

Guidelines for Remote Testing for Instructors of Online and Remote Courses – Fall 2020

Creating a test in MyLS and setting up Lockdown Browser and Monitor

Creating a test and setting up Lockdown

To create a test in MyLearningSpace and to enable Lockdown Browser and Monitor please see the following instructions. Please also see [Quizzes](#) on the Instructor Help Page in MyLearningSpace.

Creating a question library to import into MyLearningSpace

A question library is easily created using the software Respondus 4.0 (there are freeware equivalents to Respondus 4.0). To begin, create a Word file (.doc or .docx) consisting of your test questions. The questions must be formatted correctly (see below) and must be uniquely and consecutively numbered. The Word file is then imported into Respondus 4.0, which creates a file that can be uploaded to MyLearningSpace (Quiz questions can also be entered manually into MyLS, although this can be extremely time consuming).

All multiple choice questions should be formatted like this:

Title: *insert a descriptive title of the question here*

1. *insert question stem here*

A. *answer option A*

B. *answer option B*

*C. *answer option C*

D. *answer option D*

E. *answer option E*

Note: non-italicized text (above) is essential for proper formatting; the asterisk next to answer option C is used to indicate, in this case, that answer option C is the correct answer; at least two answer options must be specified (1 correct answer and as many distractors as you wish).

All fill-in-the-blank questions should be formatted like this:

Type: F

Title: *insert a descriptive title of the question here*

1. *Question stem including a series of underscores _____ in the position of the missing word(s).*

A. *answer option A*

B. *answer option B*

Note: non-italicized text (above) is essential for proper formatting; answers can be more than one word in length; there can be one or more answers specified (e.g., additional correct answers could include acceptable variations on spelling such as behaviour or behavior; note that answers are case-insensitive, so adding alternate correct answers with variations in capitalization are not necessary).

Best Practices for Online Tests – Technical Considerations

Practice Quiz

- Have students do a practice quiz prior to the online test, ideally in the same location AND with the same computer AND with the same internet connection as the test will be conducted – students who do not do the practice quiz at least 2 days prior to the real test should be blocked from writing the real test (the instructor can set up a restriction in the quiz that only those who write the practice quiz can do the real quiz) (requiring students to complete the Practice Quiz well in advance and trouble-shooting any problems encountered saves the instructor (or examquestions@wlu.ca) from significant trouble-shooting emails at the start of the real test!). The practice quiz should cover technical aspects of doing an online test, not practice about course content. Examples of practice quiz questions are available upon request. The Practice Quiz, and each Quiz/Test/Midterm in your course, should be begin with a warning of the following kind:

Abide by all instructions in the document "Guidelines for Online Testing - Student Instructions - Fall 2020"

During the test your eyes should look exclusively at your computer screen. Make sure your webcam is centred on your computer screen. The questions are presented on your screen. The answers are entered on your screen. Therefore your eyes should exclusively be staring at your computer screen. Do not look left, right, up or down – we have to assume that if you do so you are cheating. Anyone caught looking away from their computer screen will have their test "invalidated" (and will have to rewrite the test and accept the lowest of the two marks) or will receive an allegation of academic misconduct (an outcome of invalidation vs. academic misconduct depends on the totality of the circumstances during your test). The minimum penalty for academic misconduct is a zero on the test and a note on your student record. Penalties can be much more harsh depending on a variety of considerations.

Good luck on the test - and do not be tempted to cheat!

Environment Scan

- Require that the students use their webcam to complete a full scan of their environment prior to completing each proctored online assessment (under the “Quizzes” tab on MyLS, click on “Lockdown Browser”, and then click next to the test of interest and choose “exam settings”, and adjust the settings from there as appropriate). A full scan of their testing environment is one way to reduce the likelihood that students have prohibited notes, other devices, a dual monitor setup, etc., in their immediate test environment. Because the webcam cannot see the computer itself, request that the students conduct a “mirror check”, in which a mirror (or other highly reflective surface) is positioned in front of the webcam so that the webcam can view itself and the computer. Suggested wording for the environment scan is:

Make sure the area around your computer is clear of papers, books, phones, etc.

Click “Start Recording”. You must complete three 360-degree scans of the environment in order to capture the top, middle and bottom of the room. The first scan should be with the webcam pointed horizontally at eye level to capture the middle of the room. The second scan should keep the webcam at eye level while pointing upwards at a 45 degree angle. The third scan should keep the webcam at eye level while pointing downwards at a 45-degrees angle. GO SLOWLY – each full 360-degree scan of the environment should take about 10 seconds.

For the final scan, hold a mirror in front of your webcam so that the webcam is now able to “see itself” – that is, the webcam can now record video of what is on and around your computer screen.

Click ‘Stop Recording’ when you are finished. Review the video to make sure the entire room is captured before moving on to the next step.

- Students who do not complete a proper environment scan should, at a minimum, have their test invalidated (and, depending on course policies, may be required to rewrite their test within some fixed period of time, be required to drop this test attempt as part of a “drop your lowest test score” policy, etc.).
- See [example videos](#) of “acceptable” and “not acceptable” environment scan videos posted on MyLS (these videos do not conform exactly to the expectations stated above, so it may be necessary to provide the students with an example of a proper environment scan in your own course).

Small number of “questions per page”

- Within the Quiz, set the number of multiple choice questions per page to 5-ish (fewer, if the questions are short answer). In this way, if there is a technical problem, only the answers to the 5 questions currently on the page will be lost. If all questions are presented at once, answers to the entire test could be lost because of a technical problem. If fewer than 5 questions are presented at a time the students are annoyed – too much time spent waiting for pages to load for the next set of questions.

Chromebooks

- Lockdown Browser will NOT work on Chromebooks.
- Students writing an online test remotely will NOT be allowed to use Chromebooks.

Trouble-shooting

- Most students will not experience technical problems with online tests. For those who do, the majority of these problems can be solved by simply rebooting the computer. More challenging issues can be escalated to myls@wlu.ca.

Best Practices for Online Tests – Academic Integrity

Instructors may consider implementing some or all of the following practices to improve the academic integrity of their online assessments.

* It is acknowledged that many of the following recommendations may seem contrary to best practices for student assessments. However, the fundamental purpose of these recommendations is to maintain academic integrity.

Use Respondus Lockdown Browser and Monitor for all online assessments

- Respondus Lockdown Browser permits the MyLS test – and only the MyLS test – to function on the students' computers – students are not able to access any other resources (Google, PDFs, course notes, etc.). Lockdown Monitor video and audio records students during their test. An online test that does not use both Respondus Lockdown Browser and Monitor is an open book test (it is recognized that there are ways to bypass Lockdown Browser and Monitor, but many of these work-arounds appear to require a significant level of tech savviness).

Consider the use of an external webcam by students

- **Check for updates to university policy on the use of external webcams before implementing an external webcam policy in your course.**
- The vast majority of students use a computer with a built-in webcam; these webcams are typically located at the top-centre of the device, and therefore only capture the front of the student's face and perhaps upper torso (depending on set up).
- Consider recommending/requiring that students use an external camera to provide a side view showing head-to-hands, including computer screen, desktop surface, keyboard/mouse, and side-view of lap if possible.
- An external webcam may require additional hardware.
- An external webcam may result in additional technical issues and need for technical support.
- Benefits: implemented correctly, the reviewer will see everything in the student's test space, not just the student's face/upper torso; may reduce the number of cases needing Respondus review.

Require the student to keep their smartphone in view of the webcam during the entire test

- Smartphones are commonly used to search for answers during online tests.
- Smartphones are typically positioned either on/near the computer keyboard, or on the side of the monitor – both out of view of the webcam.
- Require that the student keep their smartphone visible during the entire test – have them hold their smartphone next to their face with their non-dominant hand throughout the test (this also leaves them with one less hand to search for answers if they have additional devices within reach).

Provide students with detailed expectations for their behaviour during online tests – sign an academic integrity contract / pledge

- Have detailed instructions for how to behave during an online test (see companion document "Guidelines for Online Testing – Student Instructions – Fall 2020" which could be posted on MyLS for the students).
- Consider having students sign an academic integrity contract that acknowledges they have read, and will abide by, your detailed instructions for online tests and maintenance of academic integrity. The quiz tool in MyLearningSpace is a convenient way to administer the contract, and the contract could be incorporated at the start of each online assessment.

Remind students about behavioural expectations and academic integrity during online tests, at the beginning of the test

- Remind students of the most important / most commonly violated dos and don'ts at the start of the test (looking away from the screen, in particular).

Require that students complete a Practice Quiz prior to each test

- The Practice Quiz must use Lockdown Browser and Monitor and provide detailed instructions on how to conduct an appropriate Environment Scan – this helps students identify technical issues well in advance of the test and helps them better understand the online testing process and academic integrity considerations.
- Require students to complete the Practice Quiz at least 2 days prior to the real test – block students from writing the real test if they have not completed the Practice Quiz at least 2 days prior to the test (in your MyLS test, under “Restrictions”, set up a “release condition” that requires students have completed the Practice Quiz).
- Review the Environment Scan for each student prior to the real test and give students feedback if their scan was not conducted properly.
- Consider allocating a bonus mark to students who complete the Practice Quiz successfully on their first attempt, at least 2 days prior to the test.

Do not use publisher-supplied test banks

- Do NOT use publisher-supplied test banks – these questions are readily available on the internet.
- Refresh your own test bank every couple of years (at the longest) – you can get students to develop questions as part of the course (e.g., teach them about Bloom’s taxonomy, have all parts of the course covered by assigning specific ranges of surnames to specific parts of the course – example instructions / rubric available upon request).
- To determine if your questions are available on the internet you can check to see what has been posted on CourseHero (etc.) about your course, or just search the question stems on Google.

Short duration “start time” for online tests

- Require all students to start the online test at the same time (e.g., make the start time 7PM, but allow students to access the test from 7PM to 7:15PM). A 15 minute window is sufficient for the occasional student who will need to reboot their computer at the start of the test.
- Advantages:
 - Technical support – you can promise the student that you will be available online and accessible by email during the entire test in case they have tech support needs.
 - Limits between-student sharing of information about the test.
- Note: many instructors new to online testing confuse the window of time to start the test with the duration of the test. In your MyLS quiz, under “Restrictions” and then “Availability”, setting the “has start date” time to 7:00PM, and the “has end date” time to 7:15PM, gives students 15 min to BEGIN the test. Further down the page, under “Timing”, set the “enforced time limit” to the total length of time students are allowed to complete their test (e.g., 30 minutes; must also turn on “prevent the student from making further changes” to enforce this time limit). (also: if you set Timing to “recommended time limit” students will have an unlimited amount of time to complete their test!)
- Once the test has started, it may be useful to extend the start time window to at least 30 min – this way, if a student gets booted out of the test through no fault of their own 20 min into the test they can still re-enter the test on their own.

Restrict amount of time per question

- A common practice for multiple choice tests is to give students approximately 1 min per question – e.g., a 60 question test would be allocated 60 min. Giving students this much time to answer concisely worded multiple choice questions provides ample time for “googling” of answers. Consider restricting average amount of time per question to 30 (-ish) seconds. Or have a high functioning TA write the test, note how long it takes, and provide students in the course that same amount of time.

Prohibit students from revisiting questions

- On the one hand, allowing students to revisit answered questions allows students to check over their work; on the other hand, it allows them time to google answers and collaborate with peers. Students will not expect this – you must warn them ahead of time if you choose to implement this strategy.
- Ensure that for your MyLS test that, under “Properties”, “Prevent moving backwards through pages” is turned on if you choose to prevent students from revisiting questions.
- Interestingly, there is a literature which shows that during review of test questions, a fatigued student is more likely to change a correct answer into an incorrect answer, than an incorrect answer into a correct answer!

Randomly select a subset of questions from a much larger test bank for each student

- Tests on MyLS should be set up such that each student receives a subset of questions from a much larger test bank of questions for each topic area. This minimizes collaboration as each student writes a (relatively) unique test.
- Set up the test in multiple sections, with each section a major topic area (e.g., chapter, unit). The test bank for each chapter/unit should have at least 2-3x as many questions as the number of questions randomly sampled for each student.
- Ensure as much as possible that all questions have a comparable level of difficulty (or create new sections within the test divided up on the basis of question difficulty).

Randomize the order of questions, and randomize the order of answers within questions

- Randomize the order of questions within each topic area (chapter/unit) (this is not needed if a random subset of questions is drawn from the test bank, as per the recommendation above).
- Randomize the order of answers for each question – note that this is not meaningful for questions that include an “all of the above” or “none of the above” answer (in your test bank, replace “all of the above” with “all the other answers are true” and “none of the above” with “none of the other answers are true”). There is no way in MyLS to do this for all questions in a test automatically – answers within a question must be randomized by modifying the parameters for each question individually.

Move beyond rote recall questions

- Use questions that require combining information from multiple places as opposed to looking up the answer in a single place in the textbook.
- Use open-book exams so that you only have to police unauthorized collaboration. Recognize that a properly constructed open book exam is going to emphasize questions at the highest levels of Bloom’s Taxonomy – open book exams should not be based on rote recall questions.

Do not allow scrap paper

- Allowing students to use scrap paper during a test is a gateway to academic misconduct.
- Even if the student shows their blank scrap paper to the webcam at the start of the test, and the doodled-on scrap paper to the webcam at the end of the test, there is a significant opportunity for some sleight-of-hand work to put cheat sheets into the scrap paper.

If there is a deferred test, do not report test results until after the deferred test is written

- Prevents between-student sharing of information.

Video proctoring review – essential for ALL students

- Proctoring footage must be reviewed for all students (the students openly joke on social media that their videos aren't reviewed...) – BUT YOU DON'T NEED TO WATCH EVERY VIDEO IN ITS ENTIRETY!
- Under "Quizzes" select "Lockdown Browser", and then for the test of interest, click to the left of the test name and choose "class results".
- The class list populates, and includes the "Review Priority" for each student – note that a HIGH Review Priority is no more or less worrisome than a LOW Review Priority – the Respondus software does NOT accurately assess review priority (see below for "flags").
- Click on the "+" sign next to each student's name. The resulting display permits the instructor to check the student's ID, review the environment scan, review the "thumbnail" images (which are sampled at regular intervals throughout the proctoring video) and check for "flags"
- The presence of "flags" and a "high priority for review" may indicate the webcam was blocked, that a second person was on screen (or perhaps a poster on the wall behind the student includes a human face...), that the student was missing from the screen, etc. HOWEVER – "low priority" videos must be reviewed as well – a student reading questions out loud to a collaborator / co-conspirator, or a student frequently looking to the side and reading from a second location, will NOT be flagged by Respondus.
- YOU DO NOT NEED TO WATCH EVERY VIDEO!!!!
- Quickly scan through the thumbnail images for each student. Is the student alone? Are they missing from any thumbnail images? Are their eyes looking at the screen the entire time, or do they consistently deviate to the same off-screen target? (suggestive of notes/phone located in one specific location) Given that MyLS displays test questions on the left-ish side of the computer screen, students who are doing something other than reading the questions are commonly seen looking right (or down).
- If you suspect something based on a quick scan of the thumbnail images, click on the thumbnail image immediately preceding the worrisome image. The video will begin playing from that point, and you can review just the worrisome footage, rather than the entire video (if something is amiss, it is worth looking at other parts of the video to determine if this same worrisome behaviour is an anomaly, or if it repeats itself).
- If in doubt, ask the "relevant administrator" in your department/program (usually, the Chair or the Coordinator) for their thoughts on whether or not an anomaly sufficient for an allegation of academic misconduct has occurred.

When reviewing test scores, look for unusually large improvements in performance from one test to the next

- Students writing tests in proctored in-person settings or in rigorously video proctored online settings tend to perform fairly consistently from one test to the next.

When reviewing test scores with individual students, only discuss incorrect answers

- Focusing on what was done incorrectly gives students feedback on where the knowledge gaps are
- Giving students feedback on the questions answered correctly enables students to copy down all the questions and correct answers and share your test bank publicly.

Adopt a "drop your lowest test score" policy or "rewrite test within 72 hours" policy

- It is inevitable that some ethical students will make inadvertent mistakes in how they conduct themselves during the test, or have technical problems beyond their control (technical problems which may be confused with deliberate attempts to cheat – such as regular interruptions of the video recording, which may be due to unavoidable internet provider glitches, versus intentionally unplugging the router during the test).

- With a “drop your lowest test score” policy, or a “rewrite test within 72 hours and keep the lowest grade” policies, if a student’s behaviour during a test is suspicious (e.g., regularly looking off-screen at the same target) they have an opportunity to prove on subsequent tests (or a re-test) that they were not acting unethically (however, some students have self-reported to administrators that they intentionally took advantage of such policies, using them as a “get out of jail free” card the first time they get caught).
- Depending on the severity of suspicious issues encountered on the first test, and certainly on a second offense, the student would be subjected to the policies and procedures of Laurier’s [Student Code of Conduct: Academic Misconduct](#). For example, deliberately blocking the webcam, collaboration on the test, regularly looking at the same off-screen target, etc.) are all examples of deliberate misconduct and should be addressed as per the [Student Code of Conduct: Academic Misconduct](#).

Accommodations: ALC, no webcam, and others

Scenarios in which webcam proctoring with Lockdown isn’t possible, or must be supplemented with alternate forms of proctoring

- ALC accommodation for Kurzweil (incompatible with Lockdown).
- Student does not have a webcam-equipped computer (This is EXTREMELY RARE – and any request to write a test without webcam proctoring should be treated with suspicion).
- Student needs support from a memory aid.

How to handle these scenarios:

- Proctor (instructor or TA) can connect with student in advance of the test to make sure a supplementary device is available for proctoring, such as an iPad, tablet or a smartphone.
- Proctoring can then be done on Zoom, via the iPad, tablet or smartphone (note that if Zoom is used for proctoring, due to data security reasons, the Zoom session must NOT be recorded).
- Proctor should start the test with the supplementary device in the same way as the “environment scan” within Lockdown – have the student pan around their test-taking space, surface of the desk, their computer, etc., to make sure that prohibited aids are not present. Memory aids can be shown to the proctor via Zoom (have the student mark the memory aid at the beginning of the test with a unique symbol to verify later in the test that it is still the same memory aid and that no other aids have been introduced).
- The supplementary device should then be positioned in such a way that the test-taker, their writing surface, and the screen of their computer, are all as visible as possible on Zoom.
- The proctor should turn off the volume on their own device and can also remove their own video to minimize this distraction

Washroom and movement breaks

- ALC accommodation specifies movement breaks (“walks in hallways”) – these students can be accommodated by having them restrict their break to a location still in plain view of the webcam.
- ALC accommodation specifies washroom breaks due to a particular medical need – these students can be accommodated by dividing the test into (for example) two equal length parts. After the student completes the first part they take their washroom break. When they return they start part two of the test (note that they will have to go through the Lockdown startup procedures a second time, as this is set up as a second test).

Instructor review of online test video and audio recordings

After each test or examination, videos must be reviewed by the instructor (or their designate) to ensure academic integrity.

Suggested policy for instructors:

Formal allegation of academic misconduct:

In most circumstances, any violation of a test policy will result in a formal allegation of academic misconduct.

- Academic misconduct: In the opinion of the instructor it appears that you are consistently looking in more than one location during a quiz or exam.
- Academic misconduct: Any of the circumstances noted below for “invalidated tests” that occur in the context of suspected deliberate academic misconduct
- Academic misconduct: You have engaged in any other prohibited behaviour during the test

Instructors have an obligation to formally file an allegation of academic misconduct when it is observed.

If you are accused of academic misconduct you will be processed as per the [Student Code of Conduct and Discipline](#).

Invalidated tests:

In rare cases, instead of a formal allegation of academic misconduct, the instructor may invalidate a quiz or exam if:

- The student’s entire face cannot be seen during the test (e.g., sitting in a dark room, backlit silhouette, or a position such that eyes cannot be seen)
- The integrated webcam is not positioned with a straight-on view of the student’s face (i.e., side views obtained from a webcam integrated into your laptop are not allowed; side views obtained from an external webcam are permitted (only when side view webcams are permitted))
- The webcam and/or microphone isn’t working
- If any of these circumstances suggest academic misconduct, then instead of an invalidated test the student will receive a formal allegation of academic misconduct.

An example of an email to a student whose test is invalidated can be found below.

Deliberate circumvention of video monitoring technology:

Any deliberate attempt to circumvent the video monitoring technology (e.g., blocking the camera lens, using a second monitor, etc.) or blocking the microphone should be treated as academic misconduct as described in the [Student Code of Conduct and Discipline](#).

Engaging in any prohibited behaviour may result in an allegation of academic misconduct as described in the [Student Code of Conduct and Discipline](#).

Template email to student concerning invalidated test attempt:

Subject: concerns about your test: IMMEDIATE ACTION REQUIRED

Hello {student name},

I am writing about concerns I have following a routine examination of your test video. The video shows that (your webcam and/or microphone aren't working properly / your face cannot be clearly seen / your webcam isn't positioned properly).

In keeping with the course policy on video monitoring (see the course syllabus posted on MyLearningSpace), I have invalidated your test. I can appreciate that this may have been an honest mistake on your part and **I am NOT presently accusing you of academic misconduct**. However, because you are in violation of the policy, I must invalidate the test attempt.

In keeping with the course policy, you now have 72 hours in which to re-write the invalidated test. If the grade obtained on a re-written test is *equal to or higher* than the original test grade, then the original grade from the invalidated test will stand. If the grade obtained on a re-written test is *lower than* the original grade, then the lower grade will be used. In other words, it is possible to maintain your current grade upon re-writing an invalidated test, but it is not possible to increase your grade. **Failure to re-write the test within the next 72 hours (no matter the circumstances) will result in a zero for the attempted test.**

Note that any further irregularities detected upon review of your quiz or exam videos in this course will be handled according to procedures for investigating academic misconduct as per Laurier policy 12.2 - Student Code of Conduct: Academic Misconduct. If you have any questions, please let me know.

~Instructor

Template text for completing Incident Notification Form:

(student name) is consistently looking away from the computer screen. More specifically, the video shows they are looking straight ahead at their computer screen at the location I would expect their web browser to be for significant periods of time, but for significant amounts of time their gaze is also aimed away from the screen.