



How are grades calculated in a percentage Gradebook?

Course grade calculations depend on your *Gradebook's* organization and grade entry setting, percentages (described here) or [points](#):

- **No categories (default)** - Each gradebook item is assigned a relative weight, which is also the item's point value. The relative weight is applied to the student's percentage grade for each item to find the student's score for that item. The course grade is determined by the sum of the student's item scores divided by the total points possible.
- **Categories only** - Categories are used to group gradebook items, where items are assigned a relative weight. Similar to a gradebook with **No categories**, the course grade is determined by the student's total score divided by the total points possible. This structure provides the option to drop the lowest grade(s), keep the highest grade(s), or drop the highest grade(s) within a category.
- **Categories & weighting** - Items are grouped into categories, where each category is assigned a percentage of the course grade. The total score of all items in a category will comprise the category's percentage of the course grade. This structure provides the option to drop the lowest grade(s), keep the highest grade(s), or drop the highest grade(s) within a category.

 **Tip:** To award students extra credit points, you can create **extra credit** items or categories, as described in [How does extra credit work in Gradebook?](#)

 **Note:** To edit the **relative weight (point value)** of an item added to the gradebook from another tool, such as *Assignments* or *Tests & Quizzes*, go to the item's tool of origin, e.g., *Assignments*. For more information, see [How do I add and edit gradebook items from Assignments, Tests & Quizzes, or Lessons?](#)

No categories

Students	Course Grade	Assignment 1 Relative weight: 10 Due: -	Assignment 2 Relative weight: 10 Due: -	Assignment 3 Relative weight: 10 Due: -	Quiz 1 Relative weight: 50 Due: -
Filter students	Course grade when all items are graded	Relative weight = Item point value			
Student, Five (t1s6u-stu5)	A- [72/80] (90%)	80%	90%	100%	90%
Student, Four (t1s6u-stu4)	B+ [70/80] (87.5%)	90%	70%	85%	91%
Student, One (t1s6u-stu1)	B [68/80] (85%)	100%	80%	95%	81%
Student, Three (t1s6u-stu3)	B [59/70] (84.29%)	80%	85%	Ungraded item	85%

In a default gradebook with **No categories**, the *Gradebook* calculates the course grade by:

1. Calculating a student's score for each item by multiplying the **percentage grade** the student earned by the item's **relative weight (point value)**.

In the example pictured above, Student Five earned **80%** on **Assignment 1**, which has a **relative weight** of **10**. His score for **Assignment 1** is $0.80 \times 10 = 8$ points.

2. Totaling the **student's scores** for all graded items in the category.

Student Five earned: **Assignment 1** (8 points) + **Assignment 2** (9 points) + **Assignment 3** (10 points) + **Quiz 1** (45 points) = **72 points**.

3. Totaling the **point values** for all graded items in the category.

Assignment 1 (10 points) + **Assignment 2** (10 points) + **Assignment 3** (10 points) + **Quiz 1** (50 points) = **80 total points**.

4. Dividing the **student's score** by the **total points**, then **multiplying that number by 100**.

Student Five's **course grade** is **90%**:

- $72/80 = 0.90$
- $0.90 \times 100 = 90$

Note: **Ungraded** items are **not included** in a student's course grade. Leaving a grade entry blank reduces the total points possible by the point value of the ungraded item for that student.

In the example pictured above, most students were graded out of **80** total points. However, Student Three has not received a grade for Homework 3 (10 points possible). Thus, her course grade is $59/70 = 0.8429$ (84.29%).

Categories only

Students	Course Grade Category	Assignment 1 Category: Assignments Relative weight: 10 Due: -	Assignment 2 Category: Assignments Relative weight: 10	Assignments Relative weight: 20 Drop Lowest: 1	Quiz 1 Category: Quizzes Relative weight: 10 Due: -	Quiz 2 Category: Quizzes Relative weight: 20 Due: -	Quizzes Relative weight: 30
	Points received for graded items that are not dropped	Lowest grade being dropped		Drop Lowest 1 shown with category average			
Student Five (t1s6u-stu5)	A (38/40) (95%)	100%	88%	100%	90%	95%	93.33%
Student Four (t1s6u-stu4)	D+ (27/40) (67.5%)	70%	90%	90%	0%	90%	60%
Student One (t1s6u-stu1)	B+ (35.5/40) (88.75%)	80%	70%	80%	100%	87.5%	91.67%

With **Categories only**, course grades are calculated the same as in a [gradebook with No categories \(described above\)](#). However, if all items in a category have the same total point value or the category has the **Equal Weight** option enabled, you can automatically drop the lowest or highest grades, or keep the highest grades within that category. Dropped grades are omitted from the course grade calculation, and the total points possible in the category are reduced by the point value(s) of the omitted item(s).

For more information on grade calculations when grades are dropped/kept, see [How does Gradebook calculate automatically dropped grades?](#) For more information on equal weight categories, see [How does Gradebook calculate grades with an equal weight category?](#)

Note: You must assign each item to a category for the item to be included in students' course grades. For steps to assign existing items to categories, see [How do I edit or delete a gradebook item?](#)

Ungraded items are **not included** in a student's course grade. Leaving a grade entry blank reduces the total points possible by the point value of the ungraded item for that student.

Categories & Weighting

Use **Categories & weighting** to group gradebook items into categories, and weight each category as a percentage of the total course grade. The sum total of all category percentages must equal **100%** (or more, if there is an **Extra Credit** category - for more information, see [How does extra credit work in Gradebook?](#))

For example, if **Exams** are worth **20%** of the course grade, the **Exams** category (**20%**) could include a **Midterm Exam** (50 points) and **Final Exam** (100 points).

Each student's **course grade** is the sum of the categories' **weighted averages**. See below for additional information about dropping and keeping grades, and example calculations.

Note: You must assign each item to a category for the item to be included in students' course grades. For steps to assign existing items to categories, see [How do I edit or delete a gradebook item?](#)

Ungraded items are **not included** in a student's course grade. If any grade entry is left blank, the total points possible within the category are reduced by the point value(s) of the ungraded item(s) for that student.

Dropping and keeping grades

If all items in a category have the same total point value or the category has the **Equal Weight** option enabled, you can automatically drop the lowest or highest grades or keep the highest grades within that category. Dropped grades are omitted from the course grade calculation, and the total points possible in the category are reduced by the point value(s) of the omitted item(s).

For more information on grade calculations when grades are dropped/kept, see [How does Gradebook calculate automatically dropped grades?](#) For more information on equal weight categories, see [How does Gradebook calculate grades with an equal weight category?](#)

Categories & Weighting - Example Calculations

Below is an example of how a *Gradebook* with three weighted categories, **Exams** (20%), **Assignments** (40%), and **Quizzes** (40%), would calculate a student's grade.

Students	Course Grade	Final Exam	Midterm Exam	Exams Weighted Average	Assignment 1	Assignment 2
	Category Calculated Course Grade	Category: Exams [20%] Relative weight: 100 Due: -	Category: Exams [20%] Relative weight: 50 Due: -	Weighted Average [20%] Relative weight: 150 Category Average	Category: Assignments [40%] Relative weight: 10 Due: -	Category: Assignments [40%] Relative weight: 10 Due: -
Student_One (t1s6u-stu1)	R- (82%)	95%	80%	90%	75%	Lowest grade being dropped
Student_Three (t1s6u-stu3)	A (95.73%)	85%	96%	88.67%	95%	90%
Student_Two (t1s6u-stu2)	B (86%)	78%	84%	80%	80%	90%

The Gradebook calculates the student's score for each item by:

Multiplying the **percentage grade** the student earned by the item's **relative weight (point value)**.

In the example pictured above, in **Exams**, Student One earned:

- **95%** on Final Exam, which has a **relative weight** of **100**. His score for **Final Exam** is $0.95 \times 100 = \mathbf{95 \text{ points}}$.
- **80%** on Midterm Exam, which has a **relative weight** of **50**. His score for **Midterm Exam** is $0.80 \times 50 = \mathbf{40 \text{ points}}$

The Gradebook calculates the weighted average in each category by:

1. Totaling the **student's scores** for all graded items in the category.

In the example pictured above, in **Exams**, Student One earned: **Final Exam** (95 points) + **Midterm Exam** (40 points) = **135 points**.

2. Totaling the **point values** for all graded items in the category.

Final Exam (100 points) + **Midterm Exam** (50 points) = **150 total points**.

3. Dividing the **student's score** by the **total points**, then **multiplying that number by 100**, to determine the **category average**:


Student One's **category average** in **Exams** is **90%**:

- $135/150 = 0.90$
- $0.90 \times 100 = \mathbf{90\%}$

4. Applying the **weight** to the **category average**.

Because the **Exams** category is worth **20%** of the course grade, Student One's **weighted average** is **18**:

- To get 20% of a number, multiply the number by 0.2.
- $90 \times 0.2 = \mathbf{18}$

 **Tip:** The **category average** is shown in a column to the right of the gradebook items in that category. The column header includes the name of the category.

The Gradebook totals the weighted averages to produce the course grade.

If Student One received a **category average** of **75%** for **Assignments** and **85%** for **Quizzes**, his **course grade** is **82%**, calculated as follows:

- **Exams** (20%) weighted average (shown above) = **18**
- **Assignments** (40%) weighted average = $0.4 \times 75 = \mathbf{30}$
- **Quizzes** (40%) weighted average = $0.4 \times 85 = \mathbf{34}$
- **Course Grade** = $18 + 30 + 34 = \mathbf{82}$