

**Roadmap**

Teaching and Learning Technology regularly reviews the portfolio of learning technology to deliver Best in Class tools for instructors. The following document reviews current updates and developing updates to the Gradescope software used in our current learning portfolio at Purdue. If you need help with learning the new and upcoming updates, please contact Teaching and Learning Technology at tlt@purdue.edu

**Table of Contents**

**Launched……………………………..…………………………………………………………………3**

1. Self-Service SSO Implementation Tool…………………………………………..……………………………….………………3
2. New Base Images Options for Code Autograders………………………………..…………………………………………3
3. New Test Case Status Settings for Code Autograders on Programming Assignments………..……...…3
4. Section Syncing Support for Canvas LTI 1.3 Customers………………………..………………………………....……..3
5. Gradescope Mobile App - Global Release………………………..……………………………..……………………………...4
6. LTI 1.3 Integrations can Sync TAs to Gradescope…………..……………………………………………………….………4
7. In-App Knowledge Bot and Searchable Help Center for Instructors………………………………..…….……….5
8. More Prominent Indication in Gradescope UI if More Than One Page is Assigned to a Question on a Student's Submission…………………..…………………..…………………………………………………………………………..5
9. Show Release Times on Assignment Dashboard for Students and Instructors…………………..…………..5
10. Ability to Unlink a GitHub or Bitbucket Account from Gradescope and to Link Multiple GitHub/Bitbucket Accounts to Gradescope………………………..……..…………………………………………………...5
11. Support for Markdown in Text Annotations………………………………....………………………………………….…….5
12. For Auto-Graded Online Assignment Questions, Clicking "Regrade All Submissions" Preserves any Manual Grading Changes……………………………………………....……………………………………………………………….5
13. Ability to Create a Rubric when Template is Created (Defore Submissions are Present………..……….6
14. Ability to Randomize Multiple Choice Option Order on Online Assignment Questions…….……..…...6
15. Instructors can Unpublish Grades for all Assignments within a Course at Once/Archive the Course………………………………………….....………………………………………………………………………………………………6
16. Student ID Syncing Support for LTI 1.3 Integration……………...………………………………..……………………….7
17. Bubble Sheet Assignments: Student Answer Report……………………………………………………………..….…….7
18. Version Predictions for Unassigned Versions on Bubble Sheet Assignments………….……………..………7
19. Bubble Sheet Assignments: Distractor Analysis Report……………………………………………………………..……7
20. Add Reliability (Chronbach's Alpha) Value to Bubble Sheet Assignments………………..…………………….7
21. Bubble Sheet Assignments Support 0, Decimal, and Negative Point Values……………………...……..…...7
22. Versioning Support for Bubble Sheet Assignments……………………………………………..………….……………..
23. Ability for Users to Remove Themselves from Course Rosters……………..……..………………………….……...8

**In Beta (Available for All Users)………………..……….……………………………………….8**

1. Online Assignments……………….………………………………………………………………………………………………………8

**In Beta (Email Gradescope for Access)…………….....………………………………………..9**

1. Section Management………………..…………………………………………………………………………………………………….9
2. Lockdown Browser Integration on Gradescope……………………………………..……………………………………….9
3. Multiple Exam Versions (For Instructor-Uploaded Assignments)…………………….…………..…………………9
4. Grid Rubrics……………………………………………………………………..………………...…………………………………………10
5. Labeled Printouts…………………………………………………………………………………..………………………………………10

**In Development.………………………………………………………………………...…….…….10**

1. Easier Method for Filtering Grading by Section………………………………….......................................................10
2. Multiple Pen Colors for Annotation…………….……………………………………………………………...…….………….10
3. "Show Applied Rubric Items" Option Works with Positive Scoring Rubrics………………...……………….10

**Launched**

## A list of Gradescope’s releases.

1. **Self-Service SSO Implementation Tool**
	* Technical administrators at new and existing licensed Gradescope institutions that would like to set up an SSO (single sign-on) integration on Gradescope (to allow instructors and students to log into the web and mobile apps with their school credentials) can now configure their SAML2 SSO integrations via a self-service tool. Once successfully configured, all users at the school will be able to create and log into their Gradescope accounts via school credentials from the gradescope.com/saml page.
	* Guidance for how to use the tool can be found here: <https://help.gradescope.com/article/k87d6hd814-configuring-sso>
	* If you are an administrator for your institution and would like to configure SSO on Gradescope, please reach out to your account manager.
2. **New Base Images Options for Code Autograders**
	* For instructors setting up code autograders, Gradescope now provides several options of base image operating systems, versions, and variants for building the autograder. Different base images and versions can help enhance security, functionality, and performance of code autograders.
	* You can read more details about updating the base image here: <https://gradescope-autograders.readthedocs.io/en/latest/base_images/>
3. **New Test Case Status Settings for Code Autograders on Programming Assignments**
	* When setting up code autograders, by default, test cases get marked as “correct” if students earn all the points and “incorrect” if students earn partial or no points.
	* Now, instructors can customize whether autograder test cases show up as ‘correct’ (in blue) or ‘incorrect’ (in red) to students regardless of points earned/lost, via a parameter within their autograder code.
	* Instructions for how to do this can be found here: <https://gradescope-autograders.readthedocs.io/en/latest/specs/#test-case-status>
4. **Section Syncing Support for Canvas LTI 1.3 Customers**
	* Gradescope customers that use the Canvas LTI 1.3 integration can now sync Sections from Canvas to the Gradescope roster.
	* Sections are currently used on Gradescope for filtering grading by section and CSV exports, but will soon be utilized for many additional features, including the ability to set custom dates and restrict assignment visibility at the section level.
	* Instructions for LMS administrators on how to add the section sync option to their existing Canvas configuration can be found here: [https://help.gradescope.com/article/w7l5zqdx31-configuring-gradescope-lti-1-3-in-canvas#sync\_sections.](https://help.gradescope.com/article/w7l5zqdx31-configuring-gradescope-lti-1-3-in-canvas#sync_sections)
	* Customers who have set up their Canvas integration with the Gradescope inherited key will start seeing sections synced over automatically (no additional configuration needed), whereas customers using the manual developer key will need to follow the instructions in the article above to enable section syncing.
5. **Gradescope Mobile App - Global Release**
	* Gradescope is excited to announce the global release of our new student submission mobile app for iPhone and Android.
	* The Gradescope Mobile app is available in all countries and in all languages that are supported with the web app. The mobile app allows students to upload work without the use of a scanner or third-party app. This makes uploading handwritten work more convenient and protects students’ privacy by keeping their work in Gradescope. Additionally, this relieves instructors from supporting students in handling the hassles previously associated with uploading work.
	* To upload work, students will:
		1. Download the Gradescope app on the App Store or Google Play
		2. Sign in via SSO or with their Gradescope credentials
		3. Select the course
		4. Select the assignment
		5. Take a new picture of their work or select an existing file on their device
		6. (For variable-length assignments only) “Assign pages” to indicate where the answer for a question appears within their submission
	* Please visit Gradescope’s Help Center for full guidance on the app and for a video for students on how to use the app: <https://help.gradescope.com/article/alyonjbud4-mobile-app>
	* Note that, for V1 of the app, students will be directed to Gradescope’s mobile website for any advanced functionality, including viewing feedback and submitting timed, programming, or online assignments. In the future, Gradescope hopes to add functionality like this to the app as well.
	* You can encourage your students to download the Gradescope app (App Store or Google Play) by adding it to your syllabus and discussing it in class. Please also share any feedback by emailing feedback@gradescope.com
6. **LTI 1.3 integrations can Sync TAs to Gradescope**
	* For all LTI 1.3 integrations with Gradescope, we’ve updated the IMS Global “Teaching Assistant” and “Grader” roles to map to the “TA” role on Gradescope.
	* Prior to this change, users with the “Instructor” role on the LMS side would map to the “Instructor” role on Gradescope during a roster sync, but users with all other LMS roles would map to ‘students’ on Gradescope. In other words, it was previously not possible for any TAs to be added to the Gradescope roster during an LTI 1.3 roster sync. Going forward, for any users that have the TeachingAssistant and Grader roles on the LMS side, they will be default-synced as TAs on Gradescope.
	* For LMS Admins: Note that every LMS and every institution’s instance of the LMS may have different custom roles set up that map to IMS Global roles. Those IMS Global roles then map to Gradescope roles. For example, one university’s Canvas instance may have Reader, LabSectionTA, Marker, and LectureSectionTA custom roles that all map to the IMS Global role of TeachingAssistant. Gradescope reads the IMS Global roles to determine which role a user should have on the Gradescope roster.
	* With this new change, Teaching Assistants and Graders get mapped to TAs, Instructors get mapped to Instructors, and all other IMS Global roles get mapped to Students on the Gradescope roster. You can see a list of all IMS Global roles here: [Learning Tools Interoperability Core Specification 1.3 | IMS Global Learning Consortium](http://www.imsglobal.org/spec/lti/v1p3/#role-vocabularies)
7. **In-app Knowledge Bot and Searchable Help Center for Instructors**
	* All non-student Gradescope users will now a knowledge bot icon in the bottom right corner of their screen. The knowledge bot provides curated help articles for using Gradescope and allows users to search our help center (help.gradescope.com) without leaving Gradescope.
	* Note: The new knowledge bot appears on the course dashboard and assignment dashboard but will not show up within an assignment workflow (grading, Review Grades, etc).
	* You can read more about the knowledge bot here: <https://help.gradescope.com/article/sgsmo8sbj6-what-is-the-circular-knowledge-bot-widget-in-gradescope>
8. **More Prominent Indication in Gradescope UI if More Than One Page is Assigned to a Question on a Student's Submission**
	* Gradescope is excited to announce the release of the multiple page indicator for student-uploaded variable-length assignments on Gradescope.
	* This feature helps graders see how many pages are in a student’s submission for a given question and feel confident each submission is reviewed in full for every assignment.
	* At the top of the submission viewer on the grading page, there is now an indicator showing how many pages or images the student assigned for a given question.
9. **Show Release Times on Assignment Dashboard for Students and Instructors**
* Small Gradescope interface update: For student-uploaded assignments, both instructors and students can now see the release time (in hours and minutes) of the assignment on their dashboard. Previously, they could only see the release date, not the time.
1. **Ability to Unlink a GitHub or Bitbucket Account from Gradescope and to Link Multiple GitHub/Bitbucket Accounts to Gradescope**
	* Students can now unlink their GitHub and Bitbucket accounts directly from Gradescope, from the Edit Account page.
	* Previously, this could only be done by logging into the GitHub or Bitbucket account.
	* Students can also now link GitHub and Bitbucket accounts to their Gradescope account from the Edit Account page and can link multiple GitHub/Bitbucket accounts to the same Gradescope account.
2. **Support for Markdown in Text Annotations**
	* Gradescope now supports Markdown notation in text annotations on Gradescope.
	* You can use any Markdown command in your text comments to make text bold, italicize text, create matrices or lists, add images and links, etc. Gradescope has a guide of common Markdown commands in our help center here: <https://help.gradescope.com/article/4g9ojkhrb5-markdown-guide>
3. **For Auto-Graded Online Assignment Questions,** **Clicking "Regrade All Submissions" Preserves any Manual Grading Changes**
	* Gradescope has updated the behavior for the "Regrade All Submissions" button on online assignments. Going forward, clicking this button will NOT overwrite any manual grading changes by default for any question.
	* You can read more about the updated behavior here: <https://help.gradescope.com/article/gm5cmcz19k-instructor-assignment-online#regrading_auto_graded_questions>.
4. **Ability to Create a Rubric when Template is Created (Before Submissions are Present)**
	* Gradescope is excited to announce the release of our rubrics before submission feature! This new option allows instructors to create and edit rubrics at any point in time, even before the assignment is released to students for submission. Learn more in the help center here: <https://help.gradescope.com/article/5uxa8ht1a2-instructor-assignment-grade-submissions#creating_a_rubric_before_student_submission>
	* This new feature saves you time by allowing you to create rubrics for any question before any submissions are uploaded to the assignment rather than creating them during the grading process (note: you will still have the option to create/change the rubric as you grade). Additionally, for instructors with TAs or other graders, rubrics before submission allows you to create an instructor-approved grading rubric, offering you greater control over your scoring system.
	* To use this feature, first create an assignment in Gradescope or go to the Settings page for an existing assignment. In the assignment set up screen, you have the option to create a rubric “Before student submission”—the default will remain “While grading submissions.”
	* An additional step will be added to the left sidebar of the assignment set up process called “Create Rubric.” This will appear for all applicable assignments but will be checked off for instructors who choose to create rubrics “While grading submissions” and skipped over in the set-up process. Instructors can still click “Create Rubric” and create their rubrics on that page even if they didn’t select that option.
	* After creating your assignment outline, you can set your rubrics on the “Create Rubric” page for any or all questions on your assignment. These rubrics will then be visible in the Grade Submissions step after submissions are uploaded and can then be edited or updated from the standard grading interface. Any changes made to rubrics in the Grade Submissions view will automatically update on the Create Rubric page and vice versa.
	* Finally, note that creating a rubric before submission is not available for Bubble Sheet Assignments (where rubrics are automatically generated) or for Programming Assignments with only an autograder component.
	* This feature is only available for Gradescope Complete or Institutional License holders. If you would like to learn how you can get access to this feature, please contact Gradescope at sales@gradescope.com.
5. **Ability to Randomize Multiple Choice Option Order on Online Assignment Questions**
	* Question and answer option randomization is now live on Gradescope for all online assignments. You can read more about this feature here: <https://help.gradescope.com/article/gm5cmcz19k-instructor-assignment-online#randomizing_questions_and_answers_for_students>
	* This feature allows instructors to randomize the order in which different students see questions and/or answer options on an online assignment, helping prevent collusion among students.
	* If you have any feedback about this feature, please let Gradescope know at feedback@gradescope.com
6. **Instructors can Unpublish Grades for all Assignments within a Course at Once/Archive the Course**
	* Gradescope is excited to announce the release of our Unpublish All Grades button that allows you to remove student access to all grades and feedback in a course with a single click. You can learn more about this button in our help center: <https://help.gradescope.com/article/50un9hzrqr-instructor-course-setup#unpublishing_all_grades>
	* The Unpublish All Grades button helps you protect your assignments and ensure assessment security from one term to the next. Students will not be able to see graded work after you click this button.
	* The button is located on the Course Settings page. You will be prompted with a message to confirm you want to unpublish your grades for all assignments in that course.
	* If you unpublish all grades, students will lose access to any grading and submissions for Online Assignments. They will lose access to grading (grades, feedback, rubrics) but will still have access to raw submitted files for non-Online Assignments.
	* This feature is only available for Gradescope Complete or Institutional License holders. If you would like to learn how you can get access to this feature, please contact Gradescope at sales@gradescope.com.
7. **Student ID Syncing Support for LTI 1.3 Integrations**
	* All five of our supported LTI 1.3 integrations (Canvas, Blackboard, Moodle, Sakai, and D2L/Brightspace) now sync over student ID values from the LMS to Gradescope during a roster sync. Previously, Gradescope synced over student ID values with our legacy LTI 1.0+API integrations but not LTI 1.3.
	* This change should make it possible for all customers who use Gradescope with an LMS integration to get student ID values for each student onto the Gradescope roster automatically, which should in turn increase the accuracy of roster matching/handwriting recognition OCR for instructor-uploaded assignments.
8. **Bubble Sheet Assignments: Student Answer Report**
	* For bubble sheet assignments, instructors can now export a report of all students' letter responses for each bubble sheet question via the Download Responses button on the assignment's Review Grades page.
9. **Version Predictions for Unassigned Versions on Bubble Sheet Assignments**
	* If students don’t bubble in a version on their bubble sheet template but the assignment has multiple versions, Gradescope will now show the instructor a prediction of what the student’s score would be according to each version’s answer key (on the Unassigned Versions modal). This can help the instructor make a decision on which version of the exam the student had.
10. **Bubble Sheet Assignments: Distractor Analysis Report**
	* The Item Analysis page for bubble sheet assignments now includes the P-value (%) of students who responded with each answer option for each question, as well as insights into questions that have low discriminatory scores.
11. **Add Reliability (Chronbach's Alpha) Value to Bubble Sheet Assignments**
	* For bubble sheet assignments, instructors can now view Reliability scores on the assignment's Statistics and Review Grades page.
	* This metric looks at the reliability of the exam in that it is an adequate measure of students’ knowledge. Reliability coefficients, such as Cronbach’s Alpha, theoretically range from zero (no reliability) to 1.00 (perfect). Generally speaking, reliability for classroom tests range from 0.50 to 0.95. You should look to improve reliability for values 0.50.
	* To improve the reliability score, you can either improve the questions (see the discriminatory score on the item analysis page) or add more questions. Gradescope does not recommend a minimum number of questions, but covering a range of topics more is better.
12. **Bubble Sheet Assignments Support 0, Decimal, and Negative Point Values**
	* Bubble sheet assignments on Gradescope now support more types of point values such as negative points, decimal values up to four decimal places, and 0-points (helpful for extra credit or bonus questions).
13. **Versioning Support for Bubble Sheet Assignments**
* Details: Gradescope is excited to announce the release of bubble sheet versioning, helping you to uphold exam integrity and maintain exam security.
* A couple of highlights of the new Gradescope bubble sheet workflow:
	1. Upload multiple versions of students’ answer sheets into a single Gradescope assignment—you no longer have to create separate assignments for each version.
	2. Upload all answer sheets simultaneously. Gradescope will assign each answer sheet to the correct version based on what version a student bubbled in.
	3. New "Version" column on the "Manage Submissions" page to quickly change or assign a student's version"
* Read more about this feature here: <https://help.gradescope.com/article/gkwvq606fq-instructor-assignment-bubble-sheets>
1. **Ability for Users to Remove Themselves from Course Rosters**
* The “Leave Course” option is now live for all Gradescope users!
* Instructors. TAs, Readers, and Students can now remove themselves from courses via the Leave Course button on the course dashboard.
* There are two exceptions:
	1. Students cannot leave courses if they have submissions or grades inside the course
	2. Instructors, TAs, and Readers cannot leave courses if there are no other Instructors/TAs/Readers on the roster
* Here is the help center documentation for the feature:
* Instructor - <https://help.gradescope.com/article/50un9hzrqr-instructor-course-setup>
* Student - <https://help.gradescope.com/article/gi7gm49peg-student-add-course#dropping_a_course_or_changing_roles>

**In Beta (Available for All Users)**

Features that Gradescope is still testing but are automatically available in Gradescope.

1. **Online Assignments**
	* The online assignment creation and submission tools are now in public beta.
	* All Gradescope users will see the "Online Assignment (Beta)" option when they go to create assignments on Gradescope. For more information on this feature, check out Gradescope’s help center article here: <https://www.gradescope.com/help#help-center-item-online-assignment-outline-edit>
	* Note: Online assignments are available to all Gradescope users while in beta. Once this feature is out of beta, online assignments will be available with institutional site licenses and for individual courses subscribed to Gradescope Complete.

**In Beta (Email Gradescope for Access)**

Features that Gradescope is testing with users before official release. Let them know if you see any that you would like to try out!

1. **Section Management**
	* With the new Gradescope Sections beta features, large courses that organize their students into sections will be able to set different assignment submission windows (release dates, due dates, late due dates, time limits) for students in different sections, under a single Gradescope assignment.
	* Instructors will also have the option to restrict an assignment's visibility to specific sections, so only a subset of students on the course roster receive the assignment.
	* Throughout the section's beta period, Gradescope will also add additional features such as more direct support for filtering grading by section and the ability to view statistics by section.
	* For more information, check out Gradescope’s documentation here: <https://help.gradescope.com/article/a5sbodh04z-sections-beta>
	* To request access to the sections beta in your course(s), please fill out this form: <https://info.gradescope.com/beta-sections>
	* NOTE: Sections will be available for all license types during the beta. Once the beta is completed in late 2022/early 2023, the sections features will only be available for Gradescope Complete and Institutional licenses.
2. **Lockdown Browser Integration on Gradescope**
	* Integration with LockDown Browser (powered by Respondus) is now in beta for timed online assignments on Gradescope. If you would like this feature enabled in any of your courses, please send Gradescope an email to help@gradescope.com.
	* When LockDown Browser is enabled, students will complete their work in a secured browser window and will not be able to open any additional tabs, windows, or applications until they have finished their work.
3. **Multiple Exam Versions (For Instructor-Uploaded Assignments)**
	* Assignment versioning is now in beta and gives you the ability to form a collection of assignments. <https://help.gradescope.com/article/khu0k5swco-instructor-assignment-versioning>
	* This will work for all instructor-uploaded assignments on Gradescope. You will be able to:
		1. Download and publish grades for all versions with a single click
		2. Sync grades from all versions at once to a single assignment/grade book column in your LMS (for schools with LMS integration)
		3. Ensure that students only have a submission for one version
		4. See which students do not have a submission across all versions
		5. Students no longer have a cluttered interface with versions of the assignment for which they do not have a submission
	* Note that bubble sheet assignments on Gradescope support more advanced versioning. You can read more about that here: [https://help.gradescope.com/article/gkwvq606fq-instructor-assignment-bubble-sheets.](https://help.gradescope.com/article/gkwvq606fq-instructor-assignment-bubble-sheets)
	* This feature will eventually be a part of our Gradescope Complete product. However, while the feature is in beta it will be accessible to all Gradescope users upon request. Please email Gradescope at help@gradescope.com if you would like more details or if you would like to try out assignment versioning in your course(s).
4. **Grid Rubrics**
	* With this beta feature, [Rubric Item Groups](https://help.gradescope.com/article/5uxa8ht1a2-instructor-assignment-grade-submissions#rubric_item_groups) on Gradescope can be displayed in a grid view for any assignment type.
	* With the grid view, you can view and edit your full assignment rubric as a pop-out grid while you grade. Rubric item groups and the rubric items within those groups will populate the rows and columns of your grid. When the pop-out grid is open, you will be able to click the appropriate cells in the grid to apply them to a student's submission.
	* You can read more about using grid rubrics here: <https://help.gradescope.com/article/5uxa8ht1a2-instructor-assignment-grade-submissions#creating_a_rubric>
	* Please email help@gradescope.com to get access to the grid view of the rubric in your course(s).
5. **Labeled Printouts**
	* Labeled printouts are now in beta. For instructor-uploaded PDF assignments (Exam/Quiz assignment type), create printouts with a special label on each page for error-proof scan splitting. If you drop the stack of papers, no need to worry! Just scan them in any order, and Gradescope will be able to reconstruct the submissions.
	* Read more here: <https://help.gradescope.com/article/8azyxbu31v-instructor-assignment-manage-scans#creating_labeled_printouts_beta>
	* Email Gradescope at help@gradescope.com for access to this feature in any of your courses.

**In Development**

A list of new features Gradescope is currently working on.

1. **Easier Method for Filtering Grading by Section**
	1. For courses that have sections associated with students on the roster, it is currently possible to [filter grading by section](https://help.gradescope.com/article/5uxa8ht1a2-instructor-assignment-grade-submissions#grading_by_section), but the interface for doing so requires multiple clicks and is difficult to find.
	2. As part of Gradescope’s [Sections beta](https://help.gradescope.com/article/a5sbodh04z-sections-beta), they are developing a more user-friendly and discoverable interface to allow graders to filter the submissions for any question by one or more sections while grading.
2. **Multiple Pen Colors for Annotation**
	1. Gradescope is working on adding two additional pen color options for the pen annotation tool. In addition to the default Gradescope blue color, they will be adding a red and green pen color option.
3. **"Show Applied Rubric Items" Option Works with Positive Scoring Rubrics**
	1. Instructors can show students only applied rubric items even when using a positive scoring scheme