Respondus LockDown Browser

Directions for Instructors
This instruction set was developed by ITaP for instructor and student use.

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# Respondus LockDown Browser

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What is Respondus LockDown Browser?

Respondus LockDown Browser™ is a custom browser that locks down the testing environment within Blackboard Learn. When students use Respondus LockDown Browser to access an assessment, they are unable to print, copy, go to another URL, or access other applications. Students are locked into an assessment until it is submitted for grading.

Respondus LockDown Browser is a client application that is installed to a local computer. It provides a custom interface for the Internet Explorer (Windows) or Safari (Mac) software that is already installed on the computer. It does not modify an existing copy of Internet Explorer or Safari, but rather, installs a separate program that will display the custom browser when it is started. Respondus LockDown Browser uses the same security features and service packs that are currently installed for Internet Explorer or Safari. Installing Respondus LockDown Browser won’t modify the current version of Internet Explorer or Safari in any way.

Respondus LockDown Browser creates a “locked” testing environment for Blackboard assessments and includes the following features:

- Assessments are displayed full-screen and cannot be minimized
- Assessments cannot be exited until submitted by users for grading
- Task switching or access to other applications is prevented
- Printing functions are disabled
- Print Screen and capturing functions are disabled
- Copying and pasting anything to and from an assessment is prohibited
- Right-click menu options are disabled (Windows); key + click options are disabled (Mac)
- Browser menu and toolbar options are disabled except Back, Forward, Refresh and Stop
- Function keys (F1-F12) are disabled
- Source code for the HTML page cannot be viewed
- URLs cannot be typed by the user
- Hundreds of screen capture, messaging, screen-sharing and network monitoring applications are blocked from running
- The browser automatically starts at the institution’s login page for Blackboard
- Links in questions that point to other servers don’t compromise the “locked” testing environment
- Pages from the assessment aren’t cached or stored in the browser’s history listing
- And many other features...

Respondus LockDown Browser is not intended to replace the browser used by faculty or students within Blackboard. Respondus LockDown Browser is only intended for use by students while taking assessments that have been prepared for use with Respondus LockDown Browser. This browser has not been tested for use in other areas of Blackboard Learn.
Respondus LockDown Browser


Installing Respondus LockDown Browser

No local client installation is necessary to set up Blackboard Learn assessments for using Respondus LockDown Browser, but you may want to install it in order to test it and see the student experience.

To install the student version of Respondus LockDown Browser, visit http://www.respondus.com/lockdown/download.php?id=929638209. You may access the student and instructors guides at the same location. Note: If you log into Blackboard as a student and access an assessment with Respondus LockDown Browser, you must “Finish” the assessment before the browser will let you exit.

System Requirements

Windows

- Windows 8, Windows 7, Vista, XP
- Internet Explorer (configured to the requirements for the Blackboard platform)
- 4 MB of permanent space on the hard drive

Mac

- OS X 10.5 or higher (512K RAM minimum)
- Safari browser (configured to the requirements for the Blackboard platform)
- 3 MB of permanent space on the hard drive

How to Use Respondus LockDown Browser with Blackboard Learn.

Make the LockDown Browser tool available for your course

This only needs to be done once.

1. Login to your BbLearn course
2. On the Control Panel, expand the Customization menu
3. Select Tool Availability
4. In the list of tools, find **Respondus LockDown Browser**

5. Put a **checkmark** in the box in the **Available** column

6. Click **Submit**

Respondus LockDown Browser should now show up under Course Tools in the Control Panel.

**Create your Assessment**

Create your assessment the normal way, either directly in Blackboard Learn (see http://www.itap.purdue.edu/learning/tools/blackboard/learn_res/faculty.html, under “Tests, Surveys and Pools), or by using Respondus and uploading the exam to Blackboard Learn (see http://www.itap.purdue.edu/learning/tools/respondus/).

**Require LDB for an assessment**

1. In the Control Panel, under **Course Tools**, click on **Respondus LockDown Browser**
2. Click on the **Settings** button for your assessment.

3. For item# 1 choose “**Require Respondus LockDown Browser for this test**”.
4. Item#2 is optional. The Exit Password feature is only intended for situations where an instructor wants to allow a student to exit the browser in the middle of taking the test. If an exit password isn’t entered for a test, the default exit password (set by the administrator of the LockDown Browser license) will be used.

5. Click Submit.

**IMPORTANT NOTE:** Instructors should NOT edit the name of the assessment or the proctor password (if used) once the assessment has been set to require the use of LockDown Browser. If the exam name or proctor password is changed, the instructor will have to repeat the process of enabling the assessment for LockDown Browser.

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**Advanced Features of Respondus LockDown Browser**

Several advanced features are available including a calculator, print capability, and spreadsheet viewer (Windows only).

**Calculator**

Respondus LockDown Browser prevents other applications from being accessed by the student during an assessment, including the “Calculator” tool. However, there are times when an instructor wants to allow students to use an online calculator during an assessment. A calculator option will appear on the toolbar for Respondus LockDown Browser if the following text is placed in the online exam: `{calc}`
The `{calc}` text can appear anywhere in the assessment. If questions are being delivered “one at a time,” the `{calculator}` text will need to appear in the first question so that it will be available for the remainder of the assessment.

To give students access to a more powerful scientific calculator, enter the text `{scalc}` instead of `{calc}`.

**Print**

Respondus LockDown Browser prevents exam questions from being printed. However, there may be situations where an instructor wants to allow students to print their exam in a lab setting before submitting their answers. This functionality can be enabled in Respondus LockDown Browser, including a print icon on the toolbar, by placing the following text within the online exam: `{prtx}`

The `{prtx}` text can appear anywhere in the assessment. If questions are being delivered “one at a time,” the `{prtx}` text must appear in the first question so that it will be available at any time during the assessment. Note if you want the entire exam printed questions will need to be delivered “all at once” and not “one at a time”.

If the student name and ID is required on the printout, add a 0-point essay or short answer/fill-in-the-blank question where this information is requested of the student.

Note that `{prtx}` should only be used in a lab setting since it allows printing a copy of the exam questions. Also note that Windows and Mac allows printing to a file, so it is best if the lab computers prevent students from copying files to an external source.

**Spreadsheet Viewer (Windows only)**

Respondus LockDown Browser uses the Internet Explorer plug-ins that are installed on the computer. However, some plug-ins can introduce a security hole because a student may be able to access the Internet using the plug-in. For example, the Excel Viewer plug-in for Internet Explorer allows a user to create a web link and then go to it by clicking on it -- even when Respondus LockDown Browser is running. But there are times when instructors want students to view an .xls spreadsheet or to have access to a spreadsheet application.

Respondus LockDown Browser offers a secure solution to this issue for Windows users. After a link to an .xls file is added to an exam question, the instructor will need to additionally add the following text to one of the questions in the exam (the first question is best) to turn on the spreadsheet viewer in Respondus LockDown Browser: `{sheet}` (Note: Excel 2010 “.xlsx” files are not supported and must be converted to the “.xls” file format.)

When the `{sheet}` text is contained in the assessment, a spreadsheet button will display on the toolbar in LockDown Browser. In addition, when a student clicks on an HTML link that points to an .xls file, it will open the spreadsheet viewer in LockDown Browser instead of the Excel Viewer. (Note: students are not able to save documents using the LockDown Browser spreadsheet viewer, just access them during the assessment.)
Best Practices for Respondus LockDown Browser

- Make sure students know, well in advance, that they must use Respondus LockDown Browser to take an online exam. This is particularly important if students are required to install Respondus LockDown Browser to their own computer. It’s recommended that you create a practice exam that requires the use of Respondus LockDown Browser.

It’s a good practice for instructors to preview the exam using Respondus LockDown Browser. The best approach is to log in as a student since instructor logins have different access rights. Previewing an exam is an especially good idea if a test password is being used. To install the student version of Respondus LockDown Browser, visit http://www.respondus.com/lockdown/download.php?id=929638209. You may access the student guide at the same location. Note: If you log into Blackboard as a student and access an assessment with Respondus LockDown Browser, you must “Finish” the assessment before the browser will let you exit.

Once a Blackboard assessment is started with Respondus LockDown Browser, the exam will appear in a full-screen window and all other applications and links are locked down. The assessment cannot be exited without clicking the “Finish” button.

- If audio/video files are used in an assessment, the media player must be embedded in the question itself. This is the only way that students will have access to the control buttons, such as play, start, pause and stop. Note: Use the Blackboard Learn standard view of the question editor to insert audio/video files. Using the HTML view of the question editor to link to files with the use of anchor “A HREF=” tags can potentially block the audio/video files as invalid external links. The Blackboard Learn question editor in standard view will correctly insert audio/video files using the appropriate OBJECT/EMBED tags.

- Respondus LockDown Browser will maintain the “locked” testing environment even if a question contains a link to another web page (which opens another, secure browser window). However, all links that may appear on the new web page will be blocked, so be sure that all content that students must see is available from the initial, linked page. If they need to see additional pages, add additional links to the question.

Making Online Exams Even More Secure

Respondus LockDown Browser is an important tool for preventing cheating on online exams, but it’s not a total solution. For example, students working from remote locations could use two computers at once.
Additional methods can be employed that further reduce the risk of cheating and ensure that students know the course material. Each approach below provides another “layer of security.” Even one or two of these items can often provide sufficient security for most assessments.

- Proctors - Having students take an exam in a room being monitored by a proctor is a major deterrent to most forms of cheating. Enhance this method by having the proctor check the identification of the student prior to the start the exam, placing security cameras throughout the room, or using a “test password” (see next item). For distance courses, proctored settings can be established in other cities, even other countries. Because of the time and expense required for a proctored setting, proctors are sometimes used only with high-stake assessments (eg. midterms, finals).

- Assessment Passwords (Bb setting) - An assessment password prevents students from accessing the exam until a password has been supplied. Assessment passwords can be typed by the proctors themselves (for added security) or conveyed to the student at the start of the assessment.

- Disallow Multiple Attempts (Bb setting) - By only allowing one attempt for an assessment, students won’t be able to determine the questions in the assessment, look up the answers at a later time, and then retake the assessment.

- Limit Initial Feedback to “Score Only” (Bb setting) - Select “Score Only” for the initial Feedback Mode. This will prevent students from viewing, printing or copying questions after they have completed the exam. Once all students have completed the exam, the Feedback Mode can be changed so that the student can see more detailed feedback. To protect questions for future terms, the “Score Only” setting should only be used.

- Answer Randomization (Bb setting) - Answer choices to multiple choice questions can easily be randomized. This setting is selected at the time a question is created.

- Randomize Questions (Bb setting) - Question randomization is a good deterrent for assessments delivered in a classroom setting. Some versions of Blackboard allow question randomization for an entire assessment to be turned on with a single checkbox. An alternative approach is to create a “random block” or “question set” which will also display questions in random order.

- Random Blocks and Question Sets (Bb setting) - “Random Blocks” and the newer Question Sets are pools of questions that generally assess similar content. During an assessment, the questions are randomly drawn from the pool so that each student sees a different set of questions. For example, the first question in an exam might be drawn from a pool of 5
questions, making the odds only 1 in 5 that students will see the same question. Random Blocks or Question Sets are ideal for creating alternate forms of the same question.

- Calculated questions - Calculated questions, typically used in math and science courses, include variables in the question wording. The values for these variables are randomly generated, so students encountering the same question must give unique answers.

- Time Limits (Bb setting) - By limiting the time a student can spend on an assessment, students can be discouraged from consulting other sources since they won’t have time to do so. Later versions of Blackboard will allow the instructor to force submission of the assessment at the end of the time limit.

- Availability Dates and Times (Bb setting) - This setting restricts the availability of the assessment to a specific date/time range.

- Deliver questions one at a time (Bb setting) - By having exam questions delivered one at a time, it makes it more difficult for students to capture the exam contents using a digital camera (eg. 50 questions requires 50 pictures).

- Code of Conduct - Have students sign an honesty statement that summarizes the expectations and requirements for academic honesty.

- Other methods of assessment - Combine objective tests with other methods of assessment, such as group projects and writing assignments. Essay questions also make it difficult for students to cheat on a traditional assessment, knowing that the instructor may recognize an answer that has been copied from another student.