and communicated to the Dean (Academics). The class committee shall meet thrice during the semester. The first meeting will be conducted within three weeks from the date of commencement of the semester to discuss the nature of cycle tests, assignments and assessment procedure. The second and third meetings will be held soon after the declaration of first and second cycle tests respectively to analyze the test performance and discuss various measures for improvement. The committee will also look into the regularity of the classes held, attendance of the students and express opinions and suggestions on the improvement of teaching learning process.

20.4 ACADEMIC COURSES COMMITTEE

The Academic Courses Committee is an internal academic body constituted by the Principal with Dean (Academics) as Chairman and Dean (Examinations), all Heads of the Departments as members. Associate Dean (Academics) shall be the convener of the Committee. The role of the committee is as follows:

- a) Prepare the general frame work of the curriculum and syllabi and review the curriculum submitted by various Board of Studies
- b) Prepare the consolidated list of General Electives for each academic year
- c) Prepare the course booklet for each academic year containing the courses offered and the faculty teaching the courses for the purpose of Registration and Time table
- d) Approve / modify the list of Professional Development Courses
- e) Approve the curriculum and assessment scheme for the Professional Development Courses
- f) Approve / modify the list of Mandatory Certificate Courses and the criteria for successful completion
- g) Discuss and deliberate on any other academic matter on the direction of the Principal

The Academic Courses Committee will meet as and when required. The decisions taken in the meetings of the committee are subject to the approval of the Principal. If and when necessary, the Principal will get the decisions of the Committee approved by the Academic Council.

20.5 ACADEMIC APPEALS BOARD

The entire process of Continuous Assessment shall be made transparent, and the course instructor shall explain to a student why he gets whatever marks awarded, if and when required. However, if a student finds some anomaly in the award of marks in the continuous assessment, he can make an appeal to the *Academic Appeals Board* for review of marks awarded. Before appealing for such review, a student shall first approach the concerned Course Instructor and then the concerned Head of the Department, with a request to do the needful. Only in situations where satisfactory remedial measures have not been taken, the student may appeal to the Academic Appeals Board. The Academic Appeals Board is constituted with the Principal as the Chairman and The Dean (Examinations), Dean (Academics), Concerned Head of the Department, Class Advisor as members. The Dean (Examinations) is the convener. The committee will receive the grievance / complaints in writing from the student regarding anomaly in award of marks. The committee will examine the complaints and recommend appropriate measures.

21. ACDEMIC CODES MANUAL

Dean (Academics), in consultation with the HoDs, shall prepare an *Academic Codes Manual* and get it approved by the Principal. *Academic Codes Manual* is a set of guidelines on the roles and functions of various academic functionaries and committees. The manual shall contain procedures and guidelines for the effective implementation of various provisions contained in the Academic Regulations for imparting instruction of courses, achieving high academic standards and maintaining academic discipline. On the advice of the Principal, the Dean (Academics) may revise or modify the contents of the manual if and when necessary. The procedures and guidelines given in the *Academic Codes Manual*, on approval by the Principal, shall be binding on all the stakeholders concerned, including Students, Faculty, Staff and Department.