Savitribai Phule Pune University

RULES AND REGULATIONS

for

UG Choice Based Credit System for Science Programme

Under Faculty of Science and Technology

Effective from June 2019

Prof. S. D. Dhole
Chairman
UG/PG Rules & Regulations committee,
SPPU, Pune

Prof. A. D. Shaligram
Dean,
Faculty of Science & Technology
SPPU, Pune

1. Background/Preamble:

Education plays enormously significant role in building of a nation. There are quite a large number of educational institutions, engaged in imparting education in our country. Majority of them have entered recently into semester system to match with international educational pattern. However, our present education system is churning out youth who have to compete locally, regionally, nationally as well as globally. The present alarming situation necessitates transformation and/or redesigning of system, not only by introducing innovations but developing learner-centric approach.

Majority of Indian higher education institutions have been following the system which obstructs the flexibility for the students to study the subjects/courses of their choice and their mobility to different institutions. There is need to allow the flexibility in education system, so that students depending upon their interests can choose inter-disciplinary, intra-disciplinary and skill-based courses. This can only be possible when choice based credit system (CBCS),an internationally acknowledged system, is adopted. The choice based credit system not only offers opportunities and avenues to learn core subjects but also explore additional avenues of learning beyond the core subjects for holistic development of an individual. The CBCS will undoubtedly facilitate benchmarking of our courses with best international academic practices.

1.1 Preface

In a bid to fine tune our scientific education system to the global standards & practices, the Credit-Grade based performance and assessment system will be implemented with effect from June 2019 onwards for all the Under Graduate Programmes (UG) under the Faculty of Science, Savitribai Phule Pune University, Pune, starting with First Year.

With the advent of frontier science, technology and ever-changing expectations from the Industry and Society, it has become imperative to relook at the structure and subject contents of various UG courses to make it contemporary and relevant.

As per the decision by the authorities of Savitribai Phule Pune University, the faculty of Science has prepared the choice based credit system and its structure. The revised course is of 132 credits and 1 credit is equivalent to 15 hours. Assessments in credit system consist of A) In-semester continuous assessment and B) End-semester assessment for the Theory head and Term Work/ Practical / Oral / Presentation at the end of the semester for Practical, Oral, Seminar and Project Head.

The faculty of Science has shouldered the idea of incorporating latest advances in Science and technology and equips the subject/syllabus contents with latest and relevant topics and know-hows. Accordingly the new structure and syllabi are being introduced, to be implemented from the academic year 2019-20 from First Year and it will continue for subsequent years.

1. All UG programmes, under Faculty of Science shall be offered with credit system.
2. All the B.Sc. programmes running under the Faculty of Science will be of three years duration.
3. The total no. of credits required for the completion of the programme is 132 credits.
4. One credit is equivalent to 15 hours.
5. A student is required to earn 132 credits in a minimum period of six semesters.
6. There are eight mandatory credits to be earned by the students for the award of degree.
7. Final CGPA will be calculated on the basis of 132 credits.
8. There is 15 weeks of teacher-student interaction during the semester.
9. The 15 week is divided into 12 weeks teaching and 3 weeks for continuous assessment including preparation time to students during the semester.

10. The workload will be calculated on the basis of 12 weeks teaching only.

1.2 Advantages of the choice based credit system:

1. Shift in focus from the teacher-centric to student-centric education.
2. Student may undertake as many credits as they can cope with (without repeating all courses in a given semester if they fail in one/more courses).
3. CBCS allows students to choose inter-disciplinary, intra-disciplinary courses, skill oriented papers(even from other disciplines according to their learning needs, interests and aptitude) and more flexibility for students.
4. CBCS makes education broad-based and at par with global standards. One can take credits by combining unique combinations. For example, Physics with Economics, Microbiology with Chemistry or Environment Science etc.
5. CBCS offers flexibility for students to study at different times and at different institutions to complete one course (ease mobility of students). Credits earned at one institution can be transferred to another institution.

1.3 Implementation of UG course structure:

1. For First year: Student has to select 4 different subject among the subjects offered by the College /Institute.
2. For Second year: Student has to select 3 different subject among 4 subject chosen in first year
3. For Third year: Student has to select only 1 subject among the 3 subject opted in second year
4. CGPA will be calculated on the basis of core 132 credits only
5. Each theory credit is equivalent to 15 clock hours of teaching and each practical credit is equivalent to 30 clock hours of teaching in a semester.
6. There is 15 weeks of teacher-student interaction during the semester.
7. The 15 week is divided into 12 weeks teaching and 3 weeks for continuous assessment including preparation time to students during the semester.
8. The workload will be calculated on the basis of 12 weeks teaching only.
9. For the purpose of computation of work-load the following mechanism may be adopted as per UGC guidelines:
   i)1 Credit = 1 Theory period of one hour fifteen minute duration per week
   ii)1 Credit = 1 Tutorial period of one hour fifteen minute duration per week
   iii)1 Credit = 1 Practical period of two hour ten minute duration per week
10. Each theory Lecture time for FY,SY,TY is of 50 min. (3 Lectures per week for 2 credit course)
11. Each practical session time for FY is of 3 hour 15 minutes = 195 min
12. Each practical session time for SY & TY is of 4 hour 20 minutes = 260 min
13. Exam pattern: University assessment 70 % and continuous internal assessment 30 %.
14. For Internal examination minimum two tests per paper of which one has to be written test of 10 marks.
15. Methods of assessment for Internal exams: Seminars, Viva-voce, Projects, Surveys, Field visits, Tutorials, Assignment, Group Discussion.

2. UG Programme Structure:

2.1 Each B.Sc. programme is of 3 years duration. The minimum total no. of credits requirement for each programme is 132. In the structure, the credits are distributed over 6 semesters. The open elective included, gives the student a wide choice of subjects from other programmes. The Credit structure for B.Sc. programme is given below in Table 1.

Table 1

Savitribai Phule Pune University

Faculty of Science and Technology

Structure of Choice Based Credit System for Undergraduate Science Programme

Semester	Discipline Specific Core Courses (CC)		Ability Enhancement Compulsory Courses (AECC)		Discipline specific Elective Courses (DSEC)		Skill Enhancement Courses (SEC)		Total Credi
	Course	Theory 1 + Theory 2 + Practical Credit	Course	Theory + Practical Credit	Course	Theory 1 + Theory 2 + Practical Credit	Course	Theory + Practical Credit	
I	CC - I	2 + 2 + 1.5 = 5.5	-	-	-	-	-	-	22
	CC - II	2 + 2 + 1.5 = 5.5							
	CC - III	2 + 2 + 1.5 = 5.5							
	CC - IV	2 + 2 + 1.5 = 5.5							
II	CC - V	2 + 2 + 1.5 = 5.5	-	-	-	-	-	-	22
	CC - VI	2 + 2 + 1.5 = 5.5							
	CC - VII	2 + 2 + 1.5 = 5.5							
	CC - VIII	2 + 2 + 1.5 = 5.5							
III	CC - IX	2 + 2 + 2 = 6	AECC - I (Environment)	2 + 0 = 2	-	-	-	-	22
	CC - X	2 + 2 + 2 = 6	AECC – II (Language communication)	2 + 0 = 2					
	CC - XI	2 + 2 + 2 = 6							

IV	CC - XII	2 + 2 + 2 = 6	AECC - III (Environment)	2 + 0 = 2	-	-	-	-	22
	CC - XIII	2 + 2 + 2 = 6	AECC - IV (Language communication)	2 + 0 = 2					
	CC - XIV	2 + 2 + 2 = 6							
V	-	-	-	-	DSEC - I	2 + 2 + 2 = 6	SEC - I	2 + 0 = 2	22
					DSEC – II	2 + 2 + 2 = 6	SEC -II	2 + 0 = 2	
					DSEC-III	2 + 2 + 2 = 6	-	-	
VI	-	-	-	-	DSEC - IV	2 + 2 + 2 = 6	SEC - III	2 + 0 = 2	22
					DSEC – V	2 + 2 + 2 = 6	SEC - IV	2 + 0 = 2	
					DSEC-VI	2 + 2 + 2 = 6	-	-	
							Total Credit		132

2.2 Mandatory Credit courses for award of B.Sc. Degree:

In addition to the compulsory credits of 132, the student has to earn additional 8 credits from following groups by taking/participating/conducting respective activities.

Courses in Group I are compulsory.

The student can earn **maximum 04 credits from an individual group from Group 2 to Group -9.**

These extra credits will not be considered for GPA calculation, however these are mandatory for the completion and award of B. Sc. Degree.

Group 1: Physical Education (at F. Y. B. Sc. Sem. I) -01 credit
Physical Education (at F. Y. B. Sc. Sem. II) - 01 credit
(Note: Group I is compulsory for all the students as stated above.)

Group 2: Sport representation at College level - 01 credit
Sport representation at University/Statelevel - 02 credits

Group 3: National Social Service Scheme (participation in Camp): 01 credits
N.C.C.(with participation in annual camp) -01 credit
N. C. C. (with B certificate/C certificate award)- 02 credits
N.S.S./N.C.C. Republic day parade participation - 04 credits

Group 4: Avishkar participation; Extension activity participation, Cultural activity participation -01 credit
Avishkar selection at University level - 02 credits
Avishkar winner at state level - 04 credits

Group 5: Research paper presentation at State/National level - 01credits
Research paper presentation at International level - 02 credits

Group 6: Participation in Summer school/programme; Short term course (not less than 1-week duration) - 03 credit.

Group 7: Scientific Survey, Societal survey, - 02 credits.

Group 8: Field Visits; Study Tours; Industrial Visits; Participation in curricular/ cocurricular competitions- 01 Credit.

Group 9: Online certificate Courses /MOOC Courses/ Career Advancement Course up to 04 credits (Minimum 10 Hrs. / credit)

2.3 Outlines of Choice Based Credit System [Detailed description of the courses]:

a) **Core Course**(14 for honours courses; 4 discipline specific papers each for regular courses and 2 papers each for English and Hindi/MIL in B.A./B.Com): The papers under this category are going to be taught uniformly across all universities with 30% deviation proposed in the draft. The purpose of fixing core papers is to ensure that all the institutions follow a minimum common curriculum so that each institution/university adheres to common minimum standard. Also the course designed for papers under this category aim to cover the basics that a student is expected to imbibe in that particular discipline. A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.

b) **Elective Course:** Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

   i. **Discipline Specific Elective (DSE) Course**(4 for honours courses and 2 each for regular courses): Elective courses offered under the main discipline/subject of study is referred to as Discipline Specific Elective. The list provided under this category are suggestive in nature and each University has complete freedom to suggest their own papers under this category based on their expertise, specialization, requirements, scope and need. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).

   ii. **Dissertation/Project***: An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher/faculty member is called dissertation/project.

   iii. **Generic Elective (GE) Course**(4 for honours courses and 2 each for B.A./B.Com. regular courses): An elective course chosen from an unrelated discipline/subject, with an intention to seek exposure beyond discipline/s of choice is called a Generic Elective. The purpose of this category of papers is to offer the students the option to explore disciplines of interest beyond the choices they make in Core and Discipline Specific Elective papers. The list provided under this category are suggestive in nature and each University has complete freedom to suggest their own papers under this category based on their expertise, specialization, requirements, scope and need.

   P.S.: A core course offered in a discipline/subject may be treated as an elective by other discipline/subject and vice versa and such electives may also be referred to as Generic Elective.

c) **Ability Enhancement Courses (AEC):** The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC)and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii. English/Hindi/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

i. **Ability Enhancement Compulsory Courses (AECC):** Environmental Science, English Communication/Hindi Communication/MIL Communication.

ii. **Skill Enhancement Courses (SEC)**(minimum 2 for honours courses and 4 for regular courses): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work. The main purpose of these courses is to provide students life-skills in hands-on mode so as to increase their employability. The list provided under this category are suggestive in nature and each University has complete freedom to suggest their own papers under this category based on their expertise, specialization, requirements, scope and need.

d) Practical/tutorials (One each with every core and discipline/generic specific elective paper): The list of practical provided is suggestive in nature and each university has the freedom to add/subtract/edit practical from the list depending on their faculty and infrastructure available. Addition will however be of similar nature.

e) **Introducing Research Component in Under-Graduate Courses**

Project work/Dissertation is considered as a special course involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problem. A Project/Dissertation work would be of 6 credits. A Project/Dissertation work may be given in lieu of a discipline specific elective paper.

3. Eligibility for Admission:

3.1 First Year B.Sc.:

A. Higher Secondary School Certificate (10+2) or its equivalent Examination with English and three science subjects such as Physics, Chemistry, Mathematics, Biology, Geography, Geology, etc. OR

B. Three Years Diploma Course of Board of Technical Education conducted by Government of Maharashtra or its equivalent. OR

C. Higher Secondary School Certificate (10+2) Examination with English and vocational subject of + 2 level (MCVC) - Medical Lab. Technician (Subject Code = P1/P2/P3)

Admissions will be given as per the selection procedure / policies adopted by the respective college keeping in accordance with conditions laid down by the University of Pune.

Reservation and relaxation will be as per the Government rules.

3.2 Medium of Instruction: English

3.3 Award of Credits:

- Each course having 4 credits shall be evaluated out of 100 marks and student should secure at least 40 marks (40%) in continuous assessment as well as term end exam to earn full credits of that course.
- Each course having 3 credits shall be evaluated out of 75 marks as students should secure at least 30 marks (40%) in continuous assessment as well as term end exam to earn full credits of that course.

- Each course having 2 or 1.5 credits shall be evaluated out of 50 marks and student should secure at least 20 marks (40%) in continuous assessment as well as term end exam to earn full credits of that course.
- Each course having 1 credits shall be evaluated out of 25 marks as student shall secure 10 marks (40%) in continuous assessment as well as term end exam to earn full credits of that course.
- GPA shall be calculated based on the marks obtained in the respective subject provided that student should have obtained credits for that course. Structure of marks scheme for choice based credit system program is given in Table 2.

Table 2

Structure of Examination Mark Scheme of Choice Based Credit System for Undergraduate Science Programme

Sem	Course opted	Course Name	Credit	Internal Max Marks	External Max Marks	Total Max Marks
I	CC-1	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-1 Practical	Practical	1.5	15	35	50
	CC-2	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-2 Practical	Practical	1.5	15	35	50
	CC-3	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-3 Practical	Practical	1.5	15	35	50
	CC-4	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-4 Practical	Practical	1.5	15	35	50
			22	**180**	**420**	**600**
II	CC-5	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-5 Practical	Practical	1.5	15	35	50
	CC-6	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-6 Practical	Practical	1.5	15	35	50
	CC-7	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-7 Practical	Practical	1.5	15	35	50
	CC-8	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-8 Practical	Practical	1.5	15	35	50
			22	**180**	**420**	**600**
		First Year Total	**44**	**360**	**840**	**1200**

III	CC-9	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-9 Practical	Practical	2	15	35	50
	CC-10	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-10 Practical	Practical	2	15	35	50
	CC-11	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-11 Practical	Practical	2	15	35	50
	AECC -1A	Environmental Science -1	2	15	35	50
	AECC -2A	English/Hindi Communication -1	2	15	35	50
			22	**165**	**385**	**550**
IV	CC-12	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-12 Practical	Practical	2	15	35	50
	CC-13	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-13 Practical	Practical	2	15	35	50
	CC-14	Paper 1:	2	15	35	50
		Paper 2:	2	15	35	50
	CC-14 Practical	Practical	2	15	35	50
	AECC -1B	Environmental Science -2	2	15	35	50
	AECC -2B	English/Hindi Communication -2	2	15	35	50
			22	**165**	**385**	**550**
		Second Year Total	**44**	**330**	**770**	**1100**

V	DSE - 1A	Paper 1:	2	15	35	50
	DSE - 1B	Paper 2:	2	15	35	50
	DSE - 2A	Paper 3:	2	15	35	50
	DSE - 2B	Paper 4:	2	15	35	50
	DSE - 3A	Paper 5:	2	15	35	50
	DSE - 3B	Paper 6:	2	15	35	50
	DSE-1	Practical Lab 1	2	15	35	50
	DSE -2	Practical Lab 2	2	15	35	50
	DSE -3	Practical Lab 3	2	15	35	50
	SEC-1	Skill Based Course 1:	2	15	35	50
	SEC-2	Skill Based Course 2:	2	15	35	50
			22	**165**	**385**	**550**

VI	DSE - 4A	Paper 1:	2	15	35	50
	DSE - 4B	Paper 2:	2	15	35	50
	DSE - 5A	Paper 3:	2	15	35	50
	DSE - 5B	Paper 4:	2	15	35	50
	DSE - 6A	Paper 5:	2	15	35	50
	DSE - 6B	Paper 6:	2	15	35	50
	DSE-4	Practical Lab 1	2	15	35	50
	DSE-5	Practical Lab 2	2	15	35	50
	DSE-6	Project	2	15	35	50
	SEC-2	Skill Based Course 2	2	15	35	50
	SEC-2	Skill Based Course 2	2	15	35	50
			22	**165**	**385**	**550**
		Third Year Total	**44**	**330**	**770**	**1100**
		Total	**132**			**3400**

4. Evaluation Pattern:

4.1 The course carrying 100 marks shall be evaluated with Continuous Assessment (CA) and University Evaluation (UE) mechanism.

4.2 Continuous assessment shall be of 30 marks while University Evaluation shall be of 70 marks. To pass in a course of 4 credit, a student has to secure minimum 40 marks provided that he should secure minimum 28 marks in University Evaluation (UE) and 12 marks (40%) in continuous assessment.

4.3 The course carrying 50 marks shall be evaluated with Continuous Assessment (CA) and University Evaluation (UE) mechanism. Continuous assessment shall be of 15 marks while University Evaluation shall be of 35 marks.

4.4 To pass in a course of 2 or 1.5 credit, a student has to secure minimum 20 marks provided that he/she should secure minimum14 marks in University Evaluation (UE) and 6 marks (40%) in continuous assessment..

4.5 For Internal examination minimum two tests per paper of which one has to be a written test 10 Marks

4.6 Methods of assessment for Internal exams: Seminars, Viva-voce, Projects, Surveys, Field visits, Tutorials, Assignment, Group Discussion, etc (on approval of the head of the centre)

4.7 There shall be revaluation of the answer scripts of semester-end examination of theory papers only but not of internal assessment papers as per Ordinance no 134 A and B.

5. ATKT Rules:

5.1 Minimum number of credits required to take admission to Second Year of B. Sc.: 31 [70%]

5.2 Minimum number of credits required to take admission to Third Year of B.Sc.: 44 credits [100%] to be completed from F.Y. B.Sc. and at least 22 credits from S.Y. B.Sc.

6. Completion of Degree Course:

6.1 A student who earns 140 credits, shall be considered to have completed the requirements of the B. Sc. degree program and CGPA will be calculated for such student. On the basis of only 132 credits. The following percentage to grade and grade point is given in Table-3 and respective example of CGPA calculation is given in Table-4.

Table 3

Percentage to Grades and Grade Points

Sr. No.	Grade Letter	Grade Point	Marks
1	O (Outstanding)	10	$90 \leq$ Marks ≤ 100
2	A+ (Excellent)	9	$75 \leq$ Marks ≤ 89
3	A (Very Good)	8	$60 \leq$ Marks ≤ 74
4	B+ (Good)	7	$55 \leq$ Marks ≤ 59
5	B (Above Average)	6	$50 \leq$ Marks ≤ 54
6	C (Average)	5	$45 \leq$ Marks ≤ 49
7	D (Pass)	4	$40 \leq$ Marks ≤ 44
8	F (Fail)	0	Marks < 40
9	Ab (Absent)	0	

Table 4

Structure of CGPA and Mark Scheme of Choice Based Credit System for Undergraduate Science Programme to be implemented from Academic year 2019-20

Sem	Course opted	Course Name	Credit	Internal Max Marks	External Max Marks	Total Max Marks	Grade Letter (F-O)	Grade point (0 - 10)	Credit Point = (Credit x Grade point)
I	CC-1	Paper 1:	2	15	35	50	O	10	20.00
		Paper 2:	2	15	35	50	A+	9	18.00
	CC-1 Practical	Practical	1.5	15	35	50	A	8	12.00
	CC-2	Paper 1:	2	15	35	50	B+	7	14.00
		Paper 2:	2	15	35	50	B	6	12.00
	CC-2 Practical	Practical	1.5	15	35	50	C	5	7.50
	CC-3	Paper 1:	2	15	35	50	D	4	8.00
		Paper 2:	2	15	35	50	A	8	16.00
	CC-3 Practical	Practical	1.5	15	35	50	D	4	6.00
	CC-4	Paper 1:	2	15	35	50	O	10	20.00
		Paper 2:	2	15	35	50	A+	9	18.00
	CC-4 Practical	Practical	1.5	15	35	50	A	8	12.00
			22	**180**	**420**	**600**			**163.50**
					SGPA	**Total Credit point / Total credit for the semester**			**7.43**
II	CC-5	Paper 1:	2	15	35	50	O	10	20.00
		Paper 2:	2	15	35	50	A+	9	18.00
	CC-5 Practical	Practical	1.5	15	35	50	A	8	12.00
	CC-6	Paper 1:	2	15	35	50	B+	7	14.00
		Paper 2:	2	15	35	50	B	6	12.00
	CC-6 Practical	Practical	1.5	15	35	50	C	5	7.50
	CC-7	Paper 1:	2	15	35	50	D	4	8.00
		Paper 2:	2	15	35	50	C	5	10.00
	CC-7 Practical	Practical	1.5	15	35	50	B	6	9.00
	CC-8	Paper 1:	2	15	35	50	O	10	20.00
		Paper 2:	2	15	35	50	A+	9	18.00
	CC-8 Practical	Practical	1.5	15	35	50	A	8	12.00
			22	**180**	**420**	**600**	**0**		**160.50**
					SGPA	**Total Credit point / Total credit for the semester**			**7.30**
	First Year Total		**44**	**360**	**840**	**1200**			**323.50**
					SGPA	**Total Credit point / Total credit for the year**			**7.35**

III	CC-9	Paper 1:	2	15	35	50	O	10	20.00
		Paper 2:	2	15	35	50	A+	9	18.00
	CC-9 Practical	Practical	2	15	35	50	A	8	16.00
	CC-10	Paper 1:	2	15	35	50	B+	7	14.00
		Paper 2:	2	15	35	50	B	6	12.00
	CC-10 Practical	Practical	2	15	35	50	C	5	10.00
	CC-11	Paper 1:	2	15	35	50	B+	7	14.00
		Paper 2:	2	15	35	50	B	6	12.00
	CC-11 Practical	Practical	2	15	35	50	C	5	10.00
	AECC -1A	Environmental Science - 1	2	15	35	50	B	6	12.00
	AECC -2A	English/Hindi Communication -1	2	15	35	50	A	8	16.00
			22	**165**	**385**	**550**			**154.00**
					SGPA	**Total Credit point / Total credit for the semester**			**7.00**

IV	CC-12	Paper 1:	2	15	35	50	O	10	20.00
		Paper 2:	2	15	35	50	A+	9	18.00
	CC-12 Practical	Practical	2	15	35	50	A	8	16.00
	CC-13	Paper 1:	2	15	35	50	B+	7	14.00
		Paper 2:	2	15	35	50	B	6	12.00
	CC-13 Practical	Practical	2	15	35	50	C	5	10.00
	CC-14	Paper 1:	2	15	35	50	B+	7	14.00
		Paper 2:	2	15	35	50	B	6	12.00
	CC-14 Practical	Practical	2	15	35	50	C	5	10.00
	AECC -1B	Environmental Science - 2	2	15	35	50	D	4	8.00
	AECC -2B	English/Hindi Communication -2	2	15	35	50	C	5	10.00
			22	**165**	**385**	**550**			**144.00**
					SGPA	**Total Credit point / Total credit for the semester**			**6.55**
	Second Year Total		**44**	**330**	**770**	**1100**			**298.00**
					SGPA	**Total Credit point / Total credit for the year**			**6.77**

V	DSE - 1A	Paper 1:	2	15	35	50	D	4	8.00
	DSE - 1B	Paper 2:	2	15	35	50	C	5	10.00
	DSE - 2A	Paper 3:	2	15	35	50	D	4	8.00
	DSE - 2B	Paper 4:	2	15	35	50	C	5	10.00
	DSE - 3A	Paper 5:	2	15	35	50	D	4	8.00
	DSE - 3B	Paper 6:	2	15	35	50	C	5	10.00
	DSE-1	Practical Lab 1	2	15	35	50	O	10	20.00
	DSE -2	Practical Lab 2	2	15	35	50	A+	9	18.00
	DSE -3	Practical Lab 3	2	15	35	50	A	8	16.00
	SEC-1	Skill Based Course 1:	2	15	35	50	D	4	8.00
	SEC-2	Skill Based Course 2:	2	15	35	50	C	5	10.00
			22	**165**	**385**	**550**			**126.00**
					SGPA	**Total Credit point / Total credit for the semester**			**5.73**
VI	DSE - 4A	Paper 1:	2	15	35	50	D	4	8.00
	DSE - 4B	Paper 2:	2	15	35	50	C	5	10.00
	DSE - 5A	Paper 3:	2	15	35	50	D	4	8.00
	DSE - 5B	Paper 4:	2	15	35	50	C	5	10.00
	DSE - 6A	Paper 5:	2	15	35	50	D	4	8.00
	DSE - 6B	Paper 6:	2	15	35	50	C	5	10.00
	DSE-4	Practical Lab 1	2	15	35	50	O	10	20.00
	DSE-5	Practical Lab 2	2	15	35	50	A+	9	18.00
	DSE-6	Project	2	15	35	50	A	8	16.00
	SEC-2	Skill Based Course 2	2	15	35	50	D	4	8.00
	SEC-2	Skill Based Course 2	2	15	35	50	C	5	10.00
			22	**165**	**385**	**550**			**126.00**
					SGPA	**Total Credit point / Total credit for the semester**			**5.73**
	Third Year Total		**44**	**330**	**770**	**1100**			**252.00**
					SGPA	**Total Credit point / Total credit for the year**			**5.73**
	Total		**132**			**3400**			**873.50**
					CGPA	**Total Credit point / Total credit for the course**			**6.62**

7. PERFORMANCE INDICES:

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

7.1 **Semester Grade Point Average (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.

$$SGPA = \frac{\sum_{i=1}^{p} C_i G_i}{\sum_{i=1}^{p} C_i}$$

$$SGPA = \frac{\sum Grade\ Points\ Earned \times Credits\ for\ each\ course}{Total\ Credits}$$

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

$$SGPA = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4 + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

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

7.2 Course Grade Point Average (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 sixth semester for the students admitted in the First year and third to sixth semester for the students directly admitted at Second year. It is calculated in the same manner as the SGPA.

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.

8. RESULT:

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 as mentioned in Rule no. 6.1. The award of the class shall be as per Table 5. and corresponding percentage calculation for the CGPA is given in Table 6. along with all details and examples.

Table 5

CGPA distribution and corresponding class of the degree awarded

Sr. No	CGPA	Class of the Degree awarded
1	9.50 or More than 9.50	Outstanding (O)
2	8.25 or more but less than 9.50	Excellent (A+)
3	6.75 or more but less than 8.25	Very Good (A)
4	5.75 or more but less than 6.75	Good (B+)
5	5.25 or more but less than 5.75	Above Average (B)
6	4.75 or more but less than 5.25	Average (C)
7	4.00 or more but less than 4.75	Pass (D)

Table 6

Percentage calculation of a corresponding CGPA

For the calculation of Percentage from CGPA following equation can be used.

$$\%\ of\ Marks = \begin{Bmatrix} if\ O\ grade\ then\ 20 \times CGPA - 100 \\ if\ A+\ grade\ then\ 12 \times CGPA - 25 \\ if\ A\ grade\ then\ 10 \times CGPA - 7.5 \\ if\ B+\ grade\ then\ 5 \times CGPA + 26.25 \\ if\ B\ grade\ then\ 10 \times CGPA - 2.5 \\ if\ C\ grade\ then\ 10 \times CGPA - 2.50 \\ if\ D\ grade\ then\ 6.6 \times CGPA + 13.6 \end{Bmatrix}$$

The factor considered in the above equations are evaluated from the grade point and marks distribution given in Table 3. The examples of the calculation of percentage are given in the Table 7.

Table 7

Some examples of CGPA to percentage calculations

Obtained CGPA	Equation	Percentage (%)	Grade
10	20×10-100=100	100	O
9.75	20×9.75-100=95	95	O
9.5	20×9.5-100=90	90	O
9.0	12×9-24=84	84	A+
8.25	12×8.25-24=75	75	A+
8.0	10×8.0-7.5=72.5	72.5	A
7.0	10x7.0-7.5=62.5	62.5	A
6.75	10x6.75-7.5=60.0	60.0	A
6.25	5x6.25+26.25=57.5	57.5	B+
5.75	5x5.75+26.25=55	55	B+
5.5	10x5.5-2.5=52.5	52.5	B
5.25	10x5.25-2.5=50	50	B
4.75	10x4.75-2.50=45	45	C
4.0	6.6x4.0+13.6=40	40	D

While declaring the result, the existing relevant ordinances are applicable. There is also a provision for verification and revaluation. In case of verification, the existing rules will be

applicable. The revaluation result will be adopted if there is a change of at least 10% marks and in the grade of the course.

For grade improvement a student will have to take minimum 30% of the requisite number of credits for the concerned degree. These courses will be theory courses from the parent department. Grade improvement programme will be implemented at the end of the academic year. A student can opt for the grade improvement programme only after the declaration of the result for his/her final semester exam, i.e., at the end of the next academic year after passing the final examination and within two years of completion of the degree and only once.