

Semester based credit and grading system for M-pharm programme

University of Pune has issued Rules and Regulations for the credit and Semester System in Post Graduate Centres of the affiliated colleges of the University of Pune. (Ref:

In pursuance of the above decision to implement Credit System at the Post Graduate level and ensure continuous assessment, the UoP has decided to implement the Credit and Semester System (CSS) in all its affiliated colleges and recognised institutions where post graduate courses are conducted.

University of Pune under Faculty of Pharmaceutical Sciences conduct the following Post graduate Courses

1. Pharmaceutics
2. Pharmaceutical Chemistry
3. Pharmacology
4. Pharmacognosy
5. Quality assurance Techniques

The courses are partly by paper and partly by research.

The rules and regulations issued by University of Pune as above need clarification. In view of this a manual is sought necessary which may help the college to implement the credit system without any confusion or ambiguity.

1. Rationale for introduction of Credit System:

“Enhanced learning opportunities, ability to match learners’ scholastic needs and aspirations, improvement in educational quality and excellence, flexibility for learners to complete the programme in specified period of time, standardization and comparability of educational programmes.”

Some of the specific advantages of using the Credit system as outlined in the available literature on the topic are as listed below:

2. Advantages of the Credit System:

- Represents a much-required shift in focus from *teacher-centric to learner-centric* education since the workload estimated is based on the investment of time in learning, not only in teaching.
- Helps to record course work and to document learner workload realistically since all activities are taken into account - not only the time learners spend in lectures or seminars but also the time they need for individual learning and the preparation of examinations etc.
- Segments learning experience into calibrated units, which can be accumulated in order to gain an academic award.

- Helps self-paced learning. Learners may undertake as many credits as they can cope with without having to repeat all the courses in a given semester if they fail in one or more courses. Alternatively, they can choose other courses and continue their studies.
- Affords more flexibility to the learners allowing them to choose inter-disciplinary courses, change majors, programmes, etc.
- Respects ‘Learner Autonomy’. Allows learners to choose according to their own learning needs, interests and aptitudes.
- Makes education more broad-based. One can take credits by combining unique combinations. For example, if a learner is engaged in pharmacy practice or community pharmacy shall get benefit while earning credits for a course etc .
- Facilitates Learner Mobility. Offers the opportunity to study at different times and in different places. Credits earned at one institution can be transferred to another.
- Helps in working out twinning programmes.
- Is beneficial for achieving more transparency and compatibility between different educational structures.
- A credit system can facilitate recognition procedures as well as access to higher education for non-traditional learners.

3. Scientific approach to implementation

Any institution desirous of working out a comprehensive Credit system needs to adopt a systematic approach that handles most, if not all the aspects that need attention. Introducing the Credit system without adequate policy formulation and clear implementation guidelines is quite likely to encounter problems that are dealt with through *ad hoc* decisions. Such decisions may have long-term consequences which cannot easily be set right. Care has to be taken to see that the learner, who must be the ultimate beneficiary of the system, does not suffer academically because of absence of procedures or lack of adequate attention to detail when evolving the system. Apart from the fact that any form of injustice caused to the learner - the ultimate ‘consumer’ in the educational process – can lead to legal issues, the lack of a comprehensive approach may affect the key features like curricular flexibility, learner autonomy and learner mobility that are central to the system. The following major steps should, therefore, be taken by any higher education provider wanting to introduce the Credit System.

3.1 At the Programme level

- a. Specify for each academic programme (eg M-Pharm),
 - i. the programme structure (core courses, optional courses, etc and their year wise distribution if applicable),
 - ii. entry level requirements,
 - iii. minimum and maximum duration for successful completion,
 - iv. programme objectives,
 - v. teaching-learning strategies (number of teaching hours/lecture hours, tutorial hours, practical conduct hours, etc involved)
 - vi. and evaluation components (nature and number of assignments, tutorials, tests, etc.) for the entire programme.
 - vii. Identify also the modules / courses that may be studied either as part of the programme or may be taken up independently.
 - viii. the syllabus to be considered under each course included in a given programme, specify the objectives of each course.
 - ix. Break up the syllabus of each course into smaller components called 'Units' and state the Specific Learning Outcomes (SLO) for each Unit.
 - x. Considering the nature of content to be studied for each course, number of lectures / practical's to be conducted and
 - xi. the evaluation components to be completed under each course, distribute the credit points among the different course components of the programme to be completed in a given year.
 - xii. As a thumb rule, each course should normally be in the range of 4 to 6 Credit Points.
 - xiii. Allocate the course wise credits based on an estimate of the number of *hours that would be required by an average learner to fulfill the basic requirements of the course including time spent on attending lectures, preparing for all the evaluation components, etc.(learner's workload =Learning hours)*.
 - xiv. Credits should also be allocated to all the units included within a given course - for compulsory or core courses as well as elective courses.
 - xv. Credits should also be allocated to project work, thesis, industrial placements, etc where these components are a part of a degree programme,

3.2 At the institutional level:

- i. Programme wise catalogues should be prepared in detail for all the academic programmes offered by the institution.

- ii. Apart from basic information regarding admission procedure, fees to be paid, eligibility criteria, academic calendar and overall programme structure,
- iii. each catalogue should contain other details like course choices available, course wise syllabi, course wise learning outcomes (what learners are expected to know, understand and be able to do after studying a given course)
- iv. and workload (the time learners typically need to achieve the learning outcomes), expressed in terms of credits.
- v. The programme wise catalogues thus prepared should be published in print form as well as made available on the web for open and transparent dissemination of information to all.
- vi. An internal Coordination Committee should be established to handle all matters related to the implementation of the Credit System. Apart from assisting in inter-departmental coordination, this Committee should also look into matters like inter-institutional credit transfer arrangements and course equivalence with the assistance of the concerned departments/officials from the university.
- vii. Transcript of record describing learning achievements of the concerned learner may be given in proforma on demand while seeking admission for higher studies.

4. Basic Concepts

Some Key Terms

i. Program:

A 'Program' is a set of courses that are linked together in an academically meaningful way and generally ends with the award of a Certificate or Diploma or Degree depending on the level of knowledge attained and the total duration of study. For example:

M-Pharm (Pharmaceutics)

M-Pharm (Pharmacology)

M-Pharm (Pharmaceutical Chemistry)

M-Pharm (Quality Assurance Techniques)

M-Pharm (Pharmacognosy) are Programs, not Courses.

ii. Course:

A 'course' in simple terms corresponds to the word 'subject' used in many universities. A course is essentially a constituent of a 'program' and may be conceived of as a composite of several learning topics taken from a certain knowledge domain, at a certain level. All the learning topics included in a course must necessarily have academic coherence, that is, there must be a common thread linking the various components of a course.

iii. Units:

A course consists of units, and unit consists of topics.

iv. Credit Point:

This has a reference to the ‘Workload’ of a learner and is an index of the number of learning hours deemed for a certain segment of learning. These learning hours may include a variety of learning activities like *reading, reflecting, discussing, attending lectures / counseling sessions, watching especially prepared videos, writing assignments, preparing for examinations, etc.* Generally, a system of assigning Credit Points (CP) for a single course is practiced in most countries across the globe. Credits assigned for a single course always pay attention to how many hours it would take for an average learner to complete a single course successfully. *The fallacy of assigning credits to a course purely based on how many lectures (teaching hours) are conducted for a learner at a certain level needs to be avoided. 1 credit is construed as corresponding to approximately 15 learning hours.*

Viz: lectures conducted are the teaching hours which are not equal to learning hours.

v. Credit completion and Credit accumulation:

Each program is assigned a credit number which is maximum for example

As per Pune university

M Pharm program which is partly by paper partly by research

the learner has to earn 100 credits with average credit of 25 to be earned in each of the semester. The proportion of laboratory work shall be around 40% of total credits. The first two semesters are by paper, and two semesters are by research.

Total credits	Sem I	SemII	SemIII	Sem IV
100	52		48	
	6 Theory courses X 4 credits =24 credits 2 Theory courses X 3 credits =06credits 3 Practical courses X 4 credits=12credits 2 Seminar=04 credits Research work=06 credits		Seminar on Research topic=4 credits Seminar on recent trends in Pharmaceutical Sciences=4 credits Research work=18 credits	
	Total=52 credits		Total=48credits	

One semester is about 19 to 20 weeks including examination days and period for preparation for examination.

vi. Credit Point (CP):

ONE credit point is equivalent to 15 clock hours of workload of learner calculated as teacher-student contact per semester.

workload of learner = Lecture hours (Face to face teaching) + notional learner work load

Thus if a student has attended all the classroom teaching or lectures for a course it does not mean that he has earned 100% credit assigned for the course as it has to include the notional workload of the learner.

Notional workload of the learner includes reading, discussions, assignments etc. It is evaluated by preparing spread sheet having well defined parameters that should reflect the participation in the classroom teaching and further learning by the student.

The proportion of face to face and notional may vary from course to course.

e.g: Suppose a course has been assigned 04 credits to be earned over a period of one semester.

4 credits = 60 hours in 15 weeks= 04 hours per week

4 credits = 120 hours in 15 weeks =08 hours per week

The hours per week should not be considered as no of lectures per week.

The proportion may vary 50; 50 or 75;25 or 25;75 etc depending on the type of course.

e.g. Biopharmaceutics-the notional learner load can be in the form of tutorials as numerical problem

Regulatory affair it can be a case study/field work/mini presentation etc.

Thus credit completion or acquisition of credit is **necessary for the grant of term.**

However acquisition of 75 % credit cannot be considered adequate to grant the term.

Credit allotted= credit earned=term granted

A model Credit structure for four semesters Program:

	Course 1	Course 2	Course 3	Course 4	Course 5	Course 6	Course 7 Seminar	Course 8 Research work
sem I	4	4	4	4	4	3	2	--
Sem II	4	4	4	4	3	--	2	6
Sem III	----- 26* -----							
Sem IV	----- 22* -----							

*the credit will be earned by progress of research project

As (01 credit=15 hours)

18+18 credits in sem III or IV will be very less time span to get a research project completed

If we presume that a student spends 5 -6 hour in research related work.

6x 6=36 hours per week or 36x 20=720 hours per sem=25 credits Thus for earning one credit in research a student has to work for 25 to 30 hours

Thus 01 credit=25-30 hours spent in research & related work

The level of performance of a student in the form of marks or grade has no bearing on the no of credits earned collected by the student.

Thus each course of an academic program that has been assigned specific credit points also has a certain scheme of learner evaluation as well as certain specific criteria defining successful completion. Credit completion or Credit acquisition may

be considered to take place after the learner has successfully cleared all the evaluation criteria with respect to a single course.

vii. Credit Transfer:

Apart from maintaining an account of credits acquired by a learner over a period of time for a wide range of courses, the main idea behind implementing the credit system is to make provision for learner mobility. Credit Transfer means that credits earned at one institution for one or more courses under a given program are accepted under another program either by the same institution or another institution.

viii. Grading:

The word Grade is derived from the latin word gradus, meaning ,step. Grading, in the educational context is a method of reporting the result of a learner’s performance subsequent to his evaluation. It involves a set of alphabets which are clearly defined and designated and uniformly understood by all the stake holders. A properly introduced grading system not only provides for a comparison of the learner’s performance but it also indicates the quality of performance but it also indicated the quality of performance with respect to the amount of efforts put in and the amount of Knowledge acquired at the end of the course by the learners.

5. Evaluation System

The continuous evaluation is the soul of credit and grading system therefore Assessment consists of

a) In semester continuous assessment and

b) End semester assessment.

The scheme of Examination shall be divided into two parts: an *In semester continuous assessment and End semester assessment* (semester end examination). *In semester continuous assessment* includes Assignments, Seminars, Case Studies, Quizzes, Viva, Open book test, Unit Tests etc..

<i>In semester continuous assessment</i>	<i>End semester assessment</i>	Total (for each course or head of passing)
50 %	50%	100%

In semester continuous assessment of 50 % for each course will be as follows:

a. Course: Theory

Sr. No	Evaluation type	Marks	Test
1	Assignments/Short Quiz/ <i>mini</i> Project / Term paper/ Extension work (Any two) Active participation in routine class instructional deliveries(Open book test/ seminars/ presentation) One case study	10 05 05	I
2	One Unit Test (multiple choice questions objective/descriptive)	30	II

b. Course: Practical

Sr. No	Evaluation type	Marks	Test
1	Individual Practical (all practicals) (Day to day assessment) Viva Journal	10 05 05	I
4	Internal Practical exam	30	II

c. Course: Seminar

Sr. No	Evaluation type	Marks
1	Ref work & Scientific contents	10
2	Communication skill	05
3	Discussion /Defence	05
4	Presentation	30

Structuring of the program in terms of units is necessary. The units to be examined are to be notified for In semester continuous assessment time to time. Every unit needs to be included in tests/continuous evaluation step by step.

All units are to be included in the End semester assessment.

Illustration:

Course: Theory:

		Test I							
Paper/Cr		Assignments/Short Quiz/miniProject / Term paper/ Extension work (Any two)	Active participation in routine class instructional deliveries(Open book test/ seminars/ presentation) One case study	Unit Test	Internal 50	External 50	Total 50/100	Grade Point	Letter grade
	4	10	10	30	20/50	20/50	50/100		
I	4	7	7	20	34	40	74	5	A

PERFORMANCE GRADING:

For converting marks in to Grade point

Grade	Marks out of 100	Marks out of 50	Grade Points
O: Outstanding	100 to 75	50 to 38	6
A: Very Good	74 to 65	37 to 33	5
B: Good	64 to 55	32 to 28	4
C: Average	54 to 50	27 to 25	3
D: Satisfactory	49 to 45	24 to 22	2
E: Pass	44 to 40	21 to 20	1
F: Fail	39 to 0	19 to 0	0

Final Grade Points:

Grade Points	Grade
05.00-6.00	O
04.50-04.99	A
03.50-04.49	B
02.50-03.49	C
01.50-02.49	D
00.50-01.49	E
00.00-00.49	F

Mode of conduct of Internal Assessment for Additional Examination

Class test or assignment for Internal Assessment:

If a student misses an internal assessment examination he/she will have a second chance with the permission of the Principal in consultation with concern teacher. Such a second chance shall not be the right of the student.

In case he/she wants to repeat internal assessment he/she can do only by registering for the said courses during the 3rd and 4th Semester.

Calculations of SGPA & CGPA

The formula for GPA will be based on weighted average. The final GPA will not be printed unless a student passes courses equivalent to 100 credits.

(i) **Semester Grade Point Average (SGPA) =**

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

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

(ii) Cumulative Grade Point Average (CGPA) =

$$\text{CGPA} = \frac{\sum_{i=1}^F C_i G_i}{\sum_{i=1}^F C_i}$$

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

If the GPA is higher than the indicated upper limit in the three decimal digit then the student be awarded higher final grade (e.g. a student getting GPA of 4.492 may be awarded 'A')

There will be only final compilation and moderation at GPA (Final) level done at the department. While declaring the result the existing relent 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 course.

Grade card:

The grade card will reflect the marks obtained by the learner, Credit points of the individual Course as well as Semester, conversion of marks into grades, calculation of SGPA for each individual semester and the CGPA for the complete Programme at the end of the final semester.

A model proforma:

Courses in the semester	Marks obtained	Grade	Grade Points	Credit(C)per course	Credit Earned	CG=(CxG)	SGPA= ΣCG/ ΣC
Course-I							
Course-II							
Course-III							
Course-IV							
Course-V							
Course-VI							
Total Credits=					ΣC=	ΣCG=	Grade=
Passes Credit Earned=							



University of Pune
ABC College of Pharmacy
Address
GRADE CARD

College logo

Programme: M. Pharm (Pharmaceutics)

Semester: First Semester

Photo

Examination Seat No.	Name of the candidates	Month & Year of examination

Course Code	Course Title	Marks Obtained		Marks (100)	Grade	Grade Point	Credit Point	CG=CXG	GPA=	
		Int.Asst (50)	Ext.Asst (50)						ΣCG/	ΣC
M.1.1	Advanced analytical Techniques	30	35	65	A	5	4	20	5.4	
M.1.2	Advanced analytical Techniques(Practical)	35	40	75	O	6	4	24		
M.1.3	Research Methodology	35	35	70	A	5	4	20		
M.1.4	Advanced Pharmaceutics	40	44	84	O	6	4	24		
M.1.5	Advanced Pharmaceutics(Practical)	45	40	85	O	6	4	24		
E.1.4	Elective I (SPT)	35	32	67	A	5	3	15		
	Seminar	32		32/50	B	4	2	08		
							ΣC=25	ΣCG=135	Grade=O	
Remarks: Passes Credit Earned: 25						SGPA=5.4				

Result Declared on:

Chairperson (exam)

Principal