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Configuring Moodle to Integrate with LabSim

This guide was made for the LMS Administrator or individual experienced at configuring their LMS systems and settings.

To help you better integrate LabSim with your Moodle LMS, we have produced the following guide as a courtesy. We walk you through the steps of how to link to a course, a specific resource within a course, and how to send a score back from a LabSim resource to Moodle’s gradebook.

At the end of the guide, we will explain some of the common errors you may run into when trying to connect to LabSim through Moodle. Please be advised, we are not Moodle (or LMS) experts.

We are unable to provide support or set up your Moodle LMS. TestOut Technical Support is willing to let you know if there are any issues on our end with the LMS integration, but do not currently have the resources to set up a Moodle account.

As always, feel free to contact us with any issues. Have a great school year!
Setting up your LTI Tool Provider

On your Home page, navigate to the Administration panel and click through the following options.

Site administration ➔ Plugins ➔ Activity modules ➔ LTI

Click on “Manage external tool types.”
On the Manage external tool types page, click “Add external tool configuration.”
On this screen, enter a “Tool Name” that will identify that this is for TestOut.

Add the base URL (http://www.testout.com/orbispartner/basiclti.aspx) to the “Tool base URL.” If needed, https://www.testout.com/orbispartner/basiclti.aspx will also connect you to LabSim.

Add your Consumer Key & Secret received from your TestOut Account Executive to the respective fields.

Additionally, you can add any custom parameters you wish to apply globally on this screen. One option here is the labsim_outcomes_allow=true. This will enable send scores to be sent back to Moodle for every link you create to LabSim in Moodle.
Scroll down and click “Save changes.”

You should see your tool listed.
Steps to Integrate LabSim with Moodle

Inside of your course, select “Add an activity or resource.”

On the “Add an activity or resource” dialog box, select “External tool” and then press “Add.”
Give your assignment a name. Insert http://www.testout.com/orbispartner/basiclti.aspx into the “Launch URL” box. You should see a green check mark verifying that Moodle recognizes the tool you have created.

If you have not created an External Tool, you can also do it here by clicking on the + symbol next to the External tool type dropdown field.

Press “Show more...”
At this point, there are two ways to direct your Moodle link to a specific course and section.

**Web Links**
You can build the Launch URL to do a variety of things. Simply add ? to the end of the base URL and add the following custom parameters, separated by &.

- **Go to your specific LabSim Course:** Add labsim_course_id= followed by the ISBN of your course (example: 978-1-935080-43-5). **This is required to connect to LabSim.**
- **Go to a Specific Resource:** To go to a specific resource inside of the course you have specified, add labsim_section_id= followed by the section (example: 9.5.3).
  - If you wish to link to a resource without a numbered title, you may put the name of the resource, using “%20” in place of spaces (for example: Course%20Overview)
  - To link to a Custom Exam, use the Exam ID (found on the Custom Exams screen in LabSim) in place of the section number (You must include labsim_class_id={Your Class Name Here} as well if you want the score stored and visible within your LabSim class).
- **Request that Student’s Submit a Score Back:** If you wish to have students report back a grade from a resource, add labsim_allow_outcomes=true to the URL. This is unnecessary if you have had TestOut set this globally or if you have previously set this globally while setting up the tool.

In the end, your URL should look similar to the URL below:


**Note:** If you wish to create a LabSim class or add students to a LabSim class, refer to [Creating a LabSim Class using LMS Integration](#).
Custom Parameters Field
Additionally, you can add the “Custom Parameters” to the field, as shown below.

Expand the “Privacy” section of the page.
In the “Privacy” section, check the boxes to “Share launcher’s name with the tool” and “Share launcher’s email with the tool.” **This is required to connect to LabSim.** Also, if you wish to collect grades in Moodle from LabSim, check the box to “Accept grades from the tool.”

Expand the Grade tab.
In the Grade tab, you tell the LMS how to interpret the score that LabSim sends to Moodle. LabSim will send Moodle value from 0 to 1 and this is where you determine how Moodle converts that value to what you would like to see in your Moodle gradebook.

Select “Save and return to course.”

When you exit the assignment creator, you will see your assignment. Click the link.
You will be directed to a LabSim screen. Press “Launch LabSim” to get into LabSim.

You will see that we enter LabSim at an exam, section 2.3.5, as we created our integration. You will also notice at the top, students are given the option to “Submit Score.”
Linking to a Custom Exam

To link to a Custom Exam you will first need to find the Exam ID found on your Custom Exams screen in LabSim.

Following the same steps outlined in Steps to Integrate LabSim with Moodle, use the Exam ID in place of the section number.

You must include labsim_class_id={Your Class Name Here} if you want the score stored and visible within your LabSim class).

For example:


Linking to a TestOut Pro Certification Exam

To link to a TestOut Pro Certification Exam, follow the same steps as outlined in Steps to Integrate LabSim with Moodle, but simply replace the value following labsim_section_id= with the name of the Pro Certification Exam.

For example:


Note that the labsim_course_id= followed by the ISBN of your course is still required.

Scores cannot be sent back to the LMS for Pro Certifications at this point.
Creating a LabSim Class using LMS Integration

**Using LTI to Create a Class**
You can create a class in LabSim by adding the custom parameter `labsim_class_id` followed by the name of your class.

**Note:** If you have spaces in your class title, please insert `%20` in place of the spaces.

In the end, your URL might look something like this:


**Assigning a Teacher and Product to the Class**

**Creating a New Class**
A teacher can create a class by clicking on an assignment where the link contains the `labsim_class_id` parameter.

By doing this, the teacher creates the class, is assigned as the instructor of this class and associates a TestOut product to the class (based on the ISBN contained in the URL).

**Note:** If a different instructor clicks on this link, they will be placed as the instructor of this course, replacing whoever the instructor was prior to that point.

**Linking to an Existing LabSim Class**
A teacher can add students to a class that was previously created in LabSim by creating a link with the `labsim_class_id` and adding the EXACT class name after the custom parameter (remembering to add `%20` in place of any spaces).

**Adding Students to the Class**
To add students to a class, students need only to click on an assignment that contains the `labsim_class_id` parameter in the URL. Once a student clicks on ONE LINK that contains `labsim_class_id`, they will be added to the indicated class.

**Note:** The custom parameter `labsim_class_id` does not need to be in every link to LabSim, just make sure it is in one of the initial links a student clicks on inside of your LMS.
Importing a Course Shell into Moodle

TestOut has a select few course shells built in Moodle 2.9 while testing LMS Integration with LabSim. If your TestOut Account Executive has provided you a “course shell” for a TestOut product, follow these steps to import that shell into Moodle.

From inside your course, click on “Restore” in the Administration Panel.
Press “Choose a file...” or drag the course you wish to import into the box and press “Restore.”

Scroll to the bottom of the screen.
In the “Restore into this course” section, select the option you would like and then press “Continue.”

On the Restore Settings page, the important settings to import are the activities and resources and blocks.
Give your course a name. As you are scrolling down, you can include or not include any of the Course Links you wish to include in your course. Then click “Next.”

Next you will review the settings of the import. Scroll to the bottom and click “Perform restore.”
The course will take a while to import.

After the finishes importing, press “Continue.”
You will see the course links have imported into your course.
**Common Errors**

There are some common errors that we have seen when trying to integrate LabSim with LMS Systems.

Below you see an error when trying to connect to LabSim. The text in the box will often give you a clue as to what the information LabSim is not receiving so that you can correct the problem in your LMS. Below are some of the common errors. If you see an error other than one of these, please contact us.

![Error Message](image.png)

**Invalid Consumer Key:** This means that you have inputted your Consumer Key incorrectly. Please verify you have keyed the Consumer Key correctly. If you have, please take a screenshot and contact us.

**OAuth Authorization Failed:** Your Shared/Consumer Secret is incorrect. Please verify you have keyed the Consumer Key correctly. If you have, please take a screenshot and contact us.

**Invalid LabSim Course Id:** You have inputted the parameters that direct you to the course you are looking to access. The parameter should look like this—the value after the equal sign is the ISBN of your LabSim product:

`labsim_course_id=978-1-935080-43-5`

**Invalid User Id:** LabSim requires that the User ID is passed from the LMS. If you are receiving this error, you (or your admin) needs to change the permissions in your LMS to pass over the User ID to LabSim.

**Invalid User Role:** LabSim requires a user role to be passed over from the LMS. This is how LabSim knows to create an instructor account or a student account. If you are receiving this error, you (or your admin) needs to change the permissions in your LMS to pass over the role to LabSim.

**No licenses are available for the requested product:** This error means that your Consumer Key and Secret have been setup with a group licensing model and there are no more licenses available. Please contact your Account Executive to get more licenses added to the pool.
Server Error in ‘OrbisPartner’ Application

The “Launch URL” you input into the LMS is incorrect. It should be:

http://www.testout.com/orbispartner/basiclti.aspx

Please verify that it is correct. If it is and you are still getting this error, please take a screenshot of both the screen and the URL you have input and contact us.