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ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ  
**PTU** PUNJAB  
TECHNICAL  
UNIVERSITY

Ref. No. PTU/DA/322

Dated 18/6/14

**Principal / Director**  
**All affiliated College / Institutes**

**Subject : Implementation of Grading System.**

**Sir,**

As approved by the 44<sup>th</sup> Academic Council, the grading system is to be implemented from session 2014-15 onwards. This scheme is applicable from academic session 2014-15 for new batches of admission only.

The credit based scheme is available at University website ([www.ptu.ac.in](http://www.ptu.ac.in)). This is for your information, record and further necessary action at your end.

Yours sincerely

**Deputy Registrar**  
**(Academics)**

- Copy to :**
1. PS to VC for the kind information of the Vice-Chancellor.
  2. Dean (Academics)
  3. Controller of Examinations
  4. Registrar

*"Propelling Punjab to a prosperous Knowledge Society"*

**Punjab Technical University Jalandhar**

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The committee took the agenda of designing the policies of Grading System for the constituent institutes of Punjab Technical University and made the following recommendations:

1. The academic performance of each student in each subject will be evaluated as per levels outlined in table 1.

Table 1: Structure of grading academic performance

S. No.	Grade	Qualitative Meaning	Grade points
1	O	Outstanding	10
2	A	Excellent	9
3	B+	Very good	8
4	B	Good	7
5	C	Average	6
6	D	Marginal	4
7	F	Failed	--
8	I	Incomplete	--
9	E	Detained	--

Description of Grades:

- “O” Grade stands for outstanding achievement. The D grade stands for marginal performance. It is the minimum passing grade in any subject.
  - “I” grade denotes incomplete performance. It may be awarded to a student if he/she does not appear in end semester examination due to some extraordinary circumstances.
  - “E” grade is awarded if student is detained i.e., attendance in theory class/laboratory is less than 75% and the student will have to repeat the course as and when offered.
2. Clearly for each subject, corresponding to earned letter grade, particular grade points are associated in table 1. The Grade Point Average (GPA) is calculated by taking the number of grade points a student earned in a given period of time divided by the total number of subjects taken. However all the subjects do not have the same weightage. The weight assigned to each subject is called credits. Following procedure shall be used to assign credits for each component of teaching:

Table 2: Credits for components of teaching

S. No.	Teaching component	Credit(s)
1	Lecture	01 credit for 01 lecture hour per week
2	Tutorial	01 credit for 01 tutorial hour per week
3	Practical	01 credit for 02 practical hour per week. Three/four Laboratory hours per week shall be assigned two credits. Five/six Laboratory hours per week shall be assigned three credits. Seven/eight Laboratory hours per week shall be assigned four credits.
4	Seminar	01 credit for 01 practical/study hour per week
5	Project	01 credit for 01 practical/study hour per week
6	Dissertation	01 credit for 01 practical/study hour per week
7	Industrial Training	Equivalent to one semester though comprehensive evaluation mechanism has to be framed and followed with spirit

The performance of a student will be evaluated in terms of two indices, viz., semester grade performance average (SGPA) and cumulative grade point average (CGPA) for the completed semesters at any point in time.

Semester Grade Performance Average (SGPA): The performance of a student in a particular semester will be measured by semester grade point average (SGPA), which is a weighted average of the grades secured in all the subjects/teaching components taken in a semester and scaled to a maximum 10.

Let the grade points associated with the letter grades awarded to a student in assigned subjects are  $g_1, g_2, g_3, g_4, g_5$  and the corresponding credits are  $w_1, w_2, w_3, w_4, w_5$ , the SGPA will be calculated as

$$\text{SGPA} = \frac{w_1g_1 + w_2g_2 + w_3g_3 + w_4g_4 + w_5g_5}{w_1 + w_2 + w_3 + w_4 + w_5}$$

In general, it can be written as

$$\text{SGPA} = \frac{\sum_{i=1}^m w_i g_i}{\sum_{i=1}^m w_i}$$

where  $w_i$  is credit of  $i^{\text{th}}$  subject,  $g_i$  is grade point of  $i^{\text{th}}$  subject and  $m$  is number of subjects in one semester.

For instance, suppose a student is registered for one 5-credit course, four 4-credit course and one 3-credit course during a semester i.e., a total 24-credits. If he secures O, A, B+, B, C & D grades respectively in these courses, his SGPA can be calculated as follows:

$$\begin{aligned} \text{SGPA} &= \frac{(5 \times 10 + 4 \times 9 + 4 \times 8 + 4 \times 7 + 4 \times 6 + 3 \times 4)}{24} \\ &= \frac{182}{24} = 7.6 \end{aligned}$$

SGPA will be calculated up to one decimal place only.

Cumulative Grade Point Average (CGPA): The cumulative grade point average (CGPA) indicates the overall academic performance of a student in all the subjects registered upto and including the latest completed semester. It is computed in the same manner as the SGPA, considering all the subjects (say  $n$ ), and is given by

$$\text{CGPA} = \frac{\sum_{i=1}^n w_i g_i}{\sum_{i=1}^n w_i}$$

The grades of any and all repeated subjects shall be included in the official transcripts. However once a student repeats and passes a course in which he/she had failed earlier, the earlier fail grade do not enter into the computation of CGPA.

3. The performance of student in each subject shall be evaluated through continuous assessment examinations/tests/quizzes etc as per table 3. An academic calendar will notify the schedule of continuous assessment.

Table 3: Continuous Assessment Criterion

Examination (Theory)	Syllabus to be covered in the examination	Time allotted for the examination	Weightage (Marks)	Remarks
Midterm Sessional Test (MST) – I	Upto 33%	1.5 Hour	24%	Best two tests shall be considered and in any case no special test will be conducted for defaulters. MST-I, II, III and quizzes etc constitute internal.
Midterm Sessional Test(MST) – II	33 % to 66 %	1.5 Hour		
Midterm Sessional Test (MST) – III	66% to 100%	1.5 Hour		
Quizzes/Group discussion / Class discussion/ attendance/ seminars / projects/ case studies etc.	As per discretion of teacher	As per discretion of teacher	16%	
End Semester Examination	100% Syllabus	3 Hours	60%	Checking of answer sheets and display to the satisfaction of students should complete within one week of end semester examinations. This component is called external.
Total			100%	Marks may be rounded off to nearest integer
<b>Practical</b>				
Daily evaluation of practical records/Assignment/Viva Voce etc.			60%	Internal
Final Practical Performance + Viva Voce	100% Syllabus	3 Hours	40%	External
Total			100%	Marks may be rounded off to nearest integer

- No claim for revision of marks whatsoever shall be entertained, after the students are shown evaluated answer scripts to their satisfaction. Before final declaration of results, moderation of marks can be done if required through an appropriate committee.

The marks computed out of 100 shall be used to find grade and grade points for each subject/component. Finally grade points of all subjects shall be used to compute SGPA and then CGPA.

4. All evaluations of different components of a subject shall be done in marks for each student. The marks obtained in theory/practical/ subjects or other teaching components shall be scaled to 100 (40 internal+60 external) up to next integer value. Finally the grades will be assigned to each student in each subject as per following guidelines:
  - (a) Absolute grading will be used for class having less than 30 (<30) students. The criterion is outlined in table 4.

Table 4: Absolute grading criterion

Sr. No.	Marks	Grade	Grade points
1	$\geq 90$ & $\leq 100$	O	10
2	$\geq 80$ & $< 90$	A	9
3	$\geq 70$ & $< 80$	B+	8
4	$\geq 60$ & $< 70$	B	7
5	$\geq 50$ & $< 60$	C	6
6	$\geq 40$ & $< 50$	D	4
7	$< 40$	F	

The grade boundaries as indicated above may be marginally adjusted.

- (b) Relative grading will be used for a class having 30 or more ( $\geq 30$ ) students as statistical distributions are suitable for samples having 30 or more number of elements. The criterion is outlined in table 5.

Table 5: Relative grading criterion

Sr. No.	Marks	Grade	Grade points
1	$\geq \mu + 1.5\sigma$	O	10
2	$\geq \mu + 1.0\sigma$ & $< \mu + 1.5\sigma$	A	9
3	$\geq \mu + 0.5\sigma$ & $< \mu + 1.0\sigma$	B+	8
4	$\geq \mu - 0.5\sigma$ & $< \mu + 0.5\sigma$	B	7
5	$\geq \mu - 1.0\sigma$ & $< \mu - 0.5\sigma$	C	6
6	$\geq \mu - 1.5\sigma$ & $< \mu - 1.0\sigma$	D	4
8	$< \mu - 1.5\sigma$	F	

$\mu$  is mean and  $\sigma$  is standard deviation of marks obtained in the class

The grade boundaries as indicated above may be marginally adjusted.

Lower and higher outliers can be separated before for calculations.

5. It is compulsory to appear in the end semester examination (external), failing which he/she will be awarded "F" grade in that subject. It is also compulsory to secure at least 20% marks in end semester examination of each subject. If a student secures less than 20% marks he/she will be awarded "F" grade in that subject.
6. A student who secures "F" grade will have an option to appear in end semester examination i.e. external component. His/her internal marks will be freezed and he/she will be given grade as per mean and standard deviation of his/her original class without modification in grades of other students. In case, absolute grading is applicable then fixed thresholds will be used as per table 4. Moreover he/she will also have to option to re-register in that subject, whenever it is offered next time.
7. Every teaching staff member handling a class will take attendance till the last instructional day in the semester. The statement of the attendance with marks in MST should be displayed on the notice board and submitted to the department within one week of MST. The next day after the last instructional day, a statement of shortage of attendance i.e. detainee student list may be submitted to the department.
8. A student who has an attendance lower than 75% in a subject, whatever may be the reason for the shortfall in attendance, will not be permitted to sit for the end semester examination in the subject. His/her enrolment in the subject shall be treated as cancelled. He/She will be awarded E grade for the subject. In order to earn credits for this subject, the student will have to re-register for the subject, when it is offered next time. The department will not make any adjustment in time table for such students. In case a student is detained in the elective course, atleast one chance in one year has to be given to the student by making appropriate arrangements for holding the classes.
9. Condone in attendance may be permitted only by honorable vice chancellor in extraordinary circumstances.
10. "I" grade (Incomplete) would be awarded to the student who has not appeared in the end semester examination due to a justified reasons in extraordinary circumstances. I grade shall be awarded to the student only after approval from honorable vice chancellor. In case a student get "I" grade, he will have option to appear only in end semester examination. His/her internal marks will be freezed and he/she will be given grade as per mean and standard deviation of his/her original class without modification

in grades of other students. In case, absolute grading is applicable then fixed thresholds will be used as per table 4.

11. There are no grade points for "F", "I" and "E" grades, so they are not considered for SGPA and CGPA. However for calculating total number of credits, all the subjects allotted in the semester(s) are considered for calculation of SGPA and CGPA.
12. SGPA and CGPA shall be calculated up to one decimal place, after rounding off the second decimal to the nearest first place integer decimal i.e. 0.05 is to be increased to 0.1. CGPA should be computed after every semester.
13. It is the discretion of the teacher to not give "O" grade to any student if student has not gone through all the necessary teaching components of the subject.
14. D grade shall not be awarded for percentage of marks less than 35% even in relative grading. Still further, no student having 40% or more marks will be awarded failing grade "F" i.e. any student having 40% or more marks will get atleast "D" grade.
15. A student can apply for improvement in grade of any subject in which he/she has got "D" grade. He/she will be allowed to appear only in end semester examination and will be evaluated as per performance of his original class. In any case grade of other students of his/her original class shall not change. The student can improve to the most in two theory subjects and maximum grade can be up to "A" grade.
16. A minimum of 40% of the total credits of the two semesters in each year are required to be earned for entering in the next year of the course, failing which student will not be allowed to register in 3<sup>rd</sup>, 5<sup>th</sup> or 7<sup>th</sup> semester as per applicability.
17. The conversion of SGPA or CGPA to Percent score will be carried out by multiplication of respective SGPA or CGPA by a factor of 10. The equivalence between important percentages in absolute marks system and CGPA is as follows:
 

CGPA	4	5	6	7	8	9	9.5
Percentage	40	50	60	70	80	90	95

CGPA of 6 is equivalent to 60 percent for first division.
18. An honors degree will be conferred at CGPA of 8.0 or above provided student should not have obtained even a single "F" in any subject during whole duration of the course.