About Calculated Columns

In the Grade Center, you can calculate grades using calculated columns. Calculated columns combine data from multiple columns to attain performance results. You can share these results with students and your school.

You can use calculated columns to do the following:

- Calculate the total grade.
- Weight grades by column, category, or both.
- Calculate the average grade.
- Calculate a minimum or maximum grade.
- Set criteria when creating adaptive release rules and Early Warning System/Retention Center rules.

You can include a calculated column when creating another calculated column. For example, if you created a calculated column that weighs quiz grades, you can include the column when creating a final grade column.

**Note:** When you point to a column name, information about that column appears in the Grade Information Bar at the top of the Grade Center grid. You can also access this information by pointing to a column header, accessing the contextual menu, and selecting Quick Column Information. For calculated columns, Points Possible includes the phrase (may vary by student) because some students could be exempt from a test or assignment or they have not submitted all of the items included in the column's calculation.

Two calculated columns are created by default and appear in new courses—the **Total** and **Weighted Total** columns. You can rename, change the settings, determine which columns are included, or delete these default columns.

**Default Total Column**

- Sum of all grade columns.
- Calculated columns are not included.
- Ungraded items are not included. You can change this by editing the column and selecting No for Calculate as Running Total.
- Included in Smart Views > Final Grade View. To learn more, see Using Smart Views in the Grade Center.
- Set as the external grade column. This is the column used for the final grade and shared with the school as the student's grade for your course. Set any column as the external grade column by accessing the contextual menu in the column header. Select Set as External Grade. You must set another column as the external grade before you can delete the Total column.

**Default Weighted Total Column**

- No default settings. You must edit the column to select the columns to include in the weight calculation.
• Included in **Smart Views** > **Final Grade View**.

You can assign a grade to a maximum of four decimal places, but the Grade Center displays only two decimal places. Grades to three or four decimal places are rounded up. For example, 45.4357 is rounded up to 45.44. Calculated columns also display to a maximum of two decimal places.

**Note:** Weighted totals are calculated based on percentages; they are not based on grading schemas/letter grades. Columns included in the **Weighted Total** are not displayed using the same grading schema as the input grade values. Grading schemas simply map a range of percentages to a particular label for display purposes. They do not have an impact on the weighted total's underlying calculations, which are based on percentages or points/points possible.

### Grade Center Columns and My Grades

Students view their grades from **My Grades**. You can show and hide columns from students. However, grades always appear in the following order on the students' **My Grades** pages:

- Overall grade for the course
- Calculated grades, such as running total
- Graded items by date
- Submitted items by date
- In progress items
- Upcoming items ordered by due date.

**Note:** If there is no due date upcoming, items are in alpha order.

To learn more, see **My Grades**.

### How to Create Grade Columns

If a grade column is not created automatically, you can create grade columns for any student work you want to grade. For example, you can create a column to record participation grades.

**Example:**

![Grade Column Example](image)

In the preceding image, two grade columns are shown:

- Participation: Created manually by an instructor to record participation grades.
- Chapter 1 Test: Created automatically by the system when an instructor created and deployed the test.

The data in the "Participation" column is populated when an instructor manually assigns the grades. The data in the "Chapter 1 Test" column is populated when students complete their tests and the test is
scored automatically by the system. If the test includes questions that an instructor must grade, such as an essay or short answer question, the needs grading icon (?) appears in the students’ cells after the tests are submitted.

When you create Grade Center columns, you can do the following:

- Choose how the grade appears. You can display the grades in the Grade Center grid and on students’ My Grades pages as a score, letter, text, percentage, or as complete/incomplete.
- Associate it with a category and grading period.
- Exclude or include the column in any potential Grade Center calculations, such as when creating a calculated column.
- Determine whether the column’s results appear on students’ My Grades pages.

Use the following steps to create a grade column.

1. In the Grade Center, click Create Column on the action bar.
2. On the Create Grade Column page, type a brief, descriptive Column Name. This name becomes the column name in the Grade Center and on students’ My Grades pages. If this name is too long to display clearly in the Grade Center, you can type a short, descriptive name in the Grade Center Name box.
   
   Note: Only the first 14-15 characters typed in either name box appear in the column heading in the Grade Center grid. If you point to the column heading, you can see its full name on the Grade Information Bar.

3. Optionally, type a Description. You can use the content editor functions to format the text. Information provided here appears to students when they click the item name in My Grades.
4. Make a selection in the Primary Display drop-down list. The selection is the grade format shown in the Grade Center and to students in My Grades. If you created any custom grading schemas, they appear in the list. Five default options appear:
   - **Score**: A numeric grade appears in the column. This is the default setting. If you do not make a selection, the score appears in the grid.
   - **Letter**: A letter grade appears in the column. The default grading schema is used to assign letter grades. For example, a score of 21/30 equals 70% and appears as a C.
   - **Text**: Text appears in the column when you create a custom text grading schema. Examples of text values include: Excellent, Very Good, Good, Fair, and Poor –OR- Satisfactory and Unsatisfactory. If you create no custom text grading schema, and the Text option is selected, you are allowed to type text in the column’s cells. If you choose to share the column results with students in My Grades, they will see the text values for their grades.
     
     Note: When you convert a numeric score to text without creating a custom text grading schema, and then return to numeric scoring, values that cannot be converted display a zero after conversion. Therefore, if you want to include text as grades, Blackboard recommends creating a custom text grading schema and associating it with the columns.
   - **Percentage**: A percentage appears in the column. For example, a score of 21/30 appears as 70%.
   - **Complete/Incomplete**: When a student submits an item, a check mark (●) appears in the students’ cells after the tests are submitted.
Optionally, make a selection in the **Secondary Display** drop-down list. The default setting is **None**. The same options appear except for the option chosen as the **Primary Display** and **Text**. The default **Text** option does not appear as you cannot edit a secondary value from a column’s cell. If you create a customized grading schema based on text and have not used it as the **Primary Display**, it appears in the list. In the Grade Center column, the secondary value appears in parentheses. The secondary value does not appear to students.

### Tip:
If you choose **Percentage** as the **Primary Display** and type the achieved numeric score into the Grade Center grid directly, the number you type is interpreted as a percentage and not the score. Therefore, if you want the system to calculate percentages when you type a score, select **Score** as the **Primary Display** and select **Percentage** as the **Secondary Display**. Scores you type directly in the grid will display a percentage in parentheses.

### 6. Optionally, you can associate the column with a category by making a selection in the **Category** drop-down list. The default setting is **No Category**. You can use categories to filter Grade Center data, create smart views that focus the view of the Grade Center data, and create calculated columns.

### 7. In the **Points Possible** box, type the total points. Entries must be numeric.

### 8. If grading periods exist, you can associate the column with a grading period by making a selection in the **Grading Period** drop-down list. If no grading periods exist, the drop-down list does not appear. You can use grading periods to filter Grade Center data and create calculated columns.

### 9. Optionally, select the option next to **Due Date** and type a date (mm/dd/yyyy) or use the pop-up **Date Selection Calendar**. Columns that you assigned a due date to are associated automatically with a grading period if the due date falls within the date range of the grading period. The option to automatically associate columns with a grading period is set when creating or editing a grading period. You can use due dates with the Early Warning System/Retention Center to generate an alert if a test or assignment is not submitted on time. To learn more, see [Early Warning System](#) or [Using the Retention Center](#).
10. Select the **Options**.
   - **Include this Column in Grade Center Calculations**: Select Yes to make the column available for potential inclusion when creating calculated columns.
   - **Show this Column to Students**: Select Yes to display the column to students in My Grades.
   - **Show Statistics (average and median) for this Column to Students in My Grades**: Select Yes to include statistical information with the grade value when shown to students.

   **Note**: When editing the Grade Center column for a test, the options to **Include this Column in Other Grade Center Calculations** and **Show Statistics (average and median) for this Column to Students in My Grades** are not available if you select the option to **Hide Results for this Test Completely from Instructor and the Grade Center** on the Test Options page.

11. Click **Submit**.

After you create a grade column, you can:
- Associate a rubric with it to make grading easier and less subjective.
- Assign grades.
- Include the column when creating calculated columns.

**About Total Columns**

The total column is a type of calculated column that generates a grade based on the cumulative points earned, related to the points allowed. You can select which columns and categories are included in a total column's calculation. When creating a total column, you can include other calculated columns.