TRANSITIONING FROM SCANTRON TO GRADESCOPE BUBBLE SHEETS — MULTIPLE VERSION ANSWER KEYS





Sharon Findlay and Adam Schmidt eLearning Technical Support Assistants

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.



TODAY'S AGENDA

- Why do I need to transition to Gradescope Bubble Sheets?
- Accessing Gradescope (CourseLink Integration)
- The Gradescope Bubble Sheet Process
 - Printing and Scanning Bubble Sheets
 - Creating Answer Keys
 - Importing Scans and Student Matching
 - Grading and Exporting to CourseLink
 - Statistics and Item Analysis
- Finding Gradescope Support
- Question and Answer Period (Optional)



WHY DO I NEED TO TRANSITION TO GRADESCOPE BUBBLE SHEETS?



WHY DO I NEED TO TRANSITION TO GRADESCOPE BUBBLE SHEETS?

As of Fall 2022 Scantron will no longer be supported

 If you are currently using Scantron as your bubble sheet solution for quizzes, midterms, or exams it is not an option in F22



ACCESSING GRADESCOPE



ACCESSING GRADESCOPE

- Gradescope can be accessed in two ways:
 - Directly via gradescope.ca using SSO



2. Via the CourseLink Integration (Content tool)

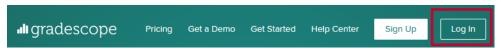




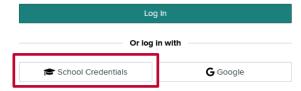
ACCESSING GRADESCOPE DIRECTLY

How to access Gradescope directly from gradescope.ca:

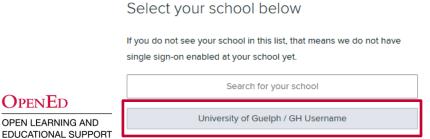
1. Press the **Log In** button



Select School Credentials



Select University of Guelph / GH Username





OPENED

ACCESSING GRADESCOPE DIRECTLY

Accessing Gradescope directly allows you to:

- Create a new Gradescope course/assignment
- See and manage any Gradescope courses/assignments you have associated with your UofG account
 - Includes Gradescope courses and assignments created through the CourseLink integration

To get the most out of Gradescope, we recommend using the CourseLink integration to connect your course site and create Gradescope assignments.



USING GRADESCOPE'S COURSELINK INTEGRATION

How to setup Gradescope's CourseLink Integration:

1. Select **Content** from your course site's nav bar



2. Select **Add a module** from the Table of Contents



3. Choose Existing Activities and select Gradescope



4. Follow the prompts to create your Gradescope Bubble Sheet Assignment





GRADESCOPE'S COURSELINK INTEGRATION

The CourseLink Integration allows you to:

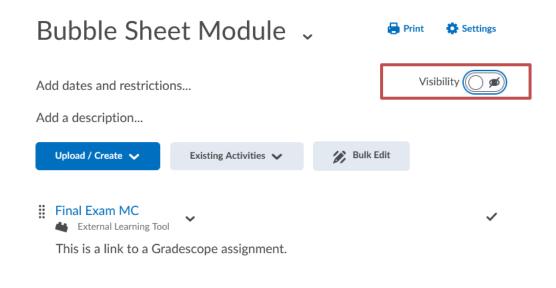
- Connect your course site to an existing Gradescope course/assignment or create a new Gradescope course/assignment
- Sync your CourseLink course site's "Classlist" with the Gradescope course "Roster"
- Automatically create grade items associated with Gradescope assignments in CourseLink's Grades tool
- Push scores from Gradescope assignments to their associated CourseLink grade item



Integration Recommendations - Content Module

When creating bubble sheet assignments, hide the content module or content item when you add it in CourseLink

 Instructors/TAs maintain access, but students won't see the link, which can avoid confusion (in most cases students do not need to access/review the bubble sheets)

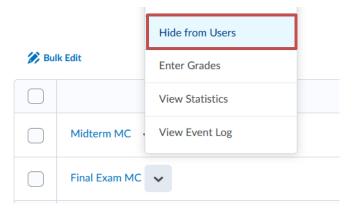


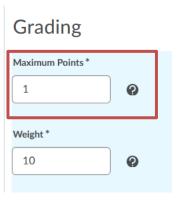


Integration Recommendations - Grade Item

Go to **Manage Grades** after creating the bubble sheet assignment to hide the grade item Gradescope creates and adjust its max points value (defaults to 1) and weight (10)

 If you are unsure of your max points value, come back and adjust before posting grades from Gradescope





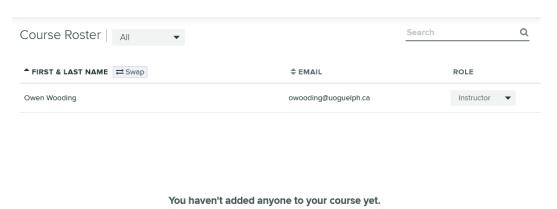




Integration Recommendations - Roster Sync

Be sure to access Gradescope and sync the **Roster** with your CourseLink course site's **Classlist**

 If you do this early in the semester, you may want to resync closer to the assessment to ensure you have the most up-to-date roster on Gradescope



Add students or other instructors to your course.

Sync Coursel ink Roster

Add Members



COURSELINK'S GRADESCOPE INTEGRATION SUMMARY (SINGLE VERSION BUBBLE SHEETS)



- Create Assignment (Content)
 - Existing Activities > Gradescope
 - Hide content module
- Create Grade Item (Automatic)
 - Hide grade item
 - Adjust points & weight

- Sync Roster with CourseLink
- Complete the Answer Key
- Import Scanned Sheets (PDF)
- Match Students Automatic (except unassigned students)
- Grade Automatic (except uncertain marks)
- Post Grades to CourseLink



DEMO

- Setting up the CourseLink integration
 - Creating a Bubble Sheet Assignment
 - Hiding the content module
 - Hiding the grade item/adjusting max points
 - Accessing Gradescope from Content
 - Importing the CourseLink Classlist to the Gradescope Roster



PRINTING AND SCANNING BUBBLE SHEETS



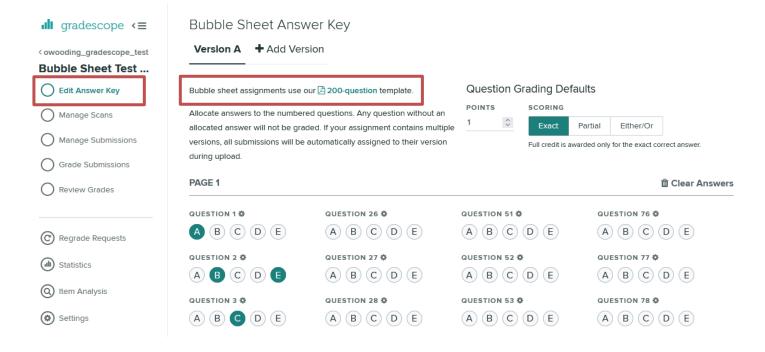
PRINTING GRADESCOPE BUBBLE SHEETS

- Gradescope's bubble sheet template is simply downloaded from the Edit Answer Key page as a PDF
- Once downloaded, you may print as many sheets as required to distribute to students (print a few extras)
- Gradescope bubble sheets can accommodate up to 200 multiple choice questions
 - For 100 or less you can simply print page one
 - For over 100 questions, print both pages (double-sided if you plan to leverage the CCS Scanning Service)



PRINTING GRADESCOPE BUBBLE SHEETS

Accessing the 200-question template from the Answer Key

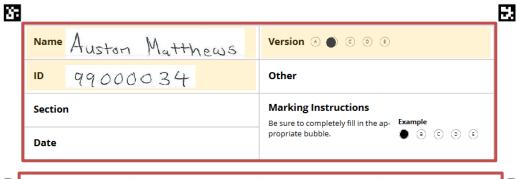






PRINTING GRADESCOPE BUBBLE SHEETS

Example bubble sheet template PDF:



Α	В	C	D	E		Α	В	C	D	E		Α	В	C	D	E		Α	В	C	D	Ε
1 🕭		(c)	0	(E)	26	\bigcirc	(8)	(c)	0	(E)	51	A	(8)	©	0	(E)	76	\bigcirc	(9)	(c)	0	(E)
2 🛦	(8)		(D)	(E)	27	\bigcirc	(8)	(c)	0	E	52	\bigcirc	(8)	©	0	E	77	\bigcirc	(8)	(c)	0	(E)
3 (4)		(c)	0	(E)	28	\bigcirc	(8)	(c)	0	E	53	\bigcirc	(8)	(c)	0	(E)	78	\bigcirc	(8)	(c)	0	(E)
4 🕭	(8)	(c)		(E)	29	\bigcirc	(8)	(c)	0	(E)	54	\bigcirc	(8)	©	0	(E)	79	\bigcirc	(8)	(c)	0	(E)
5 (4)	(9)	©	•	(E)	30	\bigcirc	(8)	(c)	0	(E)	55	A	9	<u>c</u>	0	(E)	80	A	(8)	©	0	(E)
6	9	(C)	0	(E)	31	<u>(*</u>	(9)	c	0	(E)	56	A	9	c	0	(i)	81	A	9	c	0	(E)
7 🕭	(8)	(C)	0		32	\bigcirc	(8)	(c)	0	(E)	57	A	(8)	(C)	0	(E)	82	\bigcirc	(8)	(C)	(D)	(E)
8	(8)	(c)	0	(E)	33	\bigcirc	(8)	(c)	0	(E)	58	A	(8)	©	0	(83	\bigcirc	(8)	(c)	D	(E)
9 🛦		(c)	0	(E)	34	\bigcirc	(9)	(c)	0	(E)	59	A	(9)	(C)	0	(E)	84	A	(9)	(c)	0	(E)
10 A	(8)		(D)	(E)	35	(A)	(8)	(c)	(0)	(E)	60	(A)	(8)	(c)	(D)	(E)	85	(A)	(8)	(c)	(D)	(E)

Name

Students should **PRINT** (no cursive) their name **BETWEEN** the lines

ID

Students should write their id number (e.g., 99000034) **BETWEEN** the lines

Version (if used)

Students should bubble in the letter that corresponds to their exam version









OPENED
OPEN LEARNING AND
EDUCATIONAL SUPPORT

Since Gradescope bubble sheets use standard paper and do not require a proprietary scanner, you have options!

Option 1: Self Scan

 Collect the bubble sheets from students and scan them to a PDF file on your department's printer/scanner or using a personal scanner

Option 2: Use the CCS Scanning Service

- CCS continues to offer scanning for Gradescope bubble sheets, just as they did for Scantron
- The service is limited to only single page scans (print double sided for >100 questions)



Scanning Considerations:

- Does your department have a quality printer/scanner that can scan multiple of pages to a single PDF file?
 - If not, you may want to use the CCS Scanning Service
- How large is your class?
 - Self-scan may be a better option for smaller classes
- Do you have access to the CCS Scanning Service?
 - Satellite campuses (Ridgetown/Guelph-Humber) do not
- Do you want more control over when your sheets are scanned?
 - The CCS Scanning Service can get busy during exam period



What do you need from the scan?

- A PDF file of all the scanned bubble sheets
 - You may upload all scanned sheets as a single PDF file, or you may upload PDF multiple files
 - Gradescope has a max file size of 256 MB per file
 - 150 DPI resolution is recommended by Gradescope
- If you are using multiple versions of a bubble sheet with different answer keys, you may scan them all to a single file
 - Scan in any order Gradescope will sort them automatically based on the version indicated
 - No manual pre-sorting required!





When scanning, be sure to set the scanner to scan 8.5"x11" paper to ensure there are no issues with alignment for investigating uncertain marks!

CREATING ANSWER KEYS



CREATING YOUR ANSWER KEY

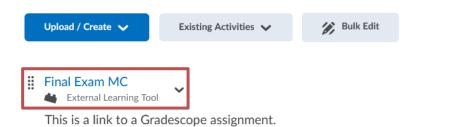
Answer keys **do not** *need* to be completed by the instructor until you are ready to upload scans

 This means students can take the quiz/exam before the assignment/answer key is completed by the instructor

When you are ready to complete the answer key, simply create or access the bubble sheet assignment

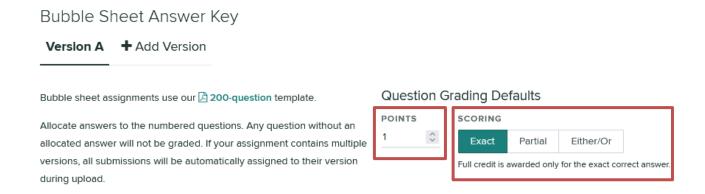
 Clicking the link to your bubble sheet assignment created in CourseLink will take you directly to the Edit Answer Key page (if you haven't saved an answer key yet)





All questions on the bubble sheet can be set with the following question grading defaults:

- A custom point value per question value (default = 1)
- A custom scoring method (default = exact)





Gradescope's 3 Scoring Method Options

- 1. **Exact**: There is only one correct answer or set of answers. Selecting any incorrect option results in a zero.
- 2. Partial: There are multiple correct answers and students get partial credit for each one selected. Selecting any incorrect option results in a zero.
- 3. Either/Or: There are multiple correct answers and students get full credit for any correct option(s) selected. Selecting any incorrect option results in a zero.



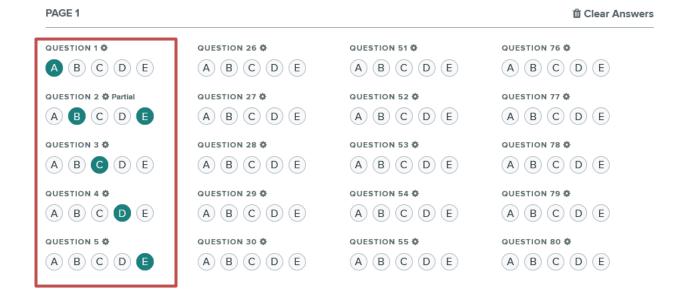
Scoring Method Example:

The question is scored out of 1 point. The correct answers are B and C on the answer key. The student has selected B as their answer.

- Exact: Student receives 0 points (did not select C)
- Partial: Student receives 0.5 points (selected 1 of 2 correct)
- Either/Or: Student receives 1 point (selected a correct answer)



Answer Keys are then set up by selecting the correct answer(s) for each question

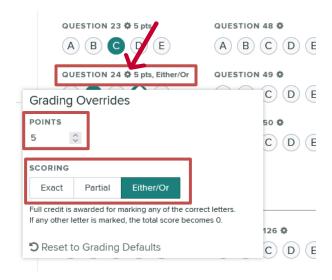






At the question level, any question can have its point value or scoring method adjusted

 E.g., Most questions are out of 1 and use exact scoring, but question 24 is worth 5 points and allows for Either/Or scoring





ANSWER KEY VERSIONING

Up to 5 different answer key versions can be created for each bubble sheet assignment

- Students indicate which version they receive
- Instructors select correct answers in each key version
- Gradescope auto-grades based on the version





Bubble sheet assignments use our 2 200-question template.

Question Grading Defaults



DEMO

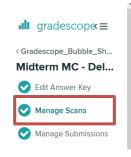
- Setting up a multiple-version Answer Key
 - Selecting correct answers for two versions
 - Customizing point values and scoring methods

IMPORTING SCANS & STUDENT MATCHING



IMPORTING BUBBLE SHEET SCANS

Once your answer key is set up, the PDF file(s) from your scan can be added to the bubble sheet assignment through the **Manage Scans** page



Manage Scans

Upload scans in PDF format. A single file can contain multiple student submissions (it is more efficient to scan in batches). Multiple files can be uploaded at once.

Gradescope attempts to split each uploaded scan into submissions. The proposed split is based on special markers on the bubble sheet template. For scans that are not automatically split, click **Show** to review the proposed submissions (you can change split points and re-order pages), then click **Create Submissions**.

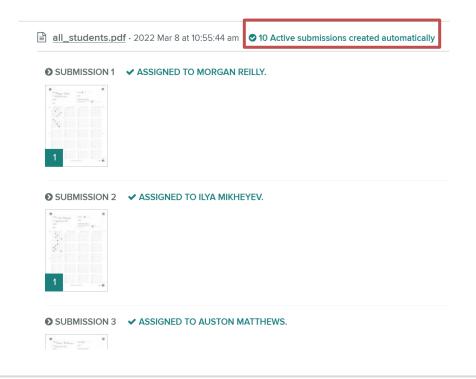




IMPORTING BUBBLE SHEET SCANS

Gradescope then splits the scans into their appropriate pages by student

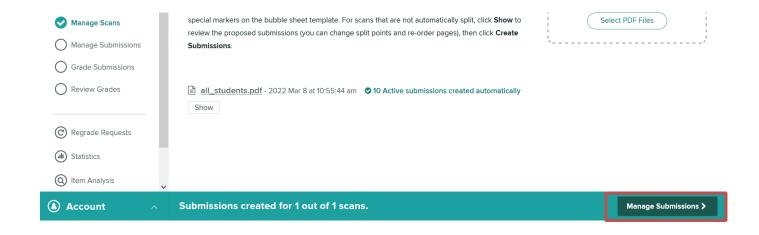
 If any pages are not split correctly or need to be rotated, you can manually adjust them





IMPORTING BUBBLE SHEET SCANS

When everything looks good, click **Manage Submissions** to match the scans to students





STUDENT TO BUBBLE SHEET MATCHING

On the **Manage Submissions** page, Gradescope uses advanced text recognition to auto-assign completed bubble sheets to students listed on the Gradescope roster



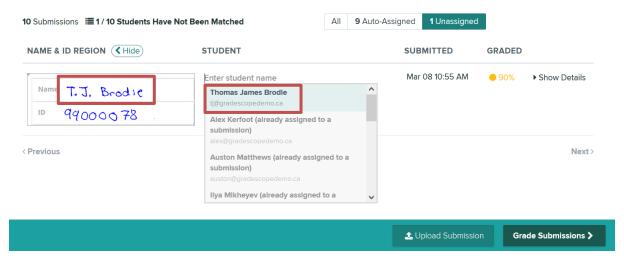


Note: Gradescope will attempt to match on **the name AND the id number** (both are imported to Gradescope during the roster sync)

STUDENT TO BUBBLE SHEET MATCHING

If a match cannot be found automatically you will need to manually match any unassigned students

 Gradescope restricts matching options to students who are not already matched, simplifying the process

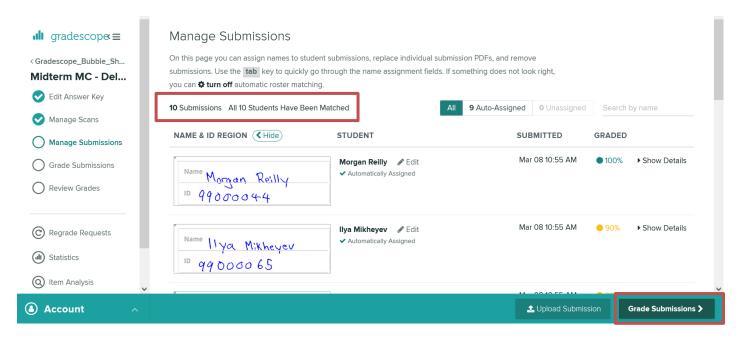






STUDENT TO BUBBLE SHEET MATCHING

Once the bubble sheets are matched, click **Grade Submissions** to complete the grading process







DEMO

- Manage Scans
 - Uploading the PDF of scanned bubble sheets
- Manage Submissions
 - View the auto-assign process
 - Manually matching unassigned submissions



GRADING AND EXPORTING TO COURSELINK



GRADING BUBBLE SHEETS - UNCERTAIN MARKS

Once student submissions are matched, Gradescope will then auto-grade based on the answer key(s)

- If any questions contain uncertain marks from students, they are flagged by Gradescope for a manual review
 - Uncertain marks may include slashes instead of filling in the circles, crossing out a bubble, adding an arrow, etc.

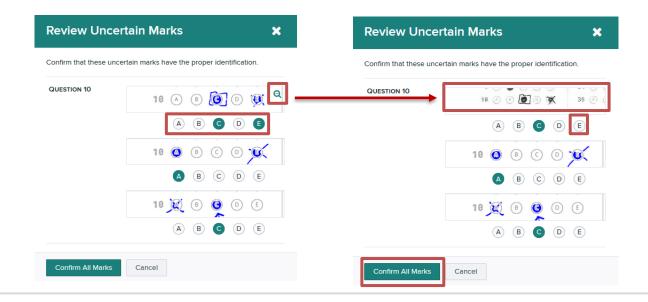




GRADING BUBBLE SHEETS - UNCERTAIN MARKS

For questions with uncertain marks, Gradescope's AI suggests an answer for each student based on what it sees, which you can confirm or modify, then confirm.

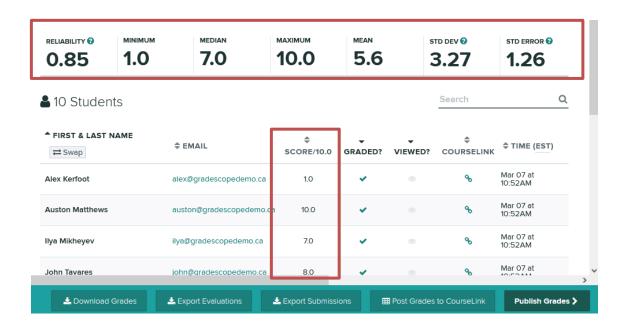
- A zoom out feature gives a better look at the original scan
- Once all uncertain marks are resolved, you may Confirm All Marks, then move on to Review Grades





REVIEWING GRADES

From **Review Grades** in the bubble sheet assignment, you can see some basic overall statistical data as well as the scores for the students





EXPORTING GRADES TO COURSELINK

To send grades from Gradescope to CourseLink, simply click the **Post Grades to CourseLink** button on the bottom bar

- Remember to ensure the max points of the grade item matches the total score for the bubble sheet
- If the grade item is hidden, students will not see their score or receive a notification from CourseLink





EXPORTING GRADES TO COURSELINK

For bubble sheets, there is *typically* no need to click Publish Grades

- In most cases there will not be any additional feedback for students to review on Gradescope for bubble sheets
- If you publish, students will be able to see their completed sheets and scores on Gradescope even if the CourseLink grade item is hidden





DEMO

- Grade Submissions
 - View the auto-grade process
 - Resolve uncertain marks
- Review Grades
 - Post Grades to CourseLink
 - Avoid Publish Grades

GRADESCOPE'S STATISTICS AND ITEM ANALYSIS



STATISTICS AND ANALYSIS

Gradescope provides two ways to explore the data that is collected after bubble sheet grading is complete:

- 1. Statistics
- 2. An Item Analysis Report



STATISTICS

Gradescope's Statistics option, provides 4 different ways to look at data through their interface:

- 1. Reliability (Cronbach's Alpha)
- Standard Error
- 3. Standard Deviation
- 4. Student Answer Report (downloadable CSV)

More information on all statistics options are available on Gradescope's Help Centre



STATISTICS - TAGS

Gradescope also provides the ability to apply custom tags to questions to group and sort statistics by the applied tag.



More information on question tagging can be found on Gradescope's Help Centre



ITEM ANALYSIS

Gradescope's Item Analysis report for bubble sheets helps instructors understand the quality of each test question by looking at the question and the individual options. It includes two data sets:

- Discriminatory Score (Point Biserial Coefficient)
- 2. Distractor Analysis

More information on both options are available on Gradescope's Help Centre



DEMO

- Statistics and Item Analysis
 - Where to access
 - How to tag questions

STEP-BY-STEP REVIEW



STEP-BY-STEP: GRADESCOPE BUBBLE SHEETS (WITH VERSIONING)

- Create a link to your Gradescope course/assignment via the CourseLink integration (Content > Existing Activity > Gradescope)
 - Hide the content item/module
 - Hide the grade item created and adjust the max points
 - Sync the Gradescope Roster with your CourseLink Classlist
- 2. Print bubble sheets & have students complete them (Answer Key)
- 3. Define bubble sheet answers by editing the Answer Key
- Create Answer Key for all versions.
- 5. Scan the completed bubble sheets to a PDF file
 - Self scan or CCS Scanning Service
- 6. Upload the PDF to Gradescope (Manage Scans)
- 7. If necessary, match students manually (Manage Submissions)
- 8. Review any questions with uncertain marks (Grade Submissions)
- Post grades to CourseLink (Review Grades)



GRADESCOPE BUBBLE SHEET SUPPORT



GRADESCOPE BUBBLE SHEET SUPPORT

- General Gradescope Support
 - CourseLink Support:
 courselink@uoguelph.ca or x.56939
- Documentation
 - Gradescope Help Centre:
 https://help.gradescope.com/article/gkwvq606fq-bubble-sheets
 - OpenEd Documentation and Support Site
 https://support.opened.uoguelph.ca/instructors/grade
 scope/menu



GRADESCOPE PROGRAMMING

Past Sessions (recordings and slides available):

- Get to Know Gradescope Series
 - Introduction to Gradescope
 - Introduction to Bubble Sheets
 - Introduction to Exams/Quizzes
 - Introduction to Homework & Problem Sets
 - Introduction to Online Assignments
- Introduction to Programming Assignments
- Gradescope for Assessment of On-Paper Assignments and Tests
- <u>Transitioning from Crowdmark to Gradescope for On-Paper Assessments</u>



GRADESCOPE PROGRAMMING: SESSIONS AND SUPPORT

Ongoing Sessions:

- Online Gradescope Drop-Ins (via Zoom)
 - Tuesdays (10-11 am)
 - Wednesdays (2-3 pm)
- Weekly Online Workshop (Run by Gradescope)
 - Thursdays at noon

Upcoming Sessions:

 Visit our <u>OpenEd site for a complete list of Fall 2022</u> <u>programming</u>



QUESTION AND ANSWER PERIOD

