

Weighted Grades (two options are available for this function)

1) Weight by Category:

When an Item is created, a category must be selected for the item from a list of options. The Weight by Category option also lists these categories and allows a number to be assigned to each category. This number is a percentage of the total value for the final grade of an item.

For example: Item 1 and 2 are categorized as Exams and given a Weight by Category of 90% towards the final grade. Item 3 is categorized as Extra Credit and given a Weight by Category of 10% towards the final grade. - The grade for Item 1 is 75 out of a possible 80 points. - The grade for Item 2 is 87 out of a possible 100 points. - The grade for Extra Credit is set to 20 out of a possible 25 points. To calculate this manually the algorithm: $[S \text{ (item score/possible points)} \times (\text{category weight}/\# \text{ items in category})]$ is used Item 1: $[(75/80) * (90/2)] = 42.19$ Item 2: $[(87/100) * (90/2)] = 39.15$ Extra Credit: $[(20/25) * (10/1)] = 8$ $42.19 + 39.15 + 8 = 89.34$ The Weighted Total for the final grade is 89.34%

2) Weight by Item:

This option allows the instructor to assign a weight to individual items and the final grades are based on those items, regardless of their category.

For example, if five Items are in the same category, Exam for instance, and the Instructor wishes to base the final grade on a single Exam, they would select the name of the Item they wish to base the weighted total grade on and enter 100 as the percentage value.

In this scenario, a numeric value for each Item in the course is set to a desired percentage. The Instructor wishes to base the weighted total on a single Exam item and also on an Extra Credit item: - Set percentage value of Exam to 80% - Set percentage value of Extra Credit to 2% - Set percentage value of Assignment to 18% - Student grade for the Exam is 37 out of a possible 65 points - Student grade for Extra Credit is 5 out of a possible 5 points - Student grade for Assignment is 38 out of a possible 100 points To calculate this manually the algorithm: $[S \text{ (item score/possible points)} \times (\text{item weight})]$ is used. Exam: $[(37/65) * 80] = 45.54$ Extra Credit: $[(5/5) * 2] = 2$ Assignment: $[(38/100) * 18] = 6.84$ $45.54 + 2 + 6.84 = 54.38$ The weighted total for these items is: 54.38%

NOTE 1: If a gradebook entry has been assigned a weight, whether it is by category or item, and the user has yet to receive a grade for that entry, the gradebook will calculate that entry as a Zero until a score is entered for the item.

NOTE 2: If the Score for an Item is set to Display as a Letter or custom grade set by the instructor, and the grade is entered/recorded as that Letter, it will be calculated using the percentages noted below.

If the instructor enters a numeric score for that item, even though it will be displayed as a Letter, the actual numeric score entered will be used in calculations, not the default percentage.

Setting for Letter Grades -have the following translations: (Note: These settings can be modified by an instructor. This list can be found on the Add/Modify Display Options page)

Letter Grade (in score/percentages):

97 to 100 = A+	94 to 97 = A	90 to 94 = A-
87 to 90 = B+	84 to 87 = B	80 to 84 = B-
77 to 80 = C+	74 to 77 = C	70 to 74 = C-
67 to 70 = D	64 to 67 = D	60 to 64 = D-
59 below = F		

Letter Grades used in calculations (in percentages):

98.5 = A+	95 = A	91.5 = A-
88.5 = B+	85 = B	81.5 = B-
78.5 = C+	75 = C	71.5 = C-
68.5 = D+	65 = D	61.5 = D-
55 = F		

Formulas used in calculations:

1. Variance can be calculated manually by using the formula: $\text{Variance} = \frac{\sum ((\text{score} - \text{average})^2)}{\text{number of scores}}$
2. Use the square root of the variance for calculating standard deviation
3. Total Points is the sum of User High and Low scores
4. Weighted Total is the Weighted Sum of a User scores

Decimal Points: The Gradebook should always round after 2 decimal places. All areas in the interface where grades are displayed should display up to 2 decimal places, but not if the decimals are irrelevant (i.e., display 45.33, but do not display 45.00, and display 45.555 as 45.56).

NOTE:: In App Pack3, the instructor will be able to select to display running total or running weighted total, which means that if a user does not have a grade assigned, instead of counting it as a zero, as the system does not, it will leave that item out of the calculations until a grade is assigned for it.