

Savitribai Phule Pune University

UG CHOICE BASED CREDIT SYSTEM



RULES AND REGULATIONS

FOR
UNDER GRADUATE PROGRAMME IN ENGINEERING
UNDER
FACULTY OF SCIENCE AND TECHNOLOGY
WITH EFFECTIVE FROM A.Y. 2019-20

Course Structure, Guidelines, Rules and Regulations

Preamble

Economic progress of country is strongly linked with quality of technical education. Engineering education is gaining new heights and it contributes substantial share in overall education system. Engineering graduates are to be educated and trained with a view of employability and sustainability. With the advent of technology and ever-changing expectations from the Industry and Society, revision of curriculum is need of the day, making it contemporary and relevant. In a bid to fine tune our technical education system to the global standards & practices, the Credit-Grade based performance and assessment system has been already implemented with effect from June 2015 onwards for all the Under Graduate Programme (UG) under the Faculty of Science & Technology.

To fulfill the necessities, the youngsters pursuing engineering studies need to be well equipped and acquaint with the latest technological trends and industrial requirements. This is possible only when the students undergo studies with an updated and evolving curriculum to match global scenario. The faculty of Science & Technology has shouldered the idea of incorporating latest advances and to upgrade the course contents with latest and relevant topics and know-how. Accordingly the new structure and curriculum are being introduced to be implemented from the academic year 2019-20 for First Year Engineering and the process will continue for subsequent years for second, third and fourth year engineering.

General Guidelines

1. All undergraduate programmes in Engineering under faculty of Science & Technology will be of **four years** duration and **eight semesters**.
2. The total number of credits required to earn for the **completion of the programme is 170 credits** in a minimum period of **eight semesters**.
3. All UG programme, under Faculty of Science & Technology shall be offered with **170 credit**; one credit is approximately equivalent to 15 contact hours.
4. Assessments in Choice based Credit System consists of
 - A) In-semester examination
 - B) End-semester examination
 - C) Continuous assessment for various examination heads.Assessment and Evaluation is to be done as per guidelines provided by competent authority.
5. Semester 1 and semester 2 will be part of First Year of Engineering (FE), Semester 3 and semester 4 will be part of Second Year of Engineering (SE), Semester 5 and semester 6 will be part of Third Year of Engineering (TE), Semester 7 and semester 8 will be part of Final Year of Engineering (BE)
6. **Induction Program**

Induction programme for first year students is introduced to familiarize them to the new environment and encourage them to learn beyond classrooms. Objective is to help new students adjust and feel comfortable in the new environment, inculcate in them the ethos and culture of the institution, help them build bonds with other students and faculty members, and expose them to a sense of larger purpose and self exploration. Induction Program should be preferably of 3 weeks (**2 weeks at beginning first semester and 1 week at the beginning of second semester**). In order to implement the (SIP) in the College the following activities can be taken at College.

- Physical Activity: - This would involve a daily routine of physical activity with games and sports.
- Creative Arts: - Every students would chose one skill related to arts whether visual arts or performing arts.
- Mentoring and Universal Human values:-Mentoring and connecting the students with faculty members and other students is the most important part of student induction. This can be effectively done by forming a group of 22-24 students with a

faculty mentor each. This can be implemented through group discussion and real life activities rather than only lecturing.

- Familiarization with College, Department and Branch :-The incoming student should be told about the credit, grading system and scheme of the examination. They should be explained how the study in College differs from the study in school. They should be taken on College tour and shown important facilities such as library, canteen, gymkhana etc. They should be shown their own department.
- Literary Activity:-Literary Activity would compass reading book, writing a summary, debating, enacting a play etc.
- Proficiency modules: - The modules can be designed to overcome some critical lacunas that students might have like English Speaking, Computer familiarity etc.
- Lectures by Eminent People: - The lectures of Eminent people be organized to expose the students to social activity and public life.
- Visit to local Area:-A couple of visits to the landmarks of the city or a hospital or orphanage could be organized.
- Extracurricular activities in College:-The new students should be introduced to the extracurricular activities at the College.
- Feedback and Report on the program:-Students should be asked to give their mid program Feedback wherein each group of 22-24 students should be asked to prepare a single report on their experience of the program.

To summarize the above activity the sequence of activities can be planned as given below:

- Address by Principal, HOD's and other functionaries and welcome the new students along with their parents.
- The branch wise allocation of students to be done and a group of 22-24 students is to be formed along with one faculty as mentor.
- A detail time table of various activities is to be prepared and displayed for all students. The timetable should give details of location and details of faculty in charge of the activity.
- The visit to local areas can be arranged on Saturdays.
- The various activities to be carried out can be divided into three phases :-
 1. Initial phase:- Which may include Address by Principal, HOD's and other functionaries College and Dept Visit, interaction with parents Forming of students group and assigning of mentor mentee.
 2. Regular Phase:- This phase may include the activities such as creative arts / universal Human values Games & Sports in the morning session and in the afternoon session. Literary activities, Proficiency module, Lectures & workshop, Extracurricular Activities etc. can be scheduled.
 3. Closing Phase:- This phase may include taking feedback of students, preparation of Report by each group, Test of creative Arts, Human Values can be taken.

These are summarized guidelines to be given to the student inducing induction programme (SIP). Please refer SIP Manual published by AICTE for detail guidelines[2].

7. **Project based Learning:**

For better learning experience, along with traditional classroom teaching and laboratory work based learning, project based learning has been introduced with an objective to motivate students to learn by working in group (**5 to 6 students per group**) courteously to

solve a problem. Students may undertake a problem which can be theoretical, practical, social, technical, symbolic, cultural and/or scientific and grows out of students' wondering within different disciplines and professional environments. A chosen problem has to be **exemplary**. The problem may involve an interdisciplinary approach in both the analysis and solving phases. Such practice will also increase their capacity and learning through shared cognition. [3] [5].

8. **Laboratory Course:**

The laboratory work will be based on completion of experiments/ lab assignments confined to the related companion courses of the semester.

9. **Seminar:**

Seminar shall be on state-of-the-art topic selected by student and approved by the authority. The student shall submit the duly certified seminar report in standard format, for satisfactory completion of the work by the concerned Guide and head of the department/institute.

10. **Project Work at Final Year:**

Project work in the seventh semester is an integral part of the project work. The project work shall be based on the knowledge acquired by the student during the graduation and preferably it should meet and contribute towards the needs of the society. The project aims to provide an opportunity of designing and building complete system or subsystems based on area where the student likes to acquire specialized skills. The student shall prepare the duly certified final report of project work in standard format for satisfactory completion of the work by the concerned guide and head of the Department/Institute.

11. **Internship**

Internships are educational and career development opportunities, providing practical experience in a field or discipline. Internships are far more important as employers are looking for employees who are properly skilled. They are structured, short-term, supervised placements often focused around particular tasks or projects with defined time scales. Core objective is to expose technical students to the industrial environment, which cannot be simulated/experienced in the classroom and hence creating competent professionals in the industry and to understand the social, economic and administrative considerations that influence the working environment of industrial organizations. Student may choose to undergo Internship at Industry/Govt./NGO/MSME/Rural Internship/Innovation/ IPR/Entrepreneurship. Student may choose either to work on innovation or entrepreneurial activities resulting in start-up or undergo internship with industry/NGO's/Government organizations/Micro/Small/ Medium enterprises to make themselves ready for the industry [4]. Conduction, monitoring, assessment, and evaluation is to be done as per guidelines provided by AICTE [4].

12. **Abbreviations:**

TW: Term Work **TH:** Theory **OR:** Oral **TUT:** Tutorial **PR:** Practical
Sem: Semester, **PROJ:** Project Work, **ESE:** End Semester Examination **ISE:** In Semester Examination, **CA:** Continuous Assessment, **DW:** Drawing.

Definition of Credit [1]:**

1 Hour Lecture (L) per week	1 credit for 1 Hour
Tutorial (T) per week	1 credit for 1 Hour
Practical (P) per week 2 Hours Practical(Lab)/week	1 credit for 2 Hours

** The head of Tutorial and Practical (as a special case) may be merged for common credit with the permission of authority.

This document includes following sections-

- I. Undergraduate Engineering Programme Structure
 - II. Examination Scheme
 - III. Structure of Question Paper
 - IV. Assessment
 - V. Rules of Passing
 - VI. Rules of ATKT (Allowed To Keep Term)
 - VII. Assessment and Grade Point Average
 - VIII. Performance Indices
 - IX. Result
- References

1) UG Programme Structure and Credit Distribution:

Each B.E. / B. Tech. programme is of 4 years duration. The minimum total number of credit requirement for each programme is 170. In the structure, the credits are distributed over 8 semesters. The open elective included, gives the student a wide choice of subjects from other programme. The Credit structure for Bachelor of Engineering programme is given below in Table 1.

TABLE 1: Credit Structure for UG programme in Engineering

Credits offered									
Course Work	Semester								Total
	I	II	III	IV	V	VI	VII	VIII	
Professional Theory Courses *	17	16	15	15	12	06	06	06	90
Elective Courses [^]	-	-	-	-	03	03	06	06	18
Laboratory Courses/ continuous assessment/TW	05	04	07	05	05	05	06	02	42
Seminar & Communication Skills	-	-	-		01	01		-	02
Project Work	-	-	-	-	-	02	02	06	10
Project Based Learning		02		02	--	--	--	--	04
Internship ^{\$}	--	--	--	--		04	--	--	04
Total	22	22	22	22	21	21	20	20	170
Mandatory Non_Credit_Graded_Audit Course [#] per semester									
Induction Program at first year Engineering	3 week duration (2 week at the beginning of Sem-I & 1 week at the beginning of Sem -II)								

*: Professional Courses include - Engineering Science Courses including Workshop, Drawing, basics of Electrical/Electronics/Mechanical/Computer/Civil Engineering, Humanities and Social Sciences including Management/Finance Management courses, Basic Science courses and Professional core courses.

[^]: Professional Elective courses relevant to chosen specialization/branch and Open Electives (interdisciplinary and /or emerging technology)

[#]: There will be mandatory **Non_Credit Course** per Semester viz- Environmental Studies, Indian Constitution, Essence of Indian Traditional Knowledge, financial Management and courses introduced time to time by university or apex bodies.

^{\$}: Internship to be completed after semester 5 and to be assessed in semester 6. Internship will be of 4 to 6 weeks maximum.

TABLE -2 First Engineering _Structure for Semester-I

Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credits			
		Theory	Practical	Tutorial	ISE	ESE	TW	PR	OR	Total	TH	PR	TUT	Total
107001	Engineering Mathematics-I	03	--	01	30	70	25	--	--	125	03	--	01	04
107002/ 107009	Engineering Physics / Engineering Chemistry	04	02	--	30	70	--	25	--	125	04	01	--	05
102003	Systems in Mechanical Engineering	03	02	--	30	70	--	25	--	125	03	01	--	04
103004 / 104010	Basic Electrical Engineering / Basic Electronics Engineering	03	02	--	30	70	--	25	--	125	03	01	--	04
110005/ 101011	Programming and Problem Solving / Engineering Mechanics	03	02	--	30	70	--	25	--	125	03	01	--	04
111006	Workshop [@]	--	02	--	--	--	--	25	--	25	--	01	--	01
Total		16	10	01	150	350	25	125	--	650	16	05	01	22
101007	Audit Course 1 ^{&}	02	Environmental Studies-I											

Induction Program : 2 weeks at the beginning of semester-I and 1 week at the beginning of semester-II

TABLE -3 First Engineering _Structure for Semester-II

Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credits			
		Theory	Practical	Tutorial	ISE	ESE	TW	PR	OR	Total	TH	PR	TUT	Total
107008	Engineering Mathematics-II	04	--	01	30	70	25	--	--	125	04	--	01	05
107002/ 107009	Engineering Physics/ Engineering Chemistry	04	02	--	30	70	--	25	--	125	04	01	--	05
103004 / 104010	Basic Electrical Engineering / Basic Electronics Engineering	03	02	--	30	70	--	25	--	125	03	01	--	04
110005/ 101011	Programming and Problem Solving / Engineering Mechanics	03	02	--	30	70	--	25	--	125	03	01	--	04
102012	Engineering Graphics ^Ω	01	02	01	--	50	25		--	75	01	01		02
110013	Project Based Learning [§]	--	04	--	--	--	25	50	--	75	--	02	--	02
Total		15	12	02	120	330	75	125	--	650	15	05	02	22
101014	Audit Course 2 ^{&}	02	Environmental Studies-II											
107015		--	Physical Education-Exercise and Field Activities											

Instructions:

- PR/Tutorial must be conducted in three batches per division.
- Minimum number of required Experiments/Assignments in PR/ Tutorial shall be carried out as mentioned in the syllabi of respective subjects.
- Every Student should appear for Engineering Physics, Engineering Chemistry, Engineering Mechanics, Basic Electrical Engineering, Basic Electronics Engineering, Programming and Problem solving during the year.
- College is allowed to distribute Teaching workload of subjects Engineering Physics, Engineering Chemistry, Basic Electrical Engineering, Basic Electronics Engineering, Engineering Mechanics, Programming and Problem solving in semester I and II dividing number of FE divisions into two appropriate groups.
- Assessment of tutorial work has to be carried out as term-work examination. Term-work Examination and Practical Examination at first year of engineering course **shall be internal continuous assessment only.**

Ω 1 Credit for Engineering Graphics theory has to be awarded on the basis of End semester examination of 50 marks while 1 credit of tutorial and practical **shall be awarded on internal continuous assessment only.**

@ Credit for the course of workshop practical is to be awarded on the basis of continuous assessment / submission of job work.

§ Project based learning (PBL) requires continuous mentoring by faculty throughout the semester for successful completion of the tasks selected by the students per batch. While assigning the teaching workload a load of 2 Hrs/week/batch needs to be considered for the faculty involved. The Batch needs to be divided into sub-groups of 5 to 6 students. Assignments / activities / models/ projects etc. under project based learning is carried throughout semester and Credit for PBL has to be awarded on the basis of internal continuous assessment and evaluation at the end of semester.

& Audit course for Environmental Studies and II (As per D.O.No.F.13-1/2000 (EA/ENV/COS-I) dated 14 May, 2019) is mandatory but non-credit course. Examination has to be conducted at the end of Sem I & II respectively for award of grade at college level. Grade awarded for audit course shall not be calculated for grade point & CGPA.

Audit course for Physical education is mandatory non-credit course. Examination has to be conducted at the end of Semester for award of grade at college level. Grade awarded for audit course shall not be calculated for grade point & CGPA.

TABLE -4 Structure for Semester-III

Subject Head	Duration (Hrs/week)	ISE	ESE	PR/OR Marks	TW Marks	Credits
Theory	15	150	350			15
PR/OR/Tut	14			100	100	07
Total	29	150	350	100	100	22

TABLE -5 Structure for Semester-IV

Subject Head	Duration (Hrs/week)	ISE	ESE	PR/OR Marks	TW Marks	Credits
Theory	15	150	350			15
PR/OR/Tut	10			100	50	05
Project based learning	04				50	02
Total	29	150	350	100	100	22

TABLE -6 Structure for Semester-V

Subject Head	Duration (Hrs/week)	ISE	ESE	PR/OR Marks	TW Marks	Credits
Theory	15	150	350			15
PR/OR/Tut	10			100	50	05
Seminar	01				50	01
Total	26	150	350	100	100	21

TABLE -7 Structure for Semester-VI

Subject Head	Duration (Hrs/week)	ISE	ESE	PR/OR Marks	TW Marks	Credits
Theory	12	120	280			12
PR/OR/Tut	10			100	100	05
Internship	04				100	04
Total	26	120	280	100	200	21

TABLE -8 Structure for Semester-VII

Subject Head	Duration (Hrs/week)	ISE	ESE	PR/OR Marks	TW Marks	Credits
Theory	12	120	280			12
PR/OR/Tut	08			100	50	04
Moocs etc.					50	02
Project Stage-1	04			50	50	02
Total	24	120	280	150	150	20
Credits of MOOCs Courses shall be awarded based on completion of relevant course (recommended by college / University) of equivalent or more credits and submission of Certificate to college. College shall submit the same to university through online process to be followed in due course.						

TABLE -9 Structure for Semester-VIII

Subject Head	Duration (Hrs/week)	ISE	ESE	PR/OR Marks	TW Marks	Credits
Theory	12	120	280			12
PR/OR/Tut	04			100	50	02
Project Stage-2	12			50	100	06
Total	28	120	280	150	150	20

Note: Any Course offered (Semester-III to Semester-VIII) should be of minimum 2 credits.

2. Examination Scheme:

R.21

The theory examination shall be conducted in two phases for all the subjects of semester-I to semester-VIII.

R2.1.1: Phases of Examination

Phase I as In-Semester Examination of 30 marks written theory examination based on Unit-1 and Unit-2 of course syllabus scheduled by university

Phase II as End-Semester Examination of 70 marks written theory examination based on unit number 3, 4, 5, 6 of course syllabus scheduled by university.

3. Structure of Question Paper:

R3.1 Two units (Unit1 and Unit 2) will be covered for 30 Marks for Phase 1 (ISE). Equal weightage will be given to both the units (15 Marks each)

R3.2 Four units (Unit 3, Unit 4, Unit 5 and Unit 6) shall have weightage of 70 Marks for Phase 2 (ESE). Marks weightage for the unit 3, unit 4, unit 5 and unit 6 shall be as shown in Table no.10

- Marks weightage to be given for questions per unit is as –

TABLE -10. Marks weightage per unit for examination

Unit Number	Phase I ISE Marks Weightage	Phase II ESE Marks Weightage
1	15	--
2	15	--
3		18
4	-	17
5	--	18
6	-	17

R3.3 Paper will have only one section and two questions for ISE and four questions for ESE. For each question there will be alternate Question based on same unit and of the same marks.

R3.4 Framing of questions should be according to Anderson/Blooms Taxonomy and disseminated through the question papers with a mention of course outcomes as well.

4. Assessment

A. Theory:

R4.1

ISE assessment will be done at the centralized assessment programme (CAP) Centre of the College by the Expert who is appointed as an examiner for the courses as per 48(3) panel of Maharashtra public university act 2016.

R4.2

ESE assessment will be done at the CAP Centre designated by the University by the Expert who is appointed as an examiner for the subject as per 48(3) panel.

B. Term work:

R4.3

Term Work assessment shall be conducted for the Lab Practice, Project, Tutorials and Seminar. Term work is continuous assessment based on work done, submission of work in the form of report/journal, timely completion, attendance, and understanding. It should be assessed by subject teacher of the institute for first to sixth semester and by the external examiner at seventh and eighth semester. At the end of the semester, the final grade for a Term Work shall be assigned based on the performance of the student and is to be submitted to the Savitribai Phule Pune University (SPPU). A student who fails in the Term Work on account of unsatisfactory performance shall be given F grade and on the account of inadequate attendance shall be given FX grade. Failing in a particular course Term Work shall not be the criteria for detention in the semester.

C. Practical/Oral/Presentation:

R4.5

Practical/Oral/presentation is to be conducted and assessed jointly by internal and external examiners. The performance in the Practical/Oral/Presentation examination shall be assessed by at

least one pair of examiners appointed as examiners by the Savitribai Phule Pune University. The examiners will prepare the mark / grade sheet in the format as specified by the Savitribai Phule Pune University and authenticate it.

D. Project Based Learning

R4.6

It is recommended that the all activities are to be record and regularly, regular assessment of work to be done and proper documents are to be maintained at college end by both students as well as mentor (you may call it PBL work book). Continuous Assessment Sheet (CAS) is to be maintained by all mentors/department and institutes.

Recommended parameters for assessment, evaluation and weightage:

- Idea Inception (5%)
- Outcomes of PBL/ Problem Solving Skills/ Solution provided/ Final product (50%) (Individual assessment and team assessment)
- Documentation (Gathering requirements, design & modeling, implementation/execution, use of technology and final report, other documents) (25%)
- Demonstration (Presentation, User Interface, Usability etc) (10%)
- Contest Participation/ publication (5%)
- Awareness /Consideration of -Environment/ Social /Ethics/ Safety measures/Legal aspects (5%)

PBL workbook will serve the purpose and facilitate the job of students, mentor and project coordinator. This workbook will reflect accountability, punctuality, technical writing ability and work flow of the work undertaken.

E. Internship

R4.7

Student may choose to undergo Internship at Industry/Govt./NGO/MSME/Rural Internship/ Innovation/ IPR/Entrepreneurship. Student may choose either to work on innovation or entrepreneurial activities resulting in start-up or undergo internship with industry/NGO's/Government organizations/Micro/Small/ Medium enterprises to make themselves ready for the industry[4].

Every student is required to prepare a maintain documentary proofs of the activities done by him. The evaluation of these activities will be done by Programme Head/Cell In-charge/ Project Head/ faculty mentor or Industry Supervisor based on- Overall compilation of internship activities, sub-activities, the level of achievement expected, evidence needed to assign the points and the duration for certain activities.

Based on internship the assessment and evaluation parameters may include as-

- Working for consultancy/ research project,
- Participation at Events (Technical / Business)
- Participation in innovation related completions for e.g. Hackathon etc.),
- Contribution in Incubation/ Innovation/ Entrepreneurship Cell/ Institutional Innovation Council,
- Learning at Departmental Lab/Tinkering Lab/ Institutional workshop,
- Development of new product/ Business Plan/ registration of start-up,
- Participation in IPR workshop/Leadership Talks/ Idea/ Design/ Innovation/ Business Completion/ Technical Expos.

It is necessary to produce participation certificate, if applicable.

F. Seminar and Communication Skills

R4.8

Seminar is the first formal curricular activity at the UG level, where students are supposed to exhibit their communication skills and knowledge by undertaking the study of the chosen topics. Core objective is to explore the basic principles of communication (verbal and non-verbal) and

active, empathetic listening, speaking and writing techniques. It exposes the student to new technologies, researches, products, and services.

Authorities/ examiner (optional) along with a guide would be assessing the seminar work based on various parameters which may include- Topic selection, Contents and Presentation, regularity, Punctuality and Timely Completion, Question and Answers, Report, Paper Presentation/Publication, Attendance and Active Participation in overall class activity.

G. Project Work at Final Year

R4.9

Progress of project work is monitored regularly on weekly project slot/project day. Regular interval presentations are to be arranged to review and assess the work. During process of monitoring and continuous assessment AND evaluation the individual and team performance is to be measured.

Project work is monitored and continuous assessment is done by guide and authorities. During university examination Internal examiner (preferably the guide) and External examiners jointly, evaluate the project work. Recommended performance measure parameters may include-Problem definition and scope of the project, Literature Survey, Appropriate Engineering approach used, Exhaustive and Rational Requirement Analysis, Comprehensive Implementation- Design, modeling, documentation, Usability, Optimization considerations(Time, Resources, Costing), Thorough Testing, Project Presentation and Demonstration(ease of use and usability), Social and environment aspects, Presentation of work in the form of Project Report(s), Understanding individual capacity, Role & involvement in the project, Team Work (Distribution of work, intra-team communication and togetherness), Participation in various contests, Publications and IPR, Manuals(Project Report, Quick reference, System, Installation guide) among other parameters.

5. Rules of Passing

R5.1

To pass the Term Work / Practical / Oral/ presentation the student has to earn Minimum of 40 percent marks in each respective examination head.

R5.2

To pass the Theory Subject head the student has to earn minimum of 40 percent marks in End-Semester examination and 40 percent total marks (In-Semester Examination and End-Semester Examination).

R5.3

The failing student can repeat the End-semester examination to pass the head in any semester and the In-Semester Examination marks will be retained as it is. OR the failing student can repeat for the End-Semester Examination as well as In-semester examination for the head of Even semester in the Even semester only and for the head of Odd semester in the Odd semester only for the theory head

R5.4

To earn credits of a course (Theory/term work/practical/oral/presentation) student must pass the course with minimum passing marks/grade.

R5.5

Student can apply only for the Revaluation/Photocopying of End-Semester theory examination.

6. Rules of ATKT (Allowed To Keep Term):

R6.1

A student can register for the third semester (SE), if he/she earns minimum 50% credits of the total of first and second semesters (FE).

R6.2

A student can register for the fifth semester (TE), if he/she earns minimum 50% credits of the total of third and fourth semesters (SE) and all the credits of first and second semester (FE).

R6.3

A student can register for the seventh semester(BE), if he/she earns minimum 50% credits of the total of fifth and sixth semesters(TE) and all the credits of third and fourth semester(SE).

R6.4

A student will be awarded the bachelor's degree if he/she earns 170 credits and clears all the mandatory non credit courses in respective semesters

7. Assessment and Grade Point Average:

R7.1 Marks/Grade/Grade Point

A grade is assigned to each head based on marks obtained by a student in examination of the course. The marks obtained in In-semester and end-semester examination are considered together to calculate the grade of the course. These grades, their equivalent grade points are given in Table 11.

TABLE 11. Grade and Grade Point

Grade	Grade Point	Percentage of Marks Obtained	Remarks
O	10	90-100	Outstanding
A	9	80-89	Very Good
B	8	70-79	Good
C	7	60-69	Fair
D	6	50-59	Average
E	5	40-49	Below Average
F	0	Below 40	Fail
FX	0	--	Detained, Repeat the Course
IC	0	--	Incomplete Course-- Absent for Exam but continue for the course
AC	--	--	Audit Course Completed
ACN	--	--	Audit Course Not Completed

7. Passing Grade:

- The grades O, A, B, C, D, E are passing grades.
- A candidate acquiring any one of these grades in a course shall be declared as PASS. And student shall earn the credits for a course only if the student gets passing grade in that course.
- F Grade -The grade F shall be treated as a failure grade.
- The student with F grade will have to pass the concerned course by re-appearing for the examination.
- The student with F grade for any stage of the Project Work, will have to carry out additional work/ improvement as suggested by the examiners and re-appear for the examination.
- AC and ACN Grade -The student registered for audit course shall be awarded the grade AC after satisfactory completion of audit course and shall be included in the Semester grade report for that course, provided student has the minimum attendance as prescribed by the SPPU and satisfactory In-semester performance and secured a passing grade in that course. Student who is unable to complete audit course will be awarded as ACN grade.
- FX Grade-The grade FX in a course is awarded by the college, if a student does not maintain the minimum attendance in the Lecture / Tutorial class as prescribed by the SPPU and/or his performance during the semester is not satisfactory and/or he/she fails in the Term Work head of that course.
- The student with FX grade in a given course is not permitted to take the end of semester examination in that course. Such a student will have to re-register for the course.
- The student with F / FX in a course shall not be awarded any credits for that course.

8. Performance Indices:

R8.1

The semester end grade sheet will contain grades for the courses along with titles and SGPA. Final grade sheet and transcript shall contain CGPA.

R8.2

SGPA -The performance of a student in a semester is indicated by a number called the Semester Grade Point Average (SGPA). The SGPA is the weighted average of the grade points obtained in all the courses, seminars and projects registered by the student during the semester.

$$\text{Semester Grade Point Average (SGPA)} = \frac{\sum_{i=1}^p C_i G_i}{\sum_{i=1}^p C_i}$$

$$\text{SGPA} = \frac{\sum \text{GradePointsEarned} \times \text{CreditsForEachCourse}}{\text{TotalCredits}}$$

For Example: suppose in a given semester a student has registered for five courses having credits C1, C2, C3, C4, C5 and his / her grade points in those courses are G1, G2, G3, G4, G5 respectively. Then students

$$\text{SGPA} = \frac{C1G1+C2G2+C3G3+C4G4+C5G5}{C1+C2+C3+C4+C5}$$

SGPA and CGPA is calculated up to two decimal places by rounding off.

R8.3

CGPA- The CGPA is the weighted average of the grade points obtained in all the courses (Theory/term work/practical/oral/presentation) of first semester to eighth semester for the students admitted in the First year and third to eighth semester for the students directly admitted at Second year.

CGPA is calculated in the same manner as the SGPA.

R8.4

In case of a student passing a failed course or in case of improvement, the earlier grade would be replaced by the new grade in calculation of the SGPA and CGPA.

9. Result:

R9.1

Based on the performance of the student in the semester examinations, the Savitribai Phule Pune University will declare the results and issue the Semester Grade sheets. The class shall be awarded to a student on the CGPA calculated. The award of the class shall be as per Table 12.

Table 12. CGPA and Class awarded

Sr. No.	CGPA	Class of the Degree Awarded
1.	7.75 or More than 7.75	First Class with Distinction
2.	6.75 or more but less than 7.75	First Class
3.	6.25 or more but less than 6.75	Higher Second Class
4.	5.5 or more but less than 6.25	Second Class

X. References

- [1] https://www.aicte-india.org/sites/default/files/Vol.%20I_UG.pdf
- [2] [https://www.aicte-india.org/sites/default/files/induction-guide-jun17-aicte%20\(1\).pdf](https://www.aicte-india.org/sites/default/files/induction-guide-jun17-aicte%20(1).pdf)
- [3] <https://www.aicteindia.org/sites/default/files/FINAL%20BEST%20PRACTICES%20IN%20AICTE%20APPROVED%20INSTITUTIONS.pdf>
- [4] <https://www.aicte-india.org/sites/default/files/AICTE%20Internship%20Policy.pdf>
- [5] <https://www.aicte-india.org/sites/default/files/ExaminationReforms.pdf>
- [6] <https://www.aicte-india.org/education/model-syllabus>