



Examples of Course Structures

Course 1

The course grade is calculated as a weighted total of a programming assignment grade (40%), a homework assignment grade (10%), a mid-term exam grade (20%), and a final exam grade (30%).

The programming assignment grade is the total of 6 programming assignments each of which is graded on a 20-point scale but the lowest grade is dropped.

The homework assignment grade is the total of 5 programming assignments each of which is graded on a 20-point scale.

The mid-term exam is graded on a 100-point scale.

The final exam is graded on a 100-point scale.

Course 2

The course grade is calculated as a weighted total of a lab grade (10%), a homework grade (30%), and an exam grade (60%).

The lab grade is calculated as the total of 11 labs each of which is graded on a 10-points scale, but the lowest grade is dropped.

The homework grade is calculated as a weighted total of 5 homework assignments, each of which accounts for 20% of the total and is graded on a 100-point scale.

The exam grade is calculated as a weighted total of the quiz grade (50%) and the final exam grade (50%).

The quiz grade is a weighted total of four quizzes each of which accounts for 25% and is graded on a 100-point scale.

The final exam is graded on a 100-point scale.

Course 3

The course grade is calculated as a weighted total of 12 quiz grades each of which is graded on a 100-point scale but the highest and lowest grades are dropped.

Course 4

The course grade is the weighted total of a mid-term exam (30%) and a final exam (70%).

The mid-term exam is graded on a 100-point scale.

The final exam is graded on a 100-point scale.

Course 5

The course grade is the weighted total of a participation grade (10%), a homework grade (30%), and an exam grade (60%).

Participation is graded on a 100-point scale.

The homework grade is the total of the 5 highest (of 6) grades on homework assignments each of which is graded on a 20-point scale.

The exam grade is the weighted total of mid-term exams (30%) and the final exam (70%).

The mid-term exams grade is the weighted total of exam 1 (50%) and exam 2 (50%) both of which are graded on a 100-point scale.

The final exam is graded on a 100-point scale.

Examples of Grade Calculations

Using the Structure of Course 1

Suppose a student received the following grades.

Programming Assignments:

PA1: 20

PA2: 18

PA3: 5

PA4: 15

PA5: 20

PA6: 20

Homework:

H1: 20

H2: 0

H3: 5

H4: 10

H5: 15

Midterm Exam: 80

Final Exam: 75

The “Programming Assignments” grade would be the sum of the five grades after dropping the lowest. That is: $20 + 18 + 15 + 20 + 20 = 93$.

The “Homework” grade would be the sum of the five grades. That is $20 + 0 + 5 + 10 + 15 = 50$.

Finally, the “Course Grade” would be $93 \cdot 0.4 + 50 \cdot 0.1 + 80.0 \cdot 0.2 + 75 \cdot 0.3 = 37.2 + 5.0 + 16.0 + 22.5 = 80.7$.

Using the Structure of Course 5

Suppose a student received the following grades.

Participation: 90

Homework:

H1: 15

H2: 0

H3: 6

H4: 19

H5: 17

H6: 20

Exams:

Midterms:

Exam 1: 65

Exam 2: 85

Final Exam: 70

The "Midterms" grade would be $65 \cdot 0.5 + 85 \cdot 0.5 = 75$. Hence, the "Exams" grade would be $75 \cdot 0.3 + 70 \cdot 0.7 = 71.5$.

The "Homework" grade would be the sum of the five grades after dropping the lowest (i.e., the 2). That is: $15 + 6 + 19 + 17 + 20 = 77$.

The "Participation" grade would be 90.

Finally, the "Course Grade" would be $90 \cdot 0.1 + 77 \cdot 0.3 + 71.5 \cdot 0.6 = 9 + 23.1 + 42.9 = 75$.