

# Assessments for the Fall 2020 to Winter 2021 COVID year

Faculty of Applied Science and Engineering, University of Toronto

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**Abstract:** Given the Faculty's remote access guarantee, assessments must be held remotely this year. The research on online teaching provides many recommendations for how to best conduct assessments remotely. Our conclusion, however, is that there is no single solution that suits all materials and contexts, and that each of these come with tradeoffs. The document below describes some of those strategies, outlines their advantages and drawbacks, and provides a list of additional resources to explore further.

**General:** Online assessments will need to operate differently than traditional, in person tests ([see composition of final marks document \(COFM\)](#)). We suggest four general strategies as you plan your assessments for Fall 2020 and Winter 2020.

1. As a first step, think about your course learning objectives and whether they can be best measured by traditional assessments (modified for an online setting) or if they can be tested via [alternative assessments](#) that function better in an online context.

2. Because access to external material will be difficult to monitor, assessments will likely be de facto open book. Open book assessments need not be more difficult but instead should focus on application versus memorization and deploy open ended questions to assess [higher order learning outcomes](#) such as analyzing, creating and evaluating.

3. Allowing students access to low stakes or practice assessments that replicate the conditions and procedures of actual assessments will help students feel more confident and reduce stress. At a minimum, communicate clearly about the assessment procedures, what is allowed and what is not, and what to do in case of problems with completion (see [creating an assessment contingency plan](#)).

For the final assessment, details should be communicated by 1 week before the course drop deadline (i.e., November 2<sup>nd</sup>, to accommodate the November 9<sup>th</sup> drop deadline). These include any technical expectations beyond [minimum university requirements](#). For other assessments, recommended practice is to communicate details no later than one week prior to the assessment start date. Any mandatory assessments must be indicated as such in your syllabus (further details in [COFM document](#)).

4. Include a statement of academic integrity (see [suggested AI statements](#)) that students must write and/or sign (electronically or in writing). Consider including this as a prerequisite or a first question on the assessment. An example of an academic integrity statement is provided below (see [example AI pledge](#)), but unique statements for each course may help make them more meaningful.

5. Research indicates a series of smaller, more frequent assessments can reinforce learning and support academic integrity for online learning. More frequent assessment can benefit from coordination across instructors to manage student workload.

**Recommended Types:** The assessment recommendations have been divided into two main categories. It is recommended that the names listed below be used for consistency in communication with students.

### Traditional Assessments

1. Oral exam
2. Time-limited exams
  - a. Offline
  - b. Online

### Alternative Assessments

1. Group or Individual Project

### Traditional Assessments

Oral Exam | See also "[Scenario 1: Oral Exam](#)"

In the remote context, an oral examination would involve an examiner posing questions and a student responding verbally over some online platform for video and/or audio chat. When planning an oral examination, consider the following characteristics of the format and best practices for conducting them:

- Scales poorly, due to time required for assessment, so is best suited for small classes
- Requires measures – e.g. benchmarking across multiple assessor(s), [unconscious bias training](#), etc. – to ensure fairness and consistency and limit subjectivity in assessment
- Assesses both their knowledge and their ability to communicate, quickly and orally, in English, so can present additional challenges for students whose first language is not English
- Communicate technology requirements (e.g. webcam vs. microphone) and exam procedure (e.g. # of questions, whether the student can take notes, etc.) clearly and in advance to students
- Build in time for students to think about their response and gather their thoughts before they need to speak
- Include a contingency plan for interruptions related to internet connectivity
- Ask for consent to record the sessions at the start of the examination, explaining to the student that such recordings will be required for regrade requests or as evidence for petitions. If a student does not consent, they forgo the ability to request a regrade

### Time-Limited Exams

For time-limited exams, consider the following:

- Scheduled examinations can present problems for students in other time zones, so consider allowing different start times to accommodate students in other time zones
- Producing and randomly distributing more than one exam to discourage academic integrity violations using strategies such as: [randomizing question order](#), [using question banks to create different exams](#) for each student, using [parameterization](#) (randomizing values in exam questions based on input values such as student numbers), and/or open-ended questions, where possible to produce unique questions and answers.

### Offline Time-Limited Exam | See also "[Scenario 2: Offline Time-Limited Exam](#)"

In this type of exam, students would download an exam paper, complete the examination offline (handwritten or typed), and upload the completed exam, with answers, after a specified period (e.g. [Quercus Assignment](#), [Crowdmark Assigned Assessment](#), etc.). In setting a time-limited offline exam:

- Include additional time for creating and uploading electronic copies of their responses. The recommended time for a final exam is three hours (2.5 hours + 30 minutes for upload time). Midterms would be shorter, but should allow for similar extra time for digitizing and uploading responses (see [how can I submit handwritten work?](#))

### Online Time-Limited Exam | See also "[Scenario 3: Online Time-Limited Exam](#)"

In this type of exam, students would respond question by question online, either by typing responses into text fields, uploading single responses one at a time, or by responding to multiple choice prompts (e.g. [Quercus Quiz](#)). In setting a time-limited online exam, consider the following issues and best practices.

- To allow students to demonstrate their knowledge rather than just the ability to arrive at an answer, consider allowing [digitized \(scanned or photographed\) preliminary work](#), or creating a text box for students to write down their steps and explain their logic for part marks.
- A practice used to support academic integrity is preventing students from returning to previous questions. See [how to show one question at a time](#) (this includes instructions on how to lock question after answering). However, this practice can create extra stress and challenges for some students. If you use this strategy, ensure that you inform students before assessment and consider allowing a final open-ended text entry box for students to revise or comment on prior answers.
- Building an exam into an online platform typically requires more time and effort than usual, but can be supported by the EdTech Office ([schedule a 1-1 consultation](#)).
- Can require students to have a stable internet connection for the duration of the exam, so ensure that students are aware of procedures to follow in the event of technical challenges (see [how to moderate a Quercus quiz](#)).

## Alternative Assessments

### Group or Individual Project | See also "[Scenario 4: Group or Individual Project](#)"

[Alternative assessment](#) methods can include a take home final, design project, case study analysis, etc. typically communicated through a written document, but could also involve a presentation and/or alternative media (poster or video), done either individually or in groups.

- Assign the project during or prior to the exam period, but make the exam due on your assigned examination day (see [how do I create a Quercus assignment?](#))
- Scaffolding the final assignment with other term work can help reduce pressure and workload for students during exam period
- Plan for a finite and fair amount of time to complete the assignment during the exam period and communicate this to your students. They have other exams, so the overall workload associated with these final assessments should be about the same as would have been expected for in-person final exams. This might equate to about 2-3 hours of primary work, with an expectation of approximately 10 hours of preparatory work that would replicate the regular final exam study time.

- Allowing for choice of topic or creating individualized projects can help with academic integrity, as would utilizing a plagiarism checker such as Turnitin.com
- Choose a longer window for your alternative assessment (three to seven days) so that students can choose and plan when to work on the assignment. The Faculty’s experience in 2020 winter term showed that a 24-hour take-home exam led some students to work for nearly the full time on the exam, at the expense of other courses and student mental health (see [Transition to Remote Learning: Engineering Student Perspectives in Spring 2020](#)).

### Scheduling of final assessments

Scheduling of Final Assessments: The Registrar’s Office will schedule final assessments as usual, to minimize conflicts. More details will be provided later in the term.

### Academic Integrity

- E-proctoring software is not supported by the Faculty (see Engineering Hub > [Course Continuity](#)).
- To avoid unfair use of online “tutorial” websites, do not use identical questions from previous years. Consider searching sites such as chegg.com for text of questions before (and after) exam is administered.
- Include a statement on personal integrity that students will not cheat on exam and consider another at the end asking if they did cheat on the exam. If exam includes a paper component, require this pledge to be signed in their own hand as well. Include a related statement on the course syllabus and reinforce the concept of ethics in engineering during classes too. Make it clear that providing a solution to others is also an offense. Make it clear what open book means for this course (e.g. open Wikipedia.org? open MATLAB?)
- If online plagiarism checker turnitin.com is to be used, read the support guide to [find the wording that must be used on the course syllabus](#) (for e.g. copyright reasons).
- Additional [example statements for inclusion in a syllabus](#) are available.
- See [CTSI’s guide on Academic Integrity and the Role of the Instructor](#) and [EdTech Office’s How to Assess Learning > Increase Academic Integrity](#) for additional tools.

### Example text for Academic Integrity Pledge

Suggested starting point for text of a pledge for final exam can be:

I, \_\_\_\_\_, pledge upon my honour that I will not violate our Faculty’s Code of Behaviour on Academic Matters during this assessment by acting in any way that would constitute cheating, misrepresentation, or unfairness, including but not limited to, using unauthorized aids and assistance, impersonating another person, and committing plagiarism. I acknowledge that providing unauthorized assistance to someone else is also considered a serious academic offence.

- **Identify Verification:** Consider requiring a scan of the students T-Card and/or written signature to verify the student’s identity.

## Other links and documents

Engineering Collaboration for Online and Remote Education (E-CORE) documents from engineering professors across Canada:

- [Remote Assessment](#): This guide provides support for assessment planning and design for remote course delivery in engineering (although most principles apply equally to in-person delivery). It provides a starting point to help frame thinking and identify key resources as part of holistic course design.
- [Remote Proctoring](#): This guide provides support for instructors considering implementing proctored online exams. It provides a starting point to help determine if proctored exams are appropriate and outlines important considerations for their use.
- [Academic Integrity in Remote Unproctored Exams](#): This guide provides recommendations on how to reduce academic misconduct on remote exams (including high-stakes quizzes and tests) without using online proctoring tools.
- [Document Scanning Solutions](#): This guide provides recommendations on tools and methods for students to scan documents for online submission of assignments and exams.

University of Toronto's [Centre for Teaching Support & Innovation](#) (CTSI):

- [Academic Integrity and the Role of the Instructor](#)
- [Assessing Learning](#) (includes [designing online projects and assignments](#) and [designing online tests and exams](#))

FASE Educational Technology Office Guidance on Remote Assessments



- [How to assess learning](#)
- [Design your \(alternative or traditional\) assessment strategy](#)



[ISTEP](#) Survey Results from U of T Engineering Students and faculty about 2020 April experiences:



- [Instructor Survey Results](#)
- [Student Survey Results](#)

## Example Scenarios

These scenarios assume that the instructions and logistics for the final assessment are shared well in advance, that a practice/mock assessment is performed, and that students are made aware of any [required technology](#).



Scenario 1: Oral Exam   <a href="#">Back to Document</a>	
The scenario	The (possible) solution
<p>Professor X plans to run an <b>oral exam online</b>.</p> <ul style="list-style-type: none"> <li>The student will join a live session and have a few minutes to review the questions but will not have access to the exam before the session.</li> <li>Professor X will then ask the questions, with follow up questions that have a personal element that they cannot look up.</li> <li>The professor plans to record the exams and wants them saved securely and privately.</li> <li>The grades for the assessment will not be shared via Quercus, as per normal guidelines.</li> </ul>	<ol style="list-style-type: none"> <li>Professor selects to use Microsoft Teams to host the oral exam online (see <a href="#">which webinar tool should I use?</a>)</li> <li>Students participate in a recorded practice exam, where they consent to being recorded for the final exam (if they want the chance to be regraded).</li> <li>The final assessment exam slots are scheduled via <a href="#">Quercus Calendar</a>, allowing students to self-select their timeslot (see <a href="#">How do I add an appointment group in a course calendar?</a>).</li> <li>Professor uses Quercus to create a <a href="#">No Submission Assignment in Quercus</a> for grading purposes and to distribute exam instructions and <a href="#">rubric</a>.</li> <li>Students join the webinar at the appointed time. Professor distributes questions for the exam and allows student 10-15 minutes to prepare a response.</li> <li>The professor starts the recording and completes the oral exam. The videos are automatically uploaded to Microsoft Stream and are only accessible to the attendees of the exam.</li> </ol>
 <p><b>Consider your workload.</b> Administering an oral exam especially for a large class is time consuming. With the preparation period, each exam could take 30-40 minutes plus marking and logging the grade. You might also decide to create unique exams, which would be done manually.</p>	 <p><b>Why not use Bb Collaborate?</b> Since the sessions will be recorded, and the sessions are private, it makes more sense to use MS Teams, which uploads recording right to <a href="#">Stream</a>, limiting access to the recording by default. <a href="#">Bb Collaborate shares recordings</a> automatically back to the course.</p>

The scenario	The (possible) solution
<p>Professor X plans to run a multi-question exam with <b>only text and handwritten responses</b>.</p> <ul style="list-style-type: none"> <li>• The students will upload both text and handwritten responses. They have a large class and are concerned about submission by email. The multiple markers are distributed across time zones.</li> <li>• They are concerned about internet connectivity across their large class, so they decide to provide the full exam in PDF format for download.</li> <li>• Students will still be limited to a timed writing window.</li> </ul>	<ol style="list-style-type: none"> <li>1. A practice submission is completed, allowing students to review the process for the final.</li> <li>2. The assessment is released to students via Crowdmark's <a href="#">Assigned Assessment</a> tool (see <a href="#">Distributing an assignment at a scheduled time</a>) for a specific length of time (see <a href="#">creating a timed assignment</a>).</li> <li>3. Students access their assessment via email or by logging into Crowdmark (see <a href="#">what students will see after distribution</a>).</li> <li>4. Students submit responses (by the deadline) using the text field and file upload per question. They can work offline and upload all the responses at one time.</li> <li>5. Marking is completed in Crowdmark, using the <a href="#">grading tools</a> (like the <a href="#">comment library</a>) and perhaps a <a href="#">rubric</a>.</li> </ol>
 <p><b>Consider the geographic location of your students.</b> If all students are required to complete a timed assessment simultaneously, some students may be forced to do the assignment very late at night or very early in the morning. Although this may appear to enhance academic integrity it may significantly disadvantage students in disparate time zones. See ideas to increase academic integrity at <a href="#">Academic Integrity and Teaching Online/Remotely, increase academic integrity</a> and the PDF <a href="#">Academic Integrity and Teaching Online/Remotely</a>.</p>	 <p><b>Why not use the <a href="#">Quercus Quiz or Assignments</a> tool?</b> Quercus quizzes does not allow you to view quiz responses in the <a href="#">Speedgrader</a> (you have to download uploaded files). Assignments does not allow you to have non-file based responses nor an active writing time within a longer availability window.</p>

The scenario	The (possible) solution
<p>Professor X typically uses a multi-question final exam, including only multiple-choice (and <b>other machine - gradable</b>) or text-based questions.</p> <ul style="list-style-type: none"> <li>• There’s multiple questions (and types) on the exam.</li> <li>• Each student should receive a unique exam. They would like to release the exam for 3 hours (including 30 mins to submit their responses).</li> <li>• They are concerned about academic integrity, so would like to implement some settings to promote independent work.</li> </ul>	<ol style="list-style-type: none"> <li>1. A “Classic” <a href="#">Quercus Quiz</a> is created with a writing window specified (see <a href="#">quiz settings</a>).</li> <li>2. During Quiz set up, the professor <a href="#">maximized their quiz security settings</a>.</li> <li>3. To create unique exams per student, <a href="#">question groups are used to randomize quiz questions from a question bank</a> (see <a href="#">other ways to randomize your quiz</a>).</li> <li>4. During the quiz, the Professor keeps an eye on student’s writing using the <a href="#">quiz moderation</a> page.</li> <li>5. After the quiz is complete, the teaching team can <a href="#">mark the quiz using the Speedgrader</a> (even marking by question).</li> </ol>
 <p><b>Consider the geographic location of your students.</b> If all students are required to complete a timed assessment simultaneously, some students may be forced to do the assignment very late at night or very early in the morning. Although this may appear to enhance academic integrity it may significantly disadvantage students in disparate time zones. See ideas to increase academic integrity at <a href="#">Academic Integrity and Teaching Online/Remotely.increase academic integrity</a> and the PDF <a href="#">Academic Integrity and Teaching Online/Remotely</a>.</p>	 <p><b>Why not use the New Quizzes Quercus Tool?</b> Instructors should use Classic Quizzes to deliver mid-terms and final examinations. In the New Quizzes tool, there is no rich text editor for authoring questions and submitting responses to short answer/essay questions does not include the Content Selector Sidebar, Accessibility Checker, HTML Editor, or Media Recorder.</p>



Scenario 4: Group or Individual Project | [Back to Document](#)

The scenario	The (possible) solution
<p>Professor X final assessment is an individual project with a flexible submission type (student could write a report, create a video, give a presentation, etc.). Throughout the term, students have submitted project components as benchmarks. For the final component, they'll have a due date (that is within their scheduled exam time period, to help to avoid scheduling conflicts). The final project will be submitted as either a document, PDF, or other media filetype. Since most submission will be lengthy report, the professor wants to run the submissions through <a href="#">Turnitin</a>, a tool that can help with similarity detection across submissions.</p>	<ol style="list-style-type: none"> <li>1. A <a href="#">notice about the use of Turnitin</a> is included on the course Syllabus.</li> <li>2. Professor creates <a href="#">a Quercus Assignment</a>.</li> <li>3. The due and availability dates are edited to allow submission window (see <a href="#">how to edit details in an assignment</a>).</li> <li>4. An external rubric (e.g. PDF) or Quercus <a href="#">rubric</a> is shared with the students.</li> <li>5. The professor and teaching team use the <a href="#">Speedgrader to assess submissions</a> and provide feedback.</li> </ol>
 <p><b>Want to make this a group project?</b> You can also use <a href="#">Quercus Assignments</a> to receive group submissions (see <a href="#">How do I assign an assignment to a course group?</a>) <i>Tip! <a href="#">Create your student groups</a> early in the term.</i></p>	 <p><b>Why use the Assignments tool?</b> The assignments tool is the only tool that is integrated with <a href="#">Turnitin</a>. Since this scenario has a plagiarism detection requirement, the Assignments tool was selected.</p>