

Gradescope homework - flexible

The Homework assessment type within Gradescope can be used to create a flexible exam that supports the submission of an entirely handwritten response.

Please note: Gradescope assignments **must** be set up by going through Minerva, following the instructions below. **Do not** attempt to set up a Gradescope assignment by going directly to Gradescope's website.

Process

This guide walks you through:

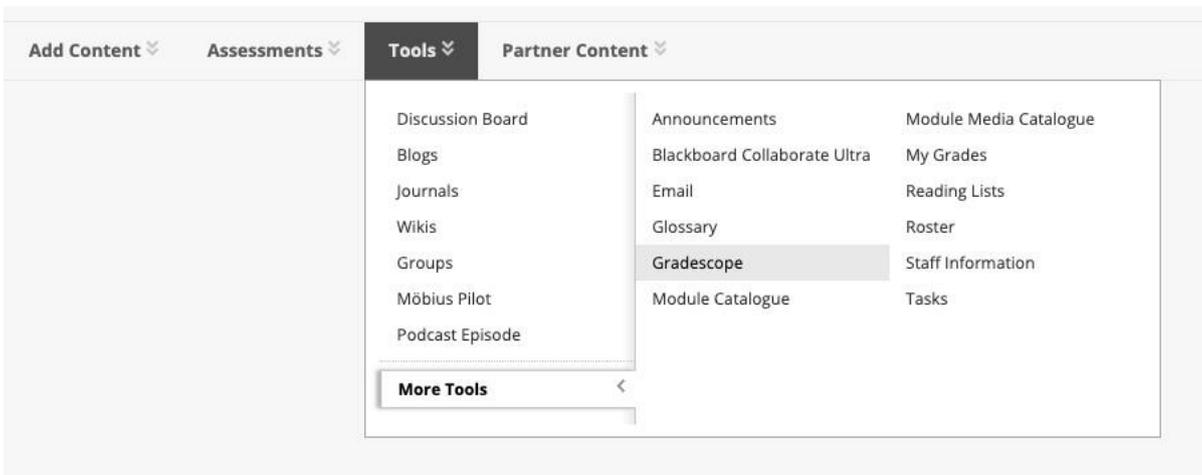
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Creating a Gradescope link in Minerva

To start creating assignments, you will need to create a link to Gradescope from Minerva. This will open the tool in a new tab. You will only need to create one link in your module.

Go to the module in Minerva, then to **Submit My Work** in the module menu. This is where we recommend that the Gradescope link is placed for consistency – so students know where to find it.

From the menu, select **Tools**, then **More Tools**, then **Gradescope**.



Keep the link name as Gradescope, then select **Submit**. Do not change any other settings. This creates an item in the module which both instructors and students will use to access Gradescope.

To start building your exam, select the link you created. This will take you to a new browser tab where you will need to select the **Launch** button.

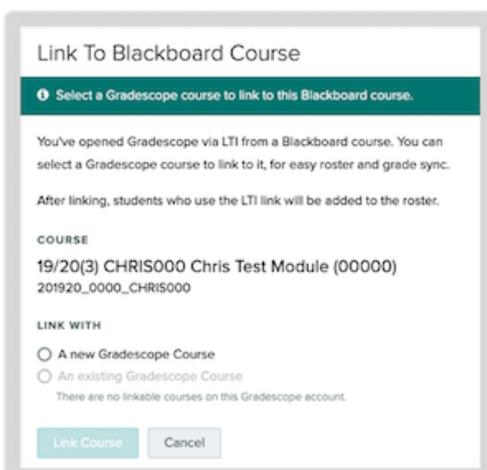
ATTENTION!

The LTI launch will open a new tool.

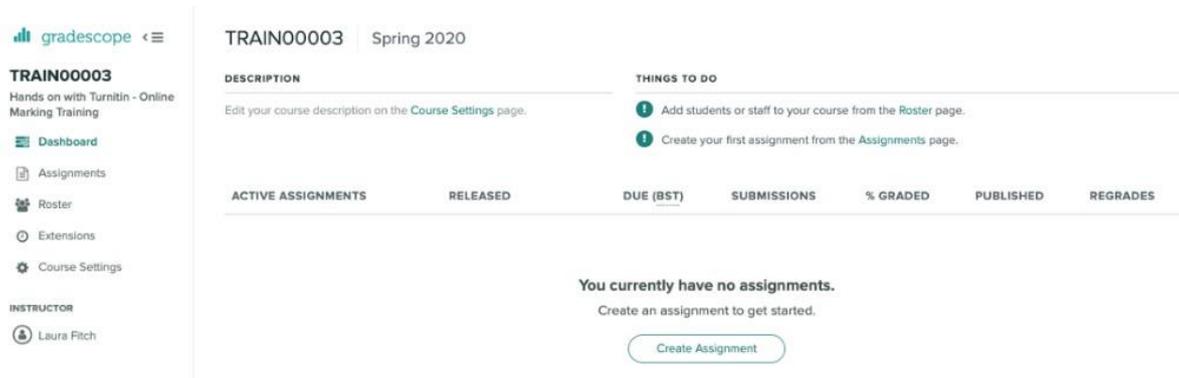


When launching your Gradescope item for the first time, Gradescope will ask you to confirm the course that should be linked.

Select **A new Gradescope Course**, then **Link Course**. This will add the course to your Gradescope Dashboard.



Please note: You only need one Gradescope item per module, regardless of how many assessments you want to set up.



Syncing the roster

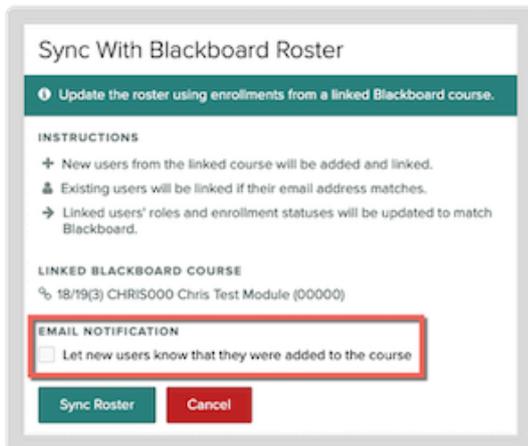
When you first access a course via Minerva, you **must** sync the Blackboard roster (all staff and student enrolments) to Gradescope. This makes sure the users from Minerva are added to Gradescope. The roster can be accessed via the left-hand menu.

To sync the roster, go to the bottom toolbar and select **Sync Blackboard Roster**.



A dialogue box will appear to confirm what is about to take place. It also tells you what course the data will be synced from.

The dialogue box contains a check box to 'Let new users know that they were added to the course'. This **must** be **unchecked**. Checking this box will inform all synced users that they need to create an account at gradescope.com – this is not the case, they should access Gradescope via Minerva.



The bottom toolbar also has an option to **Send Enrolment Notification**. Again, this asks users to sign up via gradescope.com and **must not** be used.

Creating a question template

Now you've set up a link to Gradescope in Minerva, you can start to think about creating your assessment.

For Gradescope Homework assessments, you need to create a question **Template**. This is a PDF that contains the questions for your assessment. The students will work from this document during the exam.

You need to upload your question template to Minerva in the Submit My Work area of the module.

To do this, go to **Submit My Work** in the module menu, then **Add Content**, and select **File**.

Give the file a name – the title of your exam, for example, and then browse your computer to attach the question template. Remember, your template needs to be saved as a PDF.

Under **Standard Options**, change the **Display After** and **Display Until** dates to reflect the submission window for the exam – the minimum period for submissions is 48 hours.

You do not need to change any other settings.

Select **Submit**.

STANDARD OPTIONS

Permit Users to View this Content Yes No

Track Number of Views Yes No

Select Date and Time Restrictions

Display After 18/05/2020 09:00
Enter dates as dd/mm/yyyy. Time may be entered in any increment.

Display Until 20/05/2020 09:00
Enter dates as dd/mm/yyyy. Time may be entered in any increment.

You have now added a copy of your assessment questions to Minerva. Students will be able to access it from the Submit My Work area between the dates you specified.

Creating the assignment

Now you've added the PDF question template to Minerva, it's time to set up your assessment in Gradescope.

Start by launching your Gradescope link from the **Submit My Work** area.

When Gradescope opens, select **Assignments** in the left-hand menu, then **Create Assignment**.

The screenshot shows the Gradescope interface. On the left, there is a navigation menu with the following items: 'gradescope <≡', '201516_0000_LAU...' (with subtext '16/17(3) LAURA000 Laura Test Module (00000)'), 'Dashboard', 'Assignments' (highlighted), 'Roster', 'Extensions', and 'Course Settings'. Below the menu, it says 'INSTRUCTOR' and 'Laura Fitch'. The main content area displays 'No Assignments' at the top. Below this is a table with columns: NAME, POINTS, RELEASED, DUE (BST), SUBMISSIONS, % GRADED, PUBLISHED, and REGRADES. The table is currently empty. Below the table, there is a message: 'You currently have no assignments. Create an assignment to get started.' with a 'Create Assignment' button.

You will see five options for the type of assignment – select **Homework/Problem Set**, then **Next**.

Give the assignment a clear **Assignment name**.

In the **Template** section, you need to upload the same question template that you added to Minerva. Select **Select PDF** then browse for your document.

Next, ensure that **Student** is selected under **Who will upload submissions?**

Set a **Release Date** and **Due Date** that allow for a 48-hour submission period – this is the minimum period of time students should have to submit. Students will be able to resubmit their paper at any time until the due date.

Please note: Make sure your submission period matches the visibility period you set for your questions template in Minerva.

Keep the submission type as **Variable Length**.

Under **Template Visibility**, select the box to **Allow students to view and download the template**. This gives students the option to see your assessment questions in both Minerva and Gradescope.

The screenshot shows the Minerva assignment creation interface. On the left, under 'ASSIGNMENT TYPE', 'Homework / Problem Set' is selected. The main form contains the following sections:

- ASSIGNMENT NAME:** 'Maths Assessment' with a text input field and a small icon.
- TEMPLATE:** 'Homework template.pdf' is listed with a 'Select PDF' button.
- WHO WILL UPLOAD SUBMISSIONS?:** Radio buttons for 'Instructor' and 'Student', with 'Student' selected.
- RELEASE DATE (BST):** 'May 17 2020 09:00 AM' and **DUE DATE (BST):** 'May 19 2020 09:00 AM'.
- Allow late submissions:** An unchecked checkbox. **LATE DUE DATE (BST):** 'Click to set date & time' with a dashed line below it.
- SUBMISSION TYPE:** Radio buttons for 'Variable Length' (selected) and 'Templated (Fixed Length)'. Descriptions are provided for each.
- GROUP SUBMISSION:** An unchecked checkbox for 'Enable Group Submission' and a 'Limit Group Size: No Max' field.
- TEMPLATE VISIBILITY:** A checked checkbox for 'Allow students to view and download the template'.

At the bottom, there are 'Cancel' and 'Create Assignment' buttons.

After adding the information above, select **Create Assignment**.

You can now start building your assignment outline. This will load on the next screen. The outline creates the structure for the assignment, and enables students to tell Gradescope which questions their answers belong to. It will also form the basis of your rubric when marking submissions.

Please refer to 'How to submit your work' in the e-Handbook for details of how to submit the electronic or paper-based assessment. Note that, unless stated otherwise, the deadline is 4.00 pm on the date shown above. **Failure to submit according to the request above will be taken as no or late submission.** Please also refer to the e-handbook for details of the penalties associated with late submission.

Learning outcomes
On successful completion of the assignment, the student will be able to:

- Analytically solve, 1st and 2nd order linear ordinary differential equations
- Understand ordinary differential equations and be able to apply it to problems relevant to engineering.

1) Use the method of separation of variables to find the general solutions of the following ODE's and express the results as $y = f(x)$:

(i) $2xy + 6x = (4 - x^2) \frac{dy}{dx}$ (ii) $8 \frac{dy}{dx} - 3x(\tan y)(1 + x^2)^3 = 0$ [8 marks]

2) Use the method of homogeneous equations $\left[\frac{dy}{dx} = f\left(\frac{y}{x}\right) \right]$ to find the general solutions of the following ODE's:

(i) $7x(x - y) \frac{dy}{dx} - 2(x^2 + 6xy - 5y^2) = 0$ (ii) $(y - x) \frac{dy}{dx} - e^{\ln(y+x)} = 0$ [12 marks]

Outline for Open Book Exam Handwritten
20 points total

Create questions and subquestions via the + buttons below. Reorder and indent questions by dragging them in the outline.

#	TITLE	POINTS
1	Method 1	8
1.1	example 1	4
1.2	example 2	4
2	Method 2	12
2.1	example 1	6
+ 2.2	example 2	6

+ new question

Save Outline Cancel

Use the grey + icon at the bottom to add your questions to Gradescope and assign a points value. You can also add subquestions (e.g. for questions that have several parts) using the green + icon to the right.

The questions you add should match the questions written on your template.

When you have added all the questions from your template to Gradescope, select **Save Outline**.

The assessment is now ready for students to take from the **Release Date**.

How do students submit their work?

Students need to select the Gradescope link added to the module. This launches the tool. **If multiple assignments have been created for the module, please note that students will see all of these listed.**

NAME	STATUS	RELEASED	DUE (BST)
Open Book Exam	No Submission	APR 20	20 hours, 7 minutes left APR 21 AT 8:00AM

Students must select the assignment name to launch it. Also, if you selected the option to **Allow students to view and download the template**, they will have the option to download your exam questions here.

Students need to upload their work by scanning or taking photos of their handwritten responses to your questions. They also need to tell Gradescope which pages they have written their answers on.

When the students upload their work, the files will appear on screen. Here, the students match the question numbers to the page numbers containing their answers. Once they are finished, they select the **Submit** button at the bottom of the screen.

You can learn more about how students submit their work by watching [Gradescope's online tutorial](#).

Open Book Exam Handwritten | Assign Questions and Pages

SUBMITTED AT: APRIL 21, 9:25 AM
Select questions and pages to indicate where your responses are located. Use **esc** to deselect all items and hold **shift** to select multiple questions.

Question Outline
Select pages to assign to Question 2.2.

TITLE	POINTS
1 Method 1	8.0 pts
1.1 example 1	4.0 pts
1.2 example 2	4.0 pts
2 Method 2	12.0 pts
2.1 example 1	6.0 pts
2.2 example 2	6.0 pts

It is advised that students use a recommended scanning app on their device to create a PDF file to submit. Gradescope provides advice about this on their [website](#).

Students will be able to resubmit their answers until the deadline.

Grading papers

When the exam is finished and you are ready to grade submissions, launch Gradescope and select the exam title. Then go to **Grade Submission** in the left-hand menu.

The papers will be displayed to you by question, rather than by each student's complete submission. Start by selecting a question (highlighted in green text, as shown in the screenshot below) that you would like to start marking. The workflow will take you through every student's answer to that particular question.

Grading Dashboard

QUESTION	POINTS	PROGRESS	GRADED BY
1: Method 1	8.0		
1.1: example 1	4.0	<div style="width: 0%;"></div> 0%	
1.2: example 2	4.0	<div style="width: 0%;"></div> 0%	

Grading Dashboard

QUESTION	POINTS	PROGRESS	GRADED BY
1: Method 1	8.0		
1.1: example 1	4.0	<div style="width: 0%;"></div> 0%	
1.2: example 2	4.0	<div style="width: 0%;"></div> 0%	

Use the rubric on the right-hand side to mark and add comments. The point value that you gave the question when setting up the assignment will be visible. The rubric will be set to negative scoring by default, but this can be adjusted in the **Rubric Settings**.

Use **Add Rubric Item** to assign points.

Specific comments can be added to each question. Comments are also saved if you need to re-use them.

You can also type or draw on the paper itself using the tools displayed at the top of the paper.

The screenshot displays a grading interface for a question titled "1: example 1". On the left, a handwritten solution is shown on a grid background. The solution is for the differential equation $2xy + 6x = (4 - x^2) \frac{dy}{dx}$. The steps are as follows:

$$1. \quad 2xy + 6x = (4 - x^2) \frac{dy}{dx}$$

$$(i) \quad 2xy + 6x + (x^2 - 4) \frac{dy}{dx} = 0$$

$$\Rightarrow (x^2 - 4) \frac{dy}{dx} = -2xy - 6x$$

$$\Rightarrow \frac{dy}{dx} = \frac{-2x(y+3)}{(x^2-4)}$$

$$\Rightarrow \int \frac{dy}{(y+3)} = \int \frac{-2x}{(x^2-4)} dx$$

Side note: $\begin{cases} x^2 - 4 = u \\ 2x dx = du \end{cases}$

$$\Rightarrow \ln(y+3) = -\ln|x^2-4| + \ln C$$

$$\Rightarrow \ln(y+3) + \ln|x^2-4| = \ln C$$

$$\Rightarrow \ln\{(y+3)(x^2-4)\} = \ln C$$

$$\Rightarrow (y+3)(x^2-4) = C$$

$$\Rightarrow y+3 = \frac{C}{x^2-4}$$

$$\therefore y = \frac{C}{x^2-4} - 3$$

The grading panel on the right shows the question is graded "0 OF 1 GRADED" with a "TOTAL POINTS" of "4.0 / 4.0 pts". The current score is "1 -0.0" and is marked as "Correct". The submission specific adjustments show a "Point Adjustment" of "0". There are buttons for "Add Rubric Item", "Create Group", and "Import...". At the bottom, there are navigation buttons: "Previous Ungraded", "Previous", "Next", and "Next Ungraded".

When you have finished marking a question, select **Next Ungraded** to move to the next response.

More information around grading can be found on the [Gradescope website](#).

Returning grades

This advice will be updated shortly.