



Date: November 29, 2022

TO WHOM IT MAY CONCERN

Calculation of GPA and CGPA

Each letter grade is converted into grade points. These grade points (G_i) are weighted with the number of credits (C_i) assigned to the course. The Grade Point Average (GPA) is the weighted average of Grade Points awarded to a student in a semester. The weighted average of GPA of all semesters at any point of time is the Cumulative Grade Point Average (CGPA) at that point of time.

GPA and CGPA calculations can be expressed as |

$$GPA = \frac{\sum_{i=1}^n C_i G_i}{\sum_{i=1}^n C_i} \quad CGPA = \frac{\sum_{i=1}^N GPA_i (\sum_{j=1}^n C_j)}{\sum_{i=1}^N (\sum_{j=1}^n C_j)}$$

Where n = Number of courses registered

C_i = Course credits

G_i = Grade point

N = Number of semesters

Example of calculation of GPA and CGPA

Courses	Credit	Letter	Grade	$C_i * G_i$
Engg. Mathematics-1	4	A	9	36
Mechanics of Solids	4	A+	10	40
Basic Electronics	4	B	8	32
Mechanical Engg. Science	4	C	7	28
Engineering Physics	4	B	8	32
Comm. Skills in English	3	A	9	27
Basic Workshop Practice	1	A	9	9
Engineering Physics lab	1	B	8	8

Credits =25

$$GPA = (36+40+32+28+32+27+9+8)/25 = 8.48$$

Semeste	Credits earned	GPA
i	25	8.48
ii	25	8.62
iii	26	8.24
iv	26	8.42

Total credits earned 102

$$CGPA = 8.48 \times 25 + 8.62 \times 25 + 8.24 \times 26 + 8.42 \times 26 = 860.66/102 = 8.44$$



(Signature)
Controller of Examinations
Manipal University Jaipur