Gradescope at UCT

Centre for Innovation in Learning and Teaching

http://bit.ly/GradescopeGuide

What is Gradescope?

Gradescope is a marking and grading tool designed for supporting Science, Technology, Engineering and Mathematics (STEM) lecturers who need their students to show complicated formulas, hand-drawn diagrams, or other outputs that are hard to create online. It is therefore optimised for students who complete their homework or project assignments primarily on paper and then scan and upload the documents for marking. Lecturers (referred to as 'Instructors' in Gradescope) then mark the uploaded submissions and return them to the students via Gradescope, which can be synchronised with Vula's Gradebook tool and Amathuba's Grades tool.

Features

As mentioned above, Gradescope is optimised for marking hand-written or hand-drawn work, with a particular focus on STEM subjects. Gradescope offers several features, namely:

- A number of different [assignment types](#) for different assessment purposes
- Collaborative, question-by-question [grading](#) (rather than grading by submission)
- Dynamic [rubrics](#) that can be developed before or during the grading process and which are available to all markers
- Analytics linked to rubric items that allow you to analyse students' answers per question and potentially identify common pitfalls

Gradescope is best suited to courses that need to mark students' handwritten submissions, such as complicated formula work or graphs, that some students may find difficult to produce with software. Its ability to allow multiple simultaneous graders working on a question-by-question basis using dynamic rubrics would be useful for courses that have large numbers of graders who need to mark consistently across different student submissions. Gradescope is therefore potentially most useful to large classes in STEM subjects.

Assignment types

Gradescope features several types of assignments, from Homework sets to Exams and Quizzes. Below are links to help documents and videos on how to set up each of these types:
- [Exams & Quizzes](#)
- [Homework & Problem Sets](#) (usually you would use this assignment type)
- [Bubble Sheets](#)
- [Programming Assignments](#)
- [Online Assignments](#) (Bear in mind that this assignment type is still in beta and also works very much like Tests & Quizzes in Vula and Quizzes in Amathuba. Some functionality present in these

Vula and Amathuba assessment tools would not be available in Gradescope, such as certain question types or the ability to add question pools.)

For more information on the separate assignment types, please read Gradescope's [guide to the different assignment types](#).

Gradescope is designed for students to scan or take pictures of their handwritten work and upload these for marking. When setting up a Homework/Problem Set assignment (we recommend you start with this assignment type), you can create a list of questions and allow students to submit as many pages as they want (variable-length submission type), which requires them to indicate which pages refer to specific questions. Alternatively, you can also supply students with a fixed worksheet (fixed-length submission type) in PDF format, which they will be required to edit or print out and write on, and in which each question has a defined space to show their working.

Students can submit their answers either in PDF or PNG form. PDF is recommended due to its smaller file size. [Gradescope recommends **Evernote Scannable** (iOS) or **Genius Scan** (iOS or Android)](#) for converting files to PDF on mobile devices. Guidance is also available on [submitting PDF homework in Gradescope](#).

Grading

Gradescope's grading process works by question rather than by student submission. This means that, during grading, you will mark all students' Question 1 submissions before moving to Question 2. This allows for consistent grading across students, which is further facilitated by the ability to add rubric items to each question to allow multiple instructors in the same course to grade according to the same criteria.

Multiple instructors can grade submitted scripts simultaneously. If multiple Instructors are grading simultaneously, they should each focus on a specific question, e.g., Tutor A focuses on marking all Question 1 submissions while Tutor B focuses on marking all Question 2 submissions. This allows for consistent grading across different submissions and a more efficient grading process.

Rubrics

Gradescope uses a rubric system for grading. Rubric items can be graded positively (adding marks from 0 for correct elements) or negatively (removing marks from the possible total for mistakes). Rubrics for individual questions can contain positive and negative rubric items. Rubrics can be created prior to student submission or while you grade submissions (see: [Creating a rubric](#)). Either type of rubric can be edited at any time and these changes applied to update already-graded student submissions, if applicable.

Integration

Gradescope integrates with both Vula and Amathuba, in similar ways.

Integration with Amathuba

Gradescope integrates directly with Amathuba via the External Learning tools facility. It synchronises with your class list (see the instructions on how to add students to Gradescope) and with the Amathuba Grades tool. This means that once you have marked assignments in Gradescope, it is possible to push the grades to your Amathuba Grades tool. To do so from within your Gradescope assignment, click the title of the assignment in the Assignments list, then click the **Post Grades to Amathuba** button. For more information on how Gradescope integrates with Amathuba, see Using Gradescope with Brightspace (D2L) as an Instructor.

Note: Tutors in Amathuba, in the role of TAs in Gradescope, will be able to grade all Gradescope submissions regardless of what group they are tutoring. This is by design and matches the recommended grading design of marking question by question. It is not currently possible to synchronise your Amathuba groups with your Gradescope courses. However, it is possible for you to manually add section columns in your roster, if required.

Integration with Vula

Gradescope integrates directly with Vula through the External Tools function. It synchronises with your site participant list (see the instructions on how to add students to Gradescope) and with the Vula Gradebook. This means that, once you have marked assignments in Gradescope, it is possible to push the grades to your Vula site Gradebook. To do so from within your Gradescope assignment, click the title of the assignment in the Assignments list, then click the **Post Grades to Sakai** button. For more information on how Gradescope integrates with Vula, see Using Gradescope with Sakai as an Instructor.

Note: Gradescope will recognise tutor groups created in Vula's Section Info tool, but tutors will be able to grade all Gradescope submissions regardless of what group they are tutoring. This is by design and matches the recommended grading design of marking question by question.

Tracking and reporting

Gradescope Assignments feature a Statistics page, which provides analysis of student performance in a particular assignment. It provides the minimum and maximum scores for the assignment, student averages by question, and also the median, mean and standard deviation at assignment and question level. Clicking the bar (in the assignment graph) for a particular question will open the statistics for that question, and clicking on a

question name will allow the Instructor to view rubric item-level statistics. Questions can also be tagged with concepts to be able to view how each student performs on questions pertaining to specific concepts. For more information on Assignment and Question statistics provided by Gradescope, please visit the [Assignments and Question Statistics](#) page.

MINIMUM	MEDIAN	MAXIMUM	MEAN	STD DEV
2.0	2.0	2.0	2.0	0.0

👤 4 Students   Search 🔍

▲ NAME	⇕ EMAIL	⇕ SCORE/2.0	▾ GRADED?	▾ VIEWED?	⇕ SAKAI	⇕ TIME (EET)
Mashudu Raudzingana	mnraudzingana@gmail.com	2.0	✔	👁	🚫	Feb 23 at 4:46AM
Seta Jackson	rhdset001@myuct.ac.za	1.0	✔	👁	🔗	Feb 12 at 9:42AM
Seta Jackson	setajackson@gmail.com	1.0	✔	👁	🔗	Feb 12 at 9:42AM

As indicated previously, Gradescope pushes its grading results directly to Vula's Gradebook and Amathuba's Grades tool, provided you have synced your course roster (class list). To sync your class list, see the instructions provided in [adding students to Gradescope](#).

Setup

These instructions assume that you already have a Gradescope account. If you do not have one yet, navigate to www.gradescope.com and click **Sign Up** > **Sign up as an Instructor**. Ensure that you enter your first name, last name, UCT email address and indicate University of Cape Town as the school to which you are affiliated > click **Sign up as an Instructor**.

Accessing Gradescope via Amathuba

To add Gradescope to your Amathuba course, click **Manage Course** > **Course Admin** > **Content**. In the Content tool, you can link Gradescope to a new content unit (+New Unit).

To add it as a new unit in your Content tool, click **+New Unit**. In the New Unit page, give your unit a name, click **Save and Close**. In the Content tool table of contents, select the new unit as it appears in the left-side menu,

then click **Add Existing**. In the following screen, click the Gradescope tool > check the appropriate radio button to link the course to a new or existing Gradescope course > **Link Assignment**.
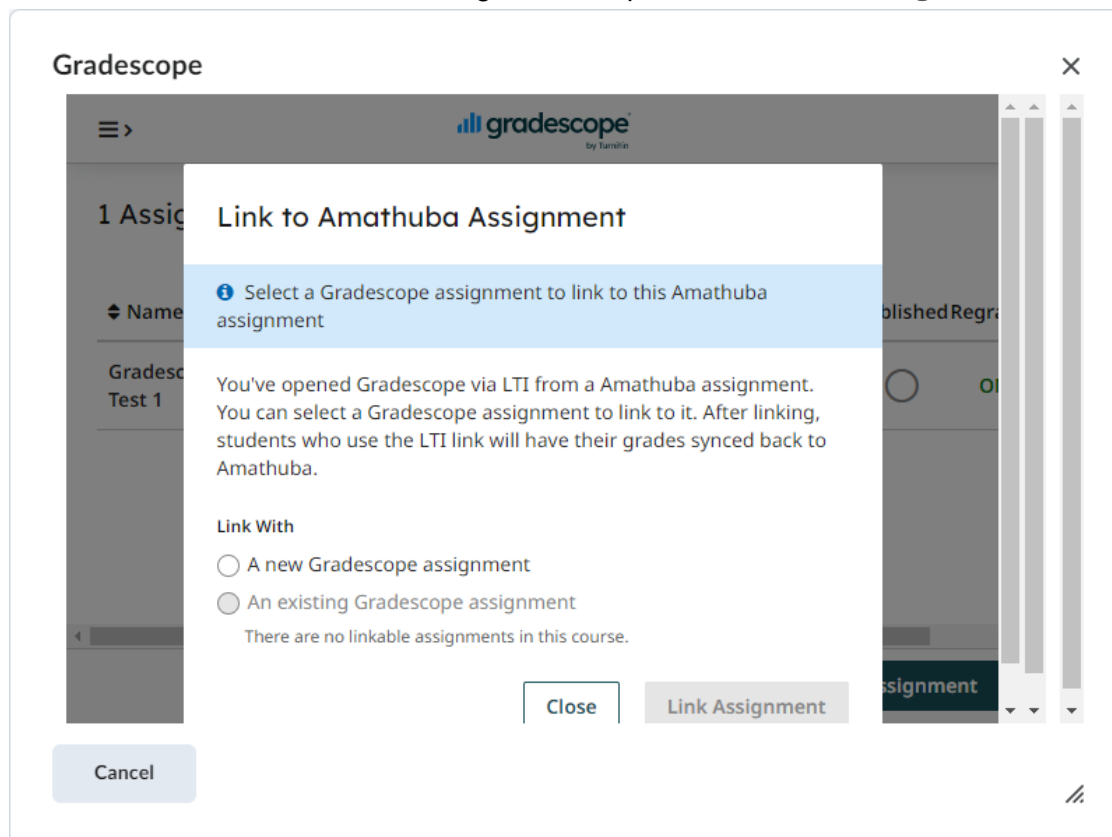
If you are linking the course to a new assignment, Gradescope takes you to the **Create Assignment** screen, where you can select an assignment type and follow the prompts to create your linked assignment. If you are linking to an existing assignment (that you have already created in your Gradescope account) select **An existing Gradescope assignment** > select your assignment from the **Search for an assignment**… dropdown menu > **Link Assignment**.

Please note that each assignment needs to be linked to a separate content item for the grades to sync.

Accessing Gradescope via Vula

To add Gradescope to your Vula site, go to **Site Setup** > **Manage Tools** > **External Tools** > **Gradescope** > **Continue** > **Finish**.

☑ **Gradescope**
Gradescope is similar to Assignments in Vula, but it is optimised for hand-written submissions (e.g. calculation-based work). It does not integrate with Turnitin.

☐ **H5P Content**
Create, share and reuse interactive HTML5 content in your browser.

☐ **Hypothesis**
Using annotation, we enable sentence-level note taking or critique on top of news, blogs, scientific articles, books, terms of service, ballot initiatives, legislation and more. (Costs apply)

Clicking on the Gradescope tab in the left-side menu of your Vula site should take you into Gradescope, where you will need to log in. Once you have logged into Gradescope, click the **Create a new course** button in the bottom right of the home page, then click **Assignments** to create a new assignment using one of the assignment types on offer: Exam/Quiz, Homework/Problem Set, Programming Assignment, Online Assignment (still in Beta).

Once you have synced your class list (see: Adding students to Gradescope below), students will be prompted to create Gradescope accounts using their student email addresses.

You should be returned to the Content tool home page. Observe that the linked Gradescope assignment is listed as a sub-item of the new unit you created. Clicking this sub-item enables you to view the assignment you created in your Gradescope account.

Adding students to Gradescope

To add students to Gradescope, navigate to your Gradescope course dashboard, click **Roster** in the left-side menu, then click on **More** > **Sync Sakai/Amathuba Roster** > **Sync Roster**.

To alert your students to the fact that they have been added to Gradescope, leave the **Let new users know that they were added to the course** option selected, or select it if not already checked. The students who have been added to your Vula site or Amathuba course should then appear in Gradescope. A message, highlighted in red, may appear at the top of your screen indicating that other course members were not added. That is because they are not in the student role in the Vula site/Amathuba course. Click the **x** to close the message. The email address associated with the students linked from your Vula site/Amathuba course should now receive a **Welcome to Gradescope** email, inviting them to follow a **set your password** link to set a password for their new Gradescope accounts.

Transferring student grades to Vula or Amathuba

Once you have graded your students on Gradescope, select either **Post Grades to Sakai** (Vula) or **Post Grades to Amathuba** to transfer the grades into the Gradebook on Vula or Grades tool on Amathuba respectively.
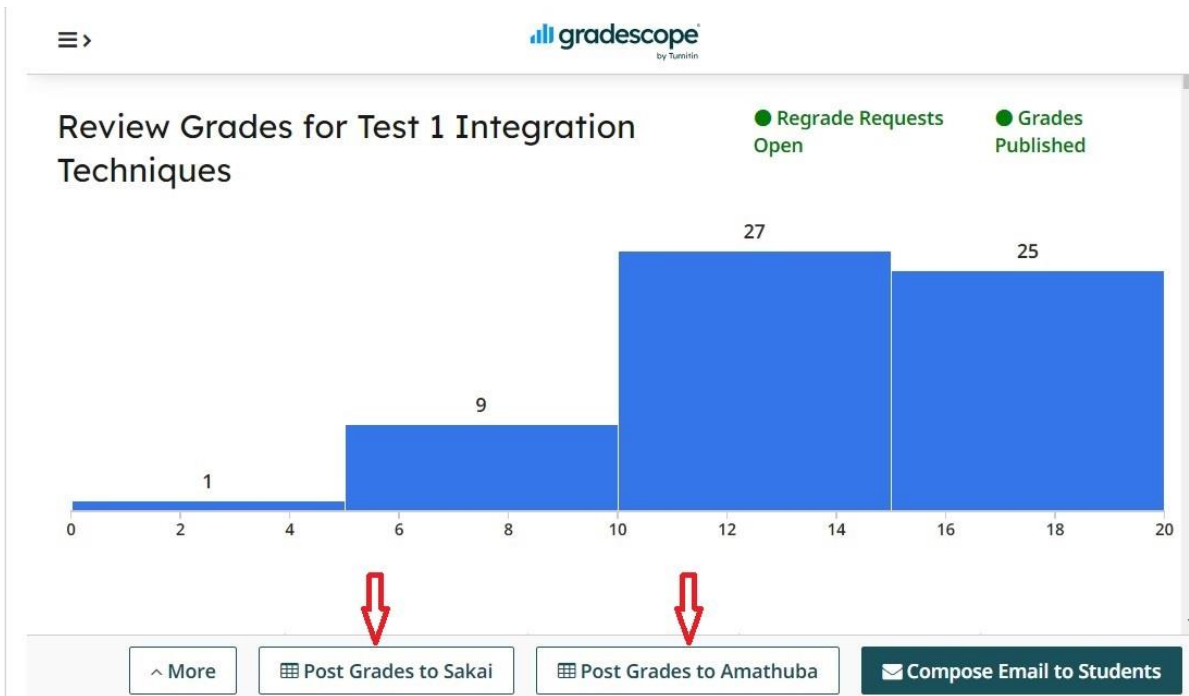
General Considerations

Gradescope is designed and optimised for STEM subjects, specifically those that involve hand-drawn diagrams, complex formulae, or other products that are currently difficult to create in Vula and Amathuba. It does not offer specific functionality over the two systems for primarily text-based outputs, and therefore may not offer much additional functionality over their assessment tools for courses in Law or the Humanities. It also does not allow for Turnitin reports (this is only available through the Assignments tools in Vula and Amathuba).

Gradescope is accessible on mobile devices.

As an external tool, Gradescope will incur data costs for students.

Gradescope allows students to upload their work in either PNG or PDF format. The use of PDF format is strongly encouraged by the Gradescope team, so your students should be familiar on how to convert a photograph or scanned image into a PDF document, as per the recommended mobile apps.

It is not possible to create question pools in Gradescope. Therefore, assignment questions cannot be randomised - each student will receive an identical assignment.

Use cases / Examples of classroom use

[Gradescope: A fast, flexible, and fair system for scalable assessment of handwritten work](#)

[Case study: Use of Gradescope in Physics (Turnitin.com)](#)

[Grading in the Fast Lane with Gradescope](#) (article by a Johns Hopkins University Computer Science professor)

[Improving Feedback and Innovating Curriculum in Harvard's Mathematics Department](#)

[Overcoming the Challenges of Mathematics Grading at Universities](#)

[How the University of Sydney achieves flexible, scalable and efficient marking with Gradescope](#)

Additional basic instructions

[Get Started](#)

[Course workflow](#)

[Assignments workflow](#)

[Student workflow](#)

CILT help resources

- [CILT Guide](#)
- [CILT YouTube Video](#)
- [Q&A Guide](#)

Further resources

Website: www.gradescope.com

Help Documentation: [Gradescope Help Center](#) | [Help Center FAQs](#)

Support Email: help@gradescope.com

Social Media:

YouTube Channel: https://www.youtube.com/user/Gradescope

Twitter / X: [@gradescope](#)