

How are grades calculated in Gradebook?

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

- **No categories (default)** - Each Gradebook item is assigned a simple point value. The course grade is determined by the student's total score divided by the total points possible.
- **Categories only** - Categories are used to group Gradebook items, where items are assigned a simple point or percentage value. 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 and 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.

No Categories

Students	Course Grade	Homework 1	Homework 2
Filter students		Total: 10 Due: -	Total: 10 Due: -
	Course Grade When All Items Are Graded		
Student, Five (tls6u-stu5)	A- [72/80] (90%)	8	9
Student, Four (tls6u-stu4)	B+ [70/80] (87.5%)	9	7
Student, One (tls6u-stu1)	B [68/80] (85%)	10	Ungraded Item
Student, Three (tls6u-stu3)	B [59/70] (84.29%)	8	

In a default gradebook with **No categories**, course grades are calculated for each student by dividing the sum of the scores received for all graded items by the total points possible for those items.

In the example pictured above, Student Five earned a total of 72 points out of 80 total points possible. This student's course grade is $72/80 = 0.90$ (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 2 (10 points possible). Thus, this student's course grade is $59/70 = 0.8429$ (84.29%).*

Categories Only

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, 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).

By using the **Keep Highest** option instead of the **Drop Lowest** to drop the lowest grade(s), no grades will be dropped in the category until the number of items kept is exceeded.

See below for example calculations when grades in a category are dropped or kept.

Note: You must assign each item to a category for the item to be included in students' course grades.

Grades can only be entered in Gradebook items; you cannot enter grades into a category with no items.

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 with Drop Lowest/Highest

The screenshot shows a gradebook interface with two main categories: **Assignments** and **Quizzes**. The **Assignments** category is set to 'Drop Lowest: 1'. The **Quizzes** category includes Quiz 1 (10 points) and Quiz 2 (20 points). The table shows grades for five students. Annotations highlight the 'Drop Lowest' feature, showing that the lowest grade in the Assignments category is dropped, and the category average is calculated based on the remaining grades.

Students	Course Grade	Assignment 1	Assignment 2	Assignments Drop Lowest: 1	Quiz 1 Total: 10 Due: -	Quiz 2 Total: 20 Due: -
Student, Five (tts6u-stu5)	A (38/40) (95%)	10	8	8		19
Student, Four (tts6u-stu4)	D+ [27/40] (67.5%)	7	9	90%	0	18
Student, One (tts6u-stu1)	B+ [35.5/40] (88.75%)	8	7	80%	10	17.5
Student, Three (tts6u-stu3)	B [33.5/40] (83.75%)	9.5	10	100%	7	16.5
Student, Two (tts6u-stu2)	B [33/40] (82.5%)	9	8	80%	8	17

Pictured above is a gradebook with two categories: **Assignments** and **Quizzes**. The **Assignments** category drops the lowest grade, and includes two assignments, each worth 10 points. The **Quizzes** category includes **Quiz 1** (10 points) and **Quiz 2** (20 points). There are **40**

points possible because only one assignment and the two quiz grades are included in the course grade calculation.

In our example, **Student Five** received the following grades:

Assignments:

- **Assignment 1** (10 points)
- **Assignment 2** (8 points) (lowest grade - dropped)

Quizzes:

- **Quiz 1** (9 points)
- **Quiz 2** (19 points)

Since the **Assignment 2** grade is dropped for Student Five, his course grade is **95%**:

- $10 + 9 + 19 = 38$ points earned
- $38/40 = 0.95$

Categories with Keep Highest

Students	Course Grade	Assignments				Quizzes		Quizzes
		Assignment 1 Total: 10 Due: -	Assignment 2 Total: 10 Due: -	Assignment 3 Total: 10 Due: -	Assignments Keep Highest: 2	Quiz 1 Total: 10 Due: -	Quiz 2 Total: 20 Due: -	
Student, Five (ts6u-stu5)	A- [46/50] (92%)	10	8		90%	9	19	93.33%
Student, Four (ts6u-stu4)	C- [35/50] (70%)		9	8	85%	0	18	60%
Student, One (ts6u-stu1)	B [42.5/50] (85%)	8	7	6.5	75%	10	17.5	91.67%

Pictured above is a gradebook with two categories: **Assignments** and **Quizzes**. The **Assignments** category keeps the two highest grades, and includes three assignments, each worth 10 points. The **Quizzes** category includes **Quiz 1** (10 points) and **Quiz 2** (20 points). There are **50 points** possible because only two assignments and the two quiz grades are included in the course grade calculation.

In our example below, we will use the **Keep Highest** option versus **Drop Lowest** to show how it affects **Student Five's** course grade.

Before All Grades Are Entered for Student Five - Keep Highest 2 Assignments

Students	Course Grade	Assignments				Quizzes		Quizzes
		Assignment 1 Total: 10 Due: -	Assignment 2 Total: 10 Due: -	Assignment 3 Total: 10 Due: -	Assignments Keep Highest: 2	Quiz 1 Total: 10 Due: -	Quiz 2 Total: 20 Due: -	
Student, Five (ts6u-stu5)	A- [46/50] (92%)	10	8		90%	9	19	93.33%
Student, Four (ts6u-stu4)	C- [35/50] (70%)		9	8	85%	0	18	60%
Student, One (ts6u-stu1)	B [42.5/50] (85%)	8	7	6.5	75%	10	17.5	91.67%

Before the third assignment grade is entered, **Student Five** received the following grades:

Assignments:

- **Assignment 1** (10 points) (1st highest grade - kept)
- **Assignment 2** (8 points) (2nd highest grade - kept)

Quizzes:

- **Quiz 1** (9 points)
- **Quiz 2** (19 points)

No grades are dropped yet because we have used the **Keep Highest** option, so Student Five's grade is **92%**:

- $10 + 8 + 9 + 19 = 46$ points earned
- $46/50 = 0.92$

In comparison, if **Drop Lowest** were used instead, Student Five's grade would have been calculated as only 36 points earned out of 40 points (**95%**), as shown in the example above where the lowest grade of two assignment is dropped.

After All Grades Are Entered for Student Five - Keep Highest 2 Assignments

Students	Course Grade	Assignments			Assignments Keep Highest 2	Quizzes		Quizzes
		Assignment 1 Total: 10 Due: -	Assignment 2 Total: 8 Due: -	Assignment 3 Total: 7 Due: -		Quiz 1 Total: 10 Due: -	Quiz 2 Total: 20 Due: -	
Student, Five (ts6u-stu5)	A- [46/50] (92%)	10	8	7	90%	9	19	93.33%
Student, Four (ts6u-stu4)	C- [35/50] (70%)	7	9	8	85%	0	18	60%
Student, One (ts6u-stu1)	B [42.5/50] (85%)	8	7	6.5	75%	10	17.5	91.67%

Now we enter the third assignment grade. The highest two assignment grades are kept, so the lowest assignment grade (**Assignment 3**) is dropped:

Assignments:

- **Assignment 1** (10 points) (1st highest grade - kept)
- **Assignment 2** (8 points) (2nd highest grade - kept)
- **Assignment 3** (7 points) (lowest grade - dropped)

Quizzes:

- **Quiz 1** (9 points)
- **Quiz 2** (19 points)

Student Five's grade is still **92%**:

- $10 + 8 + 9 + 19 = 46$ points earned
- $46/50 = 0.92$

Keeping the highest grades instead of dropping the lowest grades ensures that Student Five's grade is calculated out of the same number of total points (**50 points**) both before and after entering the third assignment grade.

If the **Drop Lowest** option had been used instead, the calculated course grade for Student Five would have been calculated out of **40 points** before entering the third assignment grade. The course grade would have decreased significantly after the third assignment grade was entered, going from an **A (95%)** down to an **A- (92%)**.

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 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 for example calculations.

Note: You must assign each item to a category for the item to be included in students' course grades.

Grades can only be entered in Gradebook items; you cannot enter grades into a category with no items.

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, 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).

By using the **Keep Highest** option instead of **Drop Lowest** to drop the lowest grade(s), no grades will be dropped in the category until the number of items kept is exceeded.

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		Exams [20%]		Assignments [40%]	
Filter students	Calculated Course Grade	Midterm Exam Total: 50 Due: -	Final Exam Total: 100 Due: -	Assignment 1 Total: 10 Due: 12/17/2018	Assignment 2 Total: 10 Due: -
Student, One (tis6u-stu1)	B- (82%)	40	95	90%	8.5
Student, Three (tis6u-stu3)	A (95.93%)	48	85	88.67%	9.5
Student, Two (tis6u-stu2)	B- (80%)	42	78	80%	8

The Gradebook calculates the weighted average in each category by doing the following:

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 (95 points) + **Midterm Exam** (40 points) = **150 total points**

3. Dividing the **student's score** by the **total points** and 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 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**, that student's **course grade** would be **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** = $18 + 30 + 34 = \mathbf{82}$