How to integrate SIMTICS with your LMS using LTI

1. Introduction

SIMTICS uses Learning Tool Interoperability (LTI) for integration with learning management systems (LMS).

Once the integration is set up:

- SSO will be operational - students will only need to log in to the LMS and will not have to log in a second time to the SIMTICS server.

- A score will be passed back to the gradebook from each student session in SIMTICS. By default, the best score for a completed *Test Mode* simulation (if any) will be posted back to your LMS when the student logs out of SIMTICS and returns to the LMS. Optional parameters (see section 4 below) allow you to post back a Quiz score instead of a Simulation score, and/or to post back the best score *of all time* instead of the best score for the current session.

2. Getting started

To link SIMTICS to your LMS, you need a unique SIMTICS consumer key and consumer secret to identify your system to the SIMTICS server. **If you haven't already been given these keys, please send a request to support@simtics.com.**

Vendor instructions for setting up integration from the three most common LMS products are available at the links listed below:

Canvas	https://guides.instructure.com/m/4152/l/74482-how-do-i-configure-an-external-app-for-a-course-using-a-url https://canvas.instructure.com/doc/api/file.tools_intro.html Canvas is by far the most popular LMS used by our customers, so we have created a how-to video for this integration: https://www.youtube.com/watch?v=zifPYEuas6I
Moodle	https://docs.moodle.org/33/en/External_tool
Blackboard	https://help.blackboard.com/Learn/Administrator/SaaS/Integrations/Learning_Tools_Interoperability

3. Setting up your integration

Follow the instructions in your LMS vendor's documentation for linking to a third party tool or external resource. Make sure you have the following information to hand:

- Consumer key: a unique key for your institution will be provided on request by SIMTICS
- Secret key: a unique key for your institution will be provided on request by SIMTICS
- Launch link for latest SIMTICS HTML5 version: https://lti.simtics.com/api/v1/new

4. Setting up SIMTICS assignments in your LMS

Consult your LMS vendor's documentation for details on how to do this in the specific product that you use.

For each assignment, at minimum you must specify the code for the relevant SIMTICS module, which is defined with this **required custom parameter**:

- **course_code=xxxx**

  Each SIMTICS module has a unique code which is usually between 4-6 characters long. When creating an assignment link in your LMS, you must use this parameter and the relevant module code to specify the module you want the student to access from that link (e.g. course_code=USLV for the Ultrasound Examination of the Liver module, course_code=MAVP for the Venipuncture module, and so on).

  SIMTICS will provide you with a list of relevant module codes for the program(s) you've purchasing SIMTICS for. Make sure to type each code correctly, as some look very similar.

Optional Custom Parameters

Optional parameters are available to control different aspects of students' access to SIMTICS.

To control what scores are passed back to your gradebook:

By default, the SIMTICS LTI interface will pass back the best score during the current session from a Test Mode simulation (for the module specified in the course_code parameter).

You can vary what score is passed back with these two parameters.

- **quiz=true**

  If you want a *quiz* score to be passed back instead of a simulation score, use this parameter with the value set to "true".

- **sendmaxscore=true**

  If this value is set to "true", the system will send the best score *for all time* instead of for the current session only.

To control what students have access to in a SIMTICS module:

By default, SIMTICS provides the student with access to the entire module that you have linked the assignment to. You can vary this by using these additional parameters.

- **learnmode=true**

  This parameter will give students access to the module's *Learn Mode simulations only.* It will display the Learn Mode scenario selection screen only, and students won't be able to navigate to any other part of the module.

- **testmode=xxx**

  This parameter controls what test content should be displayed for the specified module. There are three possible values for this parameter:

  - **testmode=simulation** – display Test Mode Simulation only

  - **testmode=simulation_with_content** – display Test Mode Simulation, Text, Video and Anatomy, but do not display Quiz

  - **testmode=quiz** – display Quiz only

- **scenario=n (values can be 1, 2 or 3)**

  When the parameter *testmode=simulation* is used, by default SIMTICS will randomly select a Test Mode scenario for the user. (This is the same behavior that the user would encounter if they logged in directly.) By adding the parameter *scenario=n*, this will select a specific scenario that you want the student to perform, e.g. scenario=3 to go to scenario 3 of the module specified in the course_code= parameter.

Other:

- **group=xxx**

  If you use the SIMTICS Group Administration & Reporting (GAR) system, this parameter allows you to place the student in a particular group for reporting purposes, e.g. a class or cohort. If the group name does not already exist, it will be automatically created when the first user clicks on the link. Groups can also be created and managed manually from the SIMTICS GAR System.

5. Managing user accounts after LMS integration

Once integration is complete, students and instructors will have access to SIMTICS through the assignment links you have set up in your LMS.

Students should now use your LMS as their sole method of access to SIMTICS. This section explains why.

- A *new* SIMTICS account is set up when a user clicks on their first SIMTICS link in your LMS. This permanently connects the user's new SIMTICS account to their account on your LMS, which enables single sign-on and score pass-back to your LMS gradebook. We refer to this as an LTI account.

- This LTI account is different from (and is not linked to) any *existing* instructor or student accounts that were previously provided by SIMTICS (eg. for a pilot). So if any of your users already had a SIMTICS account, they now have two SIMTICS accounts – direct and LTI.

- Students should now only access SIMTICS from the LMS. If students log in directly at the SIMTICS website, instead of going through your LMS, scores cannot automatically transfer to the gradebook.

- Instructors can use either account, however to access the GAR System they will need to log in separately at https://group.simtics.com with a valid username provided by SIMTICS.

General Notes:

- If a student exits a Simulation before their score is displayed on their screen, the score won't be calculated/logged and can't be transferred to your LMS.

- If students do not log out of SIMTICS cleanly using the Logout button, e.g. they just close the browser tab, it can take some time before the score will appear in your LMS.

- The SIMTICS LTI usernames are auto-generated based on your school's id in our system plus user id information that is passed from your LMS. With SSO, end users don't need to know these auto-generated usernames, however faculty / administrators will see them if they use the SIMTICS GAR system.

- If you have introduced your LMS partway through a school year, and you need to retain student logbook data from previously existing accounts, you can request for the students' original and LTI accounts to be merged. The older merged data will not be transferred to the gradebook, however, and will only be viewable from the GAR System.

For further assistance or additional information, please contact support@simtics.com