GRADESCOPE FOR MIXED FORMAT EXAMS

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LAND ACKNOWLEDGEMENT

While we are coming together today in a virtual space, it is important to recognize the physical space that connects us and brings us together. The University of Guelph and its campuses are situated on the treaty lands of the Mississaugas of the Credit. We understand that these lands are connected by the Dish with One Spoon Wampum and continue to be home to diverse communities of First Nations, Inuit and Métis Peoples. By acknowledging the land, we reaffirm our commitment to decolonization and reconciliation with Indigenous peoples and our responsibility to the land on which we live, learn, and play.
AGENDA

• What is a “Mixed Format” Exam?
• Gradescope for Paper-Based Assessment
• Gradescope and Multiple-Choice Assessment
• Two Gradescope Mixed-Format Options:
  – Separate Assignments (Bubble Sheet + Exam/Quiz)
  – Single Assignment (Exam/Quiz Only)
• Where to Find Gradescope Support
• Question and Answer Period
WHAT IS A “MIXED FORMAT” EXAM?
WHAT IS A “MIXED FORMAT” EXAM?

An exam with both:

• Written question components (short answer, long answer, graphing, diagram labels, etc.)
• Multiple-choice/true false questions
GRADESCOPE FOR PAPER-BASED EXAM ASSESSMENT (SHORT & LONG ANSWER QUESTIONS)

Process, benefits, features, and considerations
**Paper-Based Exam Assessment Comparison**

**Traditional Exam Grading**

- Graded by hand (pen/highlighter)
- Papers typically graded by student rather than by question
- Multiple assessors can lead to inconsistent grading
- Rubrics can be used to grade, but are not available to the student
- Changes to the rubric mid-assessment requires regrading all previously graded papers
- Grades need to be manually entered or imported into CourseLink
- No access to question-based data and analytics
PAPER-BASED EXAM ASSESSMENT COMPARISON

Gradescope Exam Grading

- Graded digitally online, but requires scanning of exams
- Grading performed by question
- Multiple assessors share comments, rubrics, and can be assigned specific questions
- Rubric scores and annotations can be shared with students
- Rubric modifications while grading are automatically applied to previous assessments
- Grades are posted to CourseLink with the click of a button
- Provides grade statistics, including custom tagging
THE GRADESCOPE PROCESS

- Create an Exams & Quizzes assignment (CourseLink integration)
- Upload an outline of your exam (a blank test) to Gradescope and define where answers should appear for each question
- Scan/upload completed exams to PDF & upload it
- Match the students to the scans (automatic*)
- Perform digital assessment (rubrics, annotations, comments)
- Make feedback available to students (optional)
- Post grades directly to CourseLink
- Use analytics to see where students excelled/struggled, then refine your lessons or exam based on that data!
**Gradescope Assessment Benefits (Exams & Quizzes Assignments)**

- Potentially provides more efficient and effective assessment of traditional exams
- Especially effective in large classes with grading teams
- Accommodates exam versioning (if required)
- Student roster is populated from the CourseLink Classlist for paper-to-student matching and grade export
- Provides question-based data on how students performed

Let’s explore some specific Gradescope Exams & Quizzes Assignment **features**...
GRADESCOPE ASSESSMENT FEATURES

Shared dynamic rubrics
• Simple assessment rubrics
• Option to use negative or positive scoring
• Can be created and modified on the fly by graders
GRADESCOPE ASSESSMENT FEATURES

Text Comments
• Can be re-used and shared with other graders
  o No need to re-write the same comments over and over
• Can be linked to rubric scores
  o Automatically apply rubric score with a comment
**Gradescope Assessment Features**

**Answer Grouping**
- Locate, group, and grade questions where students provided the same answer in just a few “clicks”
- Potential to grade dozens, even hundreds of answers at the same time
GRADESCOPE ASSESSMENT FEATURES

AI Answer Grouping

- Let Gradescope group answers for you automatically for Multiple Choice, Math Fill-in-the-blank, or Text Fill-in-the-blank question types
- Gradescope uses AI and text recognition to locate and group the same answers together for you
**Gradescope Assessment Features**

**Digital Annotation**
- Mark up student answers digitally with clear text, using a freeform option with a mouse or stylus, or by drawing boxes around areas to highlight them.
**Gradescope Assessment Features**

**Grade by Question**
- Gradescope always grades at the question-level, not at the student or paper level
- Can improve consistency, especially in grading teams (TA Grades Q1 and Q2, instructor grades Q3)

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>POINTS</th>
<th>PROGRESS</th>
<th>GRADED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Calculus</td>
<td>6.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1: Integral Submissions</td>
<td>3.0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>1.2: Derivative</td>
<td>3.0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>2: United States Geography</td>
<td>2.0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>3: Chemistry</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1: Lewis Structure</td>
<td>3.0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>3.2: Multiple Choice</td>
<td>1.0</td>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>
GRADESCOPE ASSESSMENT FEATURES

Publish Feedback to Students (Optional)
- Provide students with access to annotations, comments, rubrics
- When published, feedback can be accessed via the CourseLink integration or directly on gradescope.ca
GradeScope Assessment Features

Regrade Request Option

• Students can request regrades on specific questions during a period you set & must provide a reason

• Regrades are managed & completed entirely through Gradescope (can save on office hours)
Gradescope Assessment Features

Statistical Data

- View question and rubric-level statistics to gain insight into student understanding of the material covered
- Tag questions to group them by learning outcomes, topics, lectures, etc.
**Gradescope Considerations**

- Scanning and uploading exams is the responsibility of the instructor (cut staples, scan on department scanner)
- Missing pages/poorly scanned pages will require re-scans/re-uploads of that student’s entire submission
- Student-to-paper matching is done using text recognition on their name/id number & may require some manual matching
- If your exam is mostly long answer questions, the grouping features will likely not be very useful
- Some features are in beta & must be requested through Gradescope support (versioning/labelled printouts)
MORE INFORMATION ON GRADESCOPE’S EXAMS & QUIZZES ASSIGNMENT TYPE

We won’t have time for a full demo of Exams and Quizzes today, but we have offered a dedicated sessions previously.

The most recent session recording & slides are available here: https://opened.uoguelph.ca/instructor-resources/fall-2022-programming#Exams

Keep an eye out for more Gradescope programming in W23 and S23!
GRADESCOPE AND MULTIPLE-CHOICE ASSESSMENT
GRADESCOPE AND MULTIPLE-CHOICE ASSESSMENT

How does Gradescope Handle Multiple-Choice Questions?

• Gradescope offers two ways to process multiple choice questions:
  1. Via a separate Bubble Sheet assignment (can be paired with an Exams and Quizzes assignment) [This has replaced Scantron as of F22]
  2. Via the same Exams & Quizzes assignment (students indicate MC answers in the exam booklet)
### What Are the Differences Between Gradescope’s Multiple-Choice Options?

<table>
<thead>
<tr>
<th>Features &amp; Options</th>
<th>Bubble Sheet</th>
<th>Exams &amp; Quizzes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gradescope Assignment Type</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Number of Questions:**
  - Bubble Sheet: Up to 200
  - Exams & Quizzes: Unlimited

- **Scanning:**
  - Bubble Sheet: Instructor or CCS
  - Exams & Quizzes: Instructor Only

- **Answer Key Required?**
  - Bubble Sheet: Yes
  - Exams & Quizzes: No

- **Student Matching:**
  - Bubble Sheet: Automatic
  - Exams & Quizzes: Automatic

- **Assignment Versioning?**
  - Bubble Sheet: Yes
  - Exams & Quizzes: Yes (Beta)

- **Grading:**
  - Bubble Sheet: Automatic
  - Exams & Quizzes: Manual (AI Grouping)

- **Separate Sheet Required?**
  - Bubble Sheet: Yes
  - Exams & Quizzes: No

- **Post Grades to CourseLink:**
  - Bubble Sheet: Yes
  - Exams & Quizzes: Yes
**Gradescope’s 2 Mixed-Format Exam Options**

- **Option 1: Two Separate Gradescope Assignments**
  - Short/long answer questions are assessed via an Exams & Quizzes assignment in Gradescope
  - Multiple-choice questions are assessed via a Bubble Sheet assignment in Gradescope
  - Grades are posted to 2 grade items in CourseLink (use of a grade category is recommended)

- **Option 2: A Single Gradescope Assignment**
  - All questions, including multiple-choice questions are assessed via the same Exams and Quizzes assignment in Gradescope (no bubble sheet)
  - Grades are posted to a single grade item in CourseLink
OPTION 1:
SEPARATE GRADESCOPE ASSIGNMENTS

Bubble Sheet assignment for multiple-choice questions
+ Exams & Quizzes assignment for the remaining questions
SEPARATE GRADESPEOPE ASSIGNMENTS

Step 1: Multiple Choice Questions

- Create a Gradescope Bubble Sheet assignment through the CourseLink integration. Detailed instructions can be found here: https://support.opened.uoguelph.ca/instructors/gradescope/bubble-sheets
Step 2: Short/Long Answer Questions

• Create a Gradescope Exams/Quizzes assignment through the CourseLink integration. Detailed instructions can be found here: https://support.opened.uoguelph.ca/instructors/gradescope/exams- quizzes
SEPARATE GRADESCOPE ASSIGNMENTS

Step 3: Adjust the CourseLink Grade Item

Grades -> Manage Grades -> New -> Category
SEPARATE GRADESCOPE ASSIGNMENTS

- Give the category a **name** (e.g., Midterm Exam)
- Adjust the **weight**
- Choose how items (i.e., multiple choice section and short/long answers) will be **distributed**
Note on Distribution Options

- **Manually assign weight to items in the category** – Choose this option if the grade items in your category will have different weights.

- **Distribute weight by points across all items in the category** – Choose this option to distribute the weight according to the number of points given for each item in the category.

- **Distribute weight evenly across all items** – Choose this option to make all grade items in your category evenly weighted. You can enable Brightspace to automatically drop the highest or lowest grade items in the category by entering the number of non-bonus items to drop for each user (optional).

Source: [https://carleton.ca/brightspace/instructors/setting-up-grades/](https://carleton.ca/brightspace/instructors/setting-up-grades/)
**Separate Gradescope Assignments**

- Select all items (parts) of the midterm exam
- Choose **Bulk Edit**
**Separate Gradescope Assignments**

<table>
<thead>
<tr>
<th>#</th>
<th>Name*</th>
<th>Short Name</th>
<th>Type</th>
<th>Max Points</th>
<th>Weight</th>
<th>Bonus</th>
<th>Can Exceed</th>
<th>Grade Scheme</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M/C</td>
<td></td>
<td>Numeric</td>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td>-- Default Scheme -- (Percentage)</td>
<td>None</td>
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<tr>
<td>2</td>
<td>Short/Long Answer</td>
<td></td>
<td>Numeric</td>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td>-- Default Scheme -- (Percentage)</td>
<td>None</td>
</tr>
<tr>
<td>3</td>
<td>Midterm Exam</td>
<td></td>
<td></td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Adjust the **Max Points** and **Weight** for each item in the category
- Select the **Category** (i.e., Midterm Exam) for each item
**SEPARATE GRADESCOPE ASSIGNMENTS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Type</th>
<th>Weight</th>
<th>Midterm Exam</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam</td>
<td>Numeric</td>
<td>50</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>MC</td>
<td>Numeric + Tool</td>
<td>20</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Short-Long Answer</td>
<td>Numeric + Tool</td>
<td>30</td>
<td>30</td>
<td>60</td>
</tr>
</tbody>
</table>

- In this example, the grade item for Midterm Exam now contains two items (MC + Short/Long Answer)
  - MC is scored out of **20** and is worth **40%** of the exam
  - Short/Long Answer is scored out of **30** and is worth **60%** of the exam
  - The midterm exam is scored out of **50** and is worth **25%** of the final grade

- **Important Note:** Hide the grade item for final exams
SEPARATE GRADESCOPE ASSIGNMENTS

Step 4: Collect exams/bubble sheets, scan/upload, and complete the assessment process for both assignments in Gradescope
SEPARATE GRADESCOPE ASSIGNMENTS

Considerations

• A separate bubble sheet assignment works best if you have many multiple-choice questions
  – Anything **more than 15-20 multiple-choice questions** generally works best as a separate bubble sheet assignment

• Bubble Sheets will need to be collected and scanned separately from the exam booklet
  – Have two separate piles at turn-in and ensure students add their name/id number to both
  – You can save some scanning time by dropping off the bubble sheets at CCS to have them scanned on your behalf
DEMO: SEPARATE GRADESCOPE ASSIGNMENTS

- Create a bubble sheet assignment
- Create an exam/quiz
- Adjust the CourseLink grade item
  - Create category
  - Adjust points, weight, distribution method
  - Hide
OPTION 2: SINGLE GRADESCOPE ASSIGNMENT

Using only a single Exams & Quizzes Gradescope Assignment
**SINGLE GRADESCOPE ASSIGNMENT**

Step 1: **Multiple Choice + Short/Long Answer Questions**

- Create a Gradescope Exams/Quizzes assignment through the CourseLink integration. Detailed instructions can be found here: [https://support.opened.uoguelph.ca/instructors/gradescope/exams-quizzes](https://support.opened.uoguelph.ca/instructors/gradescope/exams-quizzes)
IMPORTANT NOTES ON THE EXAM TEMPLATE (PDF)

Multiple choice questions should be formatted as follows:

- For multiple choice questions,
  - □ means mark all options that apply
  - ○ means mark a single choice

Students should fill in the appropriate circle/square. Gradescope AI does NOT support circling of answers.
SINGLE GRADESCOPE ASSIGNMENT

Step 2: Adjust the CourseLink grade item

- Change the maximum points and weight
- Hide the grade item for final exams
**SINGLE GRADESCOPE ASSIGNMENT**

Step 3: Collect exams, scan/upload, and complete the assessment process in Gradescope
SINGLE GRADESCOPE ASSIGNMENT

Considerations

• A single Exams and Quizzes assignment works best if you have a smaller number of multiple-choice questions
  – Anything **less than 15-20 multiple-choice questions** generally works best as a single assignment

• There is only one paper to collect, but all scanning must be done by the instructor/TA
  – CCS can only scan single-page bubble sheets
DEMO: SINGLE GRADESCOPE ASSIGNMENT

• Create an Exam/Quiz
  – Note formatting of multiple-choice questions on the exam template (PDF)
• Adjust the CourseLink grade item
  – Adjust points and weight
  – Hide
• Sample Assessment
  – AI-assisted grading for multiple choice questions
• Post grades to CourseLink
WHERE TO FIND GRADESCOPE SUPPORT
GRADESCOPE SUPPORT

• Technical Support for Gradescope is available via CourseLink Support
  – X.56939 or courselink@uoguelph.ca

• Gradescope Drop-in Support (via Zoom)
  – Tuesdays at 10 am and Wednesdays at 2 pm

• Online Support Resources
  – OpenEd Gradescope Support for Instructors
  – Gradescope’s Help Centre
GRADESCOPE PROGRAMMING

• Bubble Sheet Sessions
  – Upcoming (Nov. 22): Transitioning from Scantron to Gradescope Bubble Sheets - Multiple Version Answer Keys
  – Recorded (Nov. 10): Transitioning from Scantron to Gradescope Bubble Sheets - Single Version Answer Key

• Exams & Quizzes Sessions
  – Recorded (Oct. 19) https://opened.uoguelph.ca/instructor-resources/fall-2022-programming#Exams

• More Gradescope sessions coming in W23/S23!
QUESTION AND ANSWER PERIOD