# Homework: Calculating GPA

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| Name: | Landon Moon |
| Student ID #: | 1001906270 |
| NetID: | Lxm6270 |
| Date: | 11/10/21 |

## Weighted Averages

A syllabus contains a description of the way the grade is calculated for the semester score. This type of scoring is called a weighted average. The individual score of the grade component is multiplied by the percent weight of the calculation. The sum of the multiplications becomes the numeric grade for the course.

For example:

|  |  |  |  |
| --- | --- | --- | --- |
| **Coursework** | **Percentage** | **Score** | **Weighted Score** |
| Homework | 70% | 84.00 | 70%x84.00=58.80 |
| Attendance | 15% | 81.00 | 15%x81.00=12.15 |
| Exam | 15% | 87.00 | 15%x87.00=13.05 |
|  |  | Weighted Average: | 84.00 |

Calculate the Weighted Average for the following classes.

1 Find the Weighted Average

|  |  |  |  |
| --- | --- | --- | --- |
| **Coursework** | **Percentage** | **Score** | **Weighted Score** |
| Homework | 70% | 90.00 | 70%x90.00=63.00 |
| Attendance | 15% | 92.00 | 15%x92.00=13.80 |
| Exam | 15% | 88.00 | 15%x88.00=13.20 |
|  |  | Weighted Average: | 90.00 |

2 Find the Weighted Average

|  |  |  |  |
| --- | --- | --- | --- |
| **Coursework** | **Percentage** | **Score** | **Weighted Score** |
| Homework | 10% | 90.00 | 10%x90.00=9.00 |
| First Midterm | 30% | 80.00 | 30%x80.00=24.00 |
| Second Midterm | 30% | 79.00 | 30%x79.00=23.70 |
| Final Exam | 30% | 81.00 | 30%x81.00=24.30 |
|  |  | Weighted Average: | 81.00 |

3 Find the Weighted Average

|  |  |  |  |
| --- | --- | --- | --- |
| **Coursework** | **Percentage** | **Score** | **Weighted Score** |
| Term Paper | 20% | 72.00 | 20%x72.00=14.40 |
| Midterm Exam | 25% | 77.00 | 25%x77.00=19.25 |
| Final Exam | 25% | 75.00 | 25%x75.00=18.75 |
| Programming Labs | 30% | 72.00 | 30%x72.00=21.60 |
|  |  | Weighted Average: | 74.00 |

4 Find the Weighted Average

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| --- | --- | --- | --- |
| **Coursework** | **Percentage** | **Score** | **Weighted Score** |
| Homework | 10% | 25.00 | 10%x25.00=2.50 |
| Quizzes | 10% | 5.00 | 10%x5.00=0.50 |
| Midterm Exam | 40% | 70.00 | 40%x70.00=28.00 |
| Final Exam | 40% | 75.00 | 40%x75.00=30.00 |
|  |  | Weighted Average: | 61.00 |

## Calculating GPA

It is very important for students to be able to work out their grade point average (GPA). Just having a number pop up on a webpage is not enough, especially if you are trying to make predictions or have concerns. The GPA is the total number of earned grade points divided by the total number of hours taken.

Grade points are the numeric value of the grade multiplied by the number of hours a class is worth.

|  |  |
| --- | --- |
| Grade | Value |
| A | 4 |
| B | 3 |
| C | 2 |
| D | 1 |
| F | 0 |

The second digit of a course number is the number of hours the course is worth for calculations.

CSE 1310 has a 3 as its second digit, and is worth 3 hours.

For example, a student is takes History 1311, and makes an A. That same semester, the student takes POLS 2311 and makes a B, and BIOL 1441 and makes a C. How to find the GPA?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Course | Title | Grade | Credit  Hours | Points | Grade  Points |
| HIST 1311 | History of the USA before 1864 | A | 3 | 4 | 3x4=12 |
| POLS 2311 | Federal Government | B | 3 | 3 | 3x3=9 |
| BIOL 1441 | Cellular Organization | C | 4 | 2 | 4x2=8 |
|  |  |  | 10 |  | 29 |

|  |  |  |  |
| --- | --- | --- | --- |
| Hours Taken= | 10, | Total Credit Hours= | 29 |

29 Grade Points/10 hours taken= 2.90 GPA

Calculate the Grade Point Average (GPA) for the following Grade Reports

1 Calculate the GPA.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course** | **Title** | **Grade** | **Credit Hours** | **Grade Value** | **Grade Points** |
| ENGL 1301 | English Composition | A | 3 | 4 | 12 |
| HIST 1311 | History of the USA before 1864 | B | 3 | 3 | 9 |
| POLS 2311 | Federal Government | B | 3 | 3 | 9 |
| CSE 1310 | Introduction to Programming | C | 3 | 2 | 6 |
|  |  | Total hours: | 12 | Total Grade Points: | 36 |
|  |  |  |  |  |  |
|  |  | GPA: | 3.0 |  |  |

2 Calculate the GPA.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course** | **Title** | **Grade** | **Credit Hours** | **Points** | **Grade Points** |
| MATH 1421 | Pre-Calculus | C | 4 | 2 | 8 |
| ART 1309 | Art History | A | 3 | 4 | 12 |
| COMS 2302 | Professional Communications | A | 3 | 4 | 12 |
| IE 2308 | Engineering Economics | B | 3 | 3 | 9 |
|  |  | Total hours: | 13 | Total Grade Points: | 41 |
|  |  |  |  |  |  |
|  |  | GPA: | 3.15 |  |  |

3 Calculate the GPA.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course** | **Title** | **Grade** | **Credit Hours** | **Points** | **Grade Points** |
| MATH 1426 | Calculus 1 | C | 4 | 2 | 8 |
| BIOL 1441 | Cellular Organization | B | 4 | 3 | 12 |
| HIST 1312 | History of the United States after 1864 | A | 3 | 4 | 12 |
| POLS 2312 | Texas Government | A | 3 | 4 | 12 |
|  |  | Total hours: | 14 | Total Grade Points: | 44 |
|  |  |  |  |  |  |
|  |  | GPA: | 3.14 |  |  |

4 Calculate the GPA.

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| --- | --- | --- | --- | --- | --- |
| **Course** | **Title** | **Grade** | **Credit Hours** | **Points** | **Grade Points** |
| MATH 2425 | Calculus 2 | D | 4 | 1 | 4 |
| PHYS 1444 | Technical Physics 2: Electromagnetics | B | 4 | 3 | 12 |
| CSE 1105 | Introduction to CSE | A | 1 | 4 | 4 |
| IE 3301 | Engineering Probability and Statistics | C | 3 | 2 | 6 |
| CSE 2315 | Discrete Structures | B | 3 | 3 | 9 |
|  |  | Total hours: | 15 | Total Grade Points: | 35 |
|  |  |  |  |  |  |
|  |  | GPA: | 2.33 |  |  |