HowTo: Adding Extra Credit for tests or assignments

This document is broken into three main sections:

1. <u>Quick Steps</u> -
   A quick walk through of the steps required for adding extra credit

2. <u>Detailed Example</u> -
   A detailed example of setting up extra credit, including images

3. <u>Explanations, reasons and notes</u> -
   Details on the reasons and process behind setting up extra credit

Quick Steps

In these steps, it describes adding extra credit to a particular grade category. If you want extra credit within more than one category, simply repeat all the steps for each category. If you do not use grading categories, simply treat the entire course as it were a category.

Steps for adding extra credit

1. Go to **Gradebook Setup** in the administration block

2. For the category the grade(s) are in, change the aggregation method to **Mean of grades (with extra credit)**.

3. This will add another column called **Extra Credit** directly to the right of the Weight column. Make sure all current grade items within this category have an extra credit value of 0.0.

4. Go to the bottom of the page and click on the button **Add grade item** so that you can add an extra credit grade item.

5. On the page that comes up, give this new grade item a name that describes its purpose such as "Test Extra Credit".

6. Set the maximum points value to 100.

7. Near the bottom of the page, in the **Parent Category** section, change the **Grade category** to the category you are adding extra credit to.
   (If you miss this step, you can move it into the category later.

8. Click on the "Save changes" button at the bottom. This will take you back to the **Categories and items** page.

9. Change the **Extra Credit** value of this new grade item to 1.000.

Detailed Example

I am going to add an extra credit grade item to my test category. First, I will change the test category's aggregation method to **Mean of grades (with extra credit)**.

Then I will make sure that all the tests have an **Extra Credit** value of **0.000** so they will not be treated as extra credit.

Name	Aggregation	Weight	Extra Credit	Max grade	Actions	Select
📁 Developement D0123 Shannon	Weighted mean of grades ▾			-	✎ 👁 🔒	All None
📁 Course Tests	Mean of grades (with extra credits) ▾		0.5000	-	✎ ✕ ⬍ 👁 🔒	All None
	Mean of grades					
	Weighted mean of grades					
📄 Section 1 Test	Simple weighted mean of grades		0.0000	100.00	✎ ▦ ✕ ⬍ 👁 🔒	☐
	Mean of grades (with extra credits)					
📄 Section 2 Test	Median of grades		0.0000	100.00	✎ ▦ ✕ ⬍ 👁 🔒	☐
	Lowest grade					
📄 Section 3 Test	Highest grade		0.0000	100.00	✎ ▦ ✕ ⬍ 👁 🔒	☐
	Mode of grades					
📄 Section 4 Test	Sum of grades		0.0000	100.00	✎ ▦ ✕ ⬍ 👁 🔒	☐
$\bar{x}$ Category total	-			100.00	▦ 👁 🔒	
📁 Other Stuff	Weighted mean of grades ▾		0.5000	-	✎ ✕ ⬍ 👁 🔒	All None
✔ ngfjhgfjuyh	-	1.0000		10.00	✎ ⬍ 👁 🔒	☐
📄 single file	-	1.0000		100.00	✎ ⬍ 👁 🔒	☐

Then I will add a new grade item to handle the extra credit. Be sure and set the **Maximum grade** at **100**.

Once I save it and go back to the **Categories and items** page, I will find my new extra credit grade item and change its **Extra Credit** value to **1.000**.

Now to check it, I have put in a 70 for all 4 test grades. That way the average comes out nice and neat and easy to verify. I decide to add 2 extra credit points to each test. This is a total of 8 extra credit points. This should be easy to verify, because the new average should be 72 (2 extra points in each test). I enter 8 points in the extra credit grade item, update it, and Ta-Da! It works.

Course Tests					
Section 1 Test	Section 2 Test	Section 3 Test	Section 4 Test	Test Extra Credit	$\bar{x}$ Category total
70.00	70.00	70.00	70.00	8.00	72.00
0.00–100.00	0.00–100.00	0.00–100.00	0.00–100.00	0.00–100.00	0.00–100.00
70.00 (1)	70.00 (1)	70.00 (1)	70.00 (1)	8.00 (1)	72.00 (1)

8 out of 100 possible extra credit points   Test grades
Extra Credit value (multiplier)

$$\frac{(8 * 1.000) + (70+70+70+70)}{4} = \frac{8 + 280}{4} = 72$$

Number of tests ⟶ 4

If I wanted an extra credit grade item for each test, I would simply follow the same steps three more times so that I would have an extra credit item matching each test. Doing this would be to let students know exactly which assignments they got extra credit for instead of a single extra credit entry for all assignments in that category.
(I have highlighted the extra credit grade items in this picture. They will not be highlighted like that in Moodle.)

Name	Aggregation	Weight	Extra Credit	Max grade	Actions	Select
📁 Developement D0123 Shannon	Weighted mean of grades			-		All None
📁 Course Tests	Mean of grades (with extra credits)	0.5000		-		All None
Section 1 Test	-		0.0000	100.00		☐
Section 1 Test Extra Credit	-		1.0000	100.00		☐
Section 2 Test	-		0.0000	100.00		☐
Section 2 Test Extra Credit	-		1.0000	100.00		☐
Section 3 Test	-		0.0000	100.00		☐
Section 3 Test Extra Credit	-		1.0000	100.00		☐
Section 4 Test	-		0.0000	100.00		☐
Section 4 Test Extra Credit	-		1.0000	100.00		☐
$\bar{x}$ Category total	-			100.00		
📁 Other Stuff	Weighted mean of grades	0.5000		-		All None
✓ ngfjhgfjuyh	-	1.0000		10.00		☐
single file	-	1.0000		100.00		☐

Extra credit grade items

To test it out and make sure it works correctly, I have taken the same four tests from before (all with a 70) and input 2 points for each of the four extra credit grades. We should end up with the same 72 category total since each test has 2 points added. Ta-Da! It does!
(Once again I have highlighted the extra credit grades in this picture. They will not be highlighted like that in Moodle.)

	Section 3 Test		Section 3 Test Extra Credit		Section 4 Test		Section 4 Test Extra Credit		$\bar{x}$ Category total	
	70.00		2.00		70.00		2.00		72.00	
–100.00	0.00–100.00		0.00–100.00		0.00–100.00		0.00–100.00		0.00–100.00	
2.00 (1)	70.00 (1)		2.00 (1)		70.00 (1)		2.00 (1)		72.00 (1)	

Explanations, reasons and notes

Problems

You may wonder "**Why can't I simply raise the maximum grade to 105 to allow for 5 points of extra credit?**". Unfortunately, it does not work like that. The **Maximum Grade** value for a grade is merely how many points can be awarded in the assignment, not how many points can be applied toward the average. When calculating the average for a grade category or the final grade, it works all the **percentages** out, and then applies them to the maximum grade. So, if you set the maximum grade to 110 for a test, and then a student got 50 out of 100 questions correct and you entered 50 in for the grade, he would get a test grade of 45 (not 50). 50 out of 100 gives him 50%. 50 out of 110 is 45%. No good.

How extra credit works

According to Moodle:

> *"A value greater than 0 treats this grade item's grades as Extra credit during aggregation. The number is a factor by which the grade value will be multiplied before it is added to the sum of all grades, but the item itself will not be counted in the division."*

This means that when figuring a category average, the extra credit grade is figured and added to the sum of all grades in the category and then that value is divided by the number of non-extra credit grades in the category. So extra credit grades are added to the category sum without being figured into the count of grades to use in the division. Here is an example:

A test category has 3 test grades. One test has a 70, one has an 80 and the last has a 90.
An extra credit grade item is added, and an extra credit grade of 6 is entered

The category average without extra credit would be calculated as (70 + 80 + 90) / 3 = 80

The category average with extra credit would be calculated as (70 + 80 + 90 + **6**) / 3 = 82

How the extra credit grade itself is figured

When using the aggregation method **Mean of grades (with extra credit)**, an extra column is show called **Extra Credit**. The value in this column is a mulitplier used to figure how much that extra credit grade counts towards the category average. A value of **0.000** means that grade is **NOT** an extra credit grade. If it is above 0, the extra credit grade is multiplied by the value before being used to calculate the category average. That is why we say to use the value **1.000**. If you were to use **0.500**, the extra credit grade would only count half as much toward the category average and **2.000** would count twice as much.

Figuring the extra credit grade itself, which is then multiplied to the **Extra Credit** value like mentioned above, is figured just like other grades. That is, the grade entered is divided by the **Maximum grade** to find the percentage, which is then applied to 100. Here are some examples:

Entered grade	Maximum grade for grade item	Percentage	Grade applied
25	50	50%	**50**
25	100	25%	**25**
30	40	75%	**75**
10	10	100%	**100**
1	10	10%	**10**

Due to these two things, it is best to have a **Maximum grade** for extra credit grades of **100** and an **Extra Credit** value of **1.000**. In this way, one point entered is one point of extra credit. Nice, simple and easy.

Note:

Extra credit can not let you put grades above the maximum grade for the category or course. As of this writing, no other method found allows you to go over the maximum grade.

Extra credit in Moodle is more like "giving credit" in that it can not go an *extra* amount above the maximum.

Technically, however, since it adds the extra credit to the sum of the grades in a category before the division, that could bring the sum above the total possible. But, hold on, don't get excited. After the division, if the result is above the maximum category grade, it is dropped down to that maximum category grade. So it still will not cause any grade to go over its maximum, just a virtual still-in-the-math-part grade can go over its maximum. In this way, it can help a student get a "virtual" 105 on a test to bring up that average after making a 58 on the last one.

100 + 58 / 2 = 79. But with extra credit, 5 + 100 + 58 / 2 = 80! The 100 went virtually over the top. The test grade itself could not go over 100, and the category total can not go over 100, but the extra credit does kick in to get them up to (but not over) 100.

Author: White, Shannon