Integrating SIMTICS into Blackboard using an External Learning Tool

This guide will help you set up your Blackboard environment so your students can access SIMTICS with SSO and have scores passed back to your gradebook.

This guide was created with Blackboard 3900.10.0 - self hosted version. If your Blackboard looks different to this guide, please reach out to benny@simtutor.com for more information on your version of Blackboard.

Please ensure you have at least admin privileges to the courses in Blackboard before proceeding with the steps in this guide.

You will also need the following, which the SIMTICS Support Team will provide:

- the unique Consumer Key and Consumer Secret codes for your school
- the list of modules and module codes that your school is purchasing access for; if multiple programs are using SIMTICS, you will need the relevant list for each program; be careful to keep these separate.

If you don't have these yet, please contact us at www.simtics.com/contact/

This guide will take you through the following steps:

Note: The term "module" in this document refers to a SIMTICS module (eLearning unit), which contains text, video, anatomy, simulations and quiz for learning a skill or procedure. Be aware that some special modules have only simulations and quizzes and a few have only simulations.

Introduction

SIMTICS uses Learning Tool Interoperability (LTI) for integration with Blackboard

Once the integration is set up:

- SSO will be operational - students will only need to log into Blackboard 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 sent to Blackboard when the student logs out of SIMTICS and returns to Blackboard.

  Optional parameters (see "Using Custom Parameters" in this document) allow you to capture a Quiz score instead of a Simulation score or the best score *of all time* instead of the best score for the current session.

To link SIMTICS to Blackboard, 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 contact us at** www.simtics.com/contact/

The launch link for latest SIMTICS HTML5 version is lti.simtics.com

If you would like students who access SIMTICS via Blackboard to automatically be placed into groups for the SIMTICS reporting system (group.simtics.com), we can turn on a feature that automatically does that based off your course name and SIS ID (or equivalent) in Blackboard. When a student first accesses SIMTICS via Blackboard, they will be sorted into that course specific group.

This is something we need to turn on individually for each school/domain, so please email our integration specialist benny@simtutor.com if you would like to have this set up, or you'd like to know more.

Step 1: Setting up SIMTICS at the Institution Level
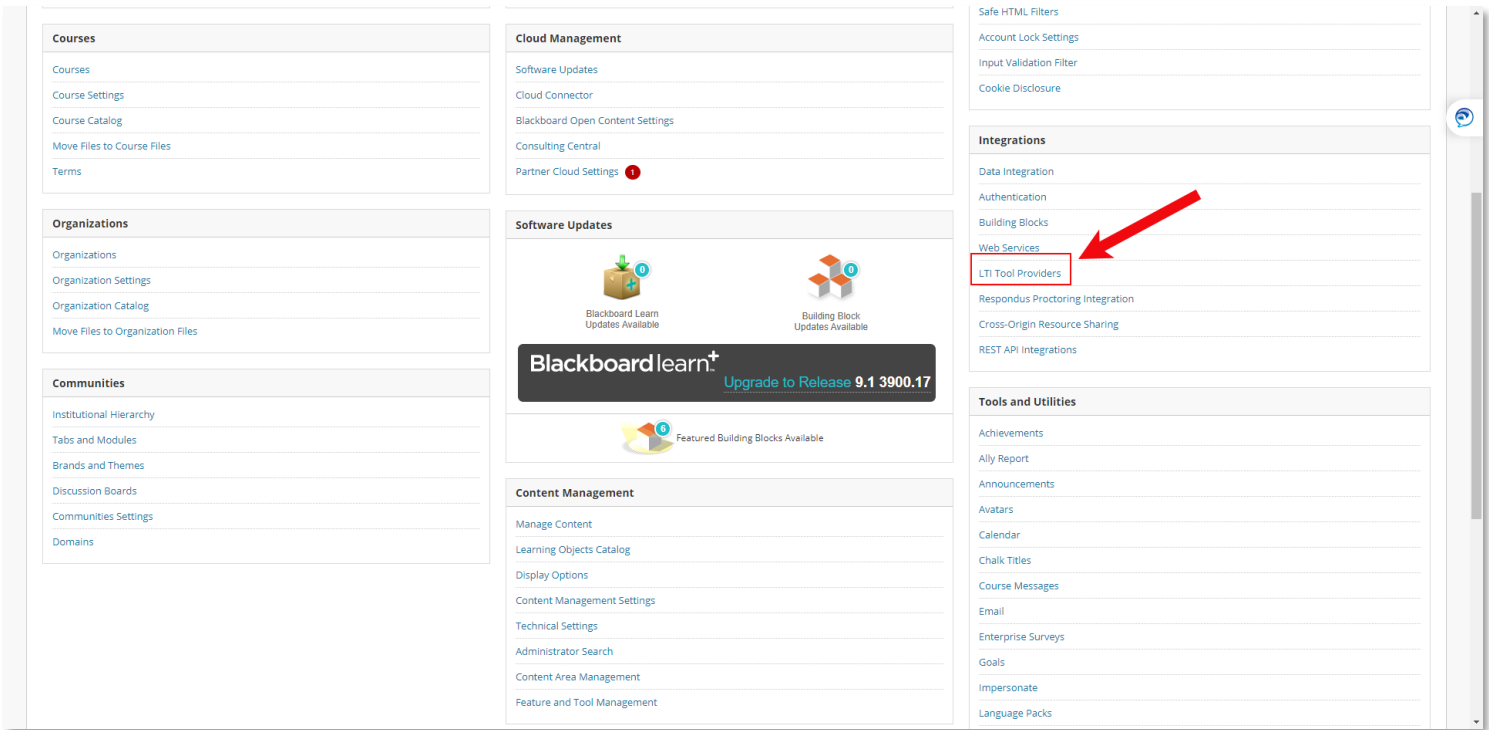
1. Click **LTI Tool Providers** in the right **Integrations** section (above image)
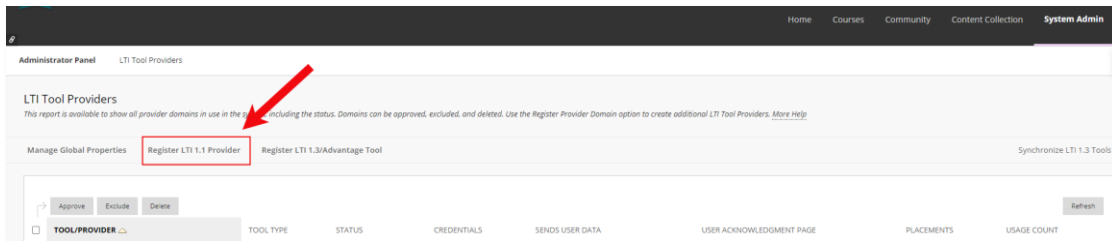
2. Select **Register LTI 1.1 Provider** tab at the top of the page
3. Fill out the following information:

Provider Domain: lti.simtics.com
Provider Domain Status: Approved

Default Configuration: Set Globally (Optional, but recommended, as it saves the instructor setting up the LTI keys in every web link later)

Tool Provider Key & Secret: Paste the consumer key and shared secret key that you have been given for your organization.

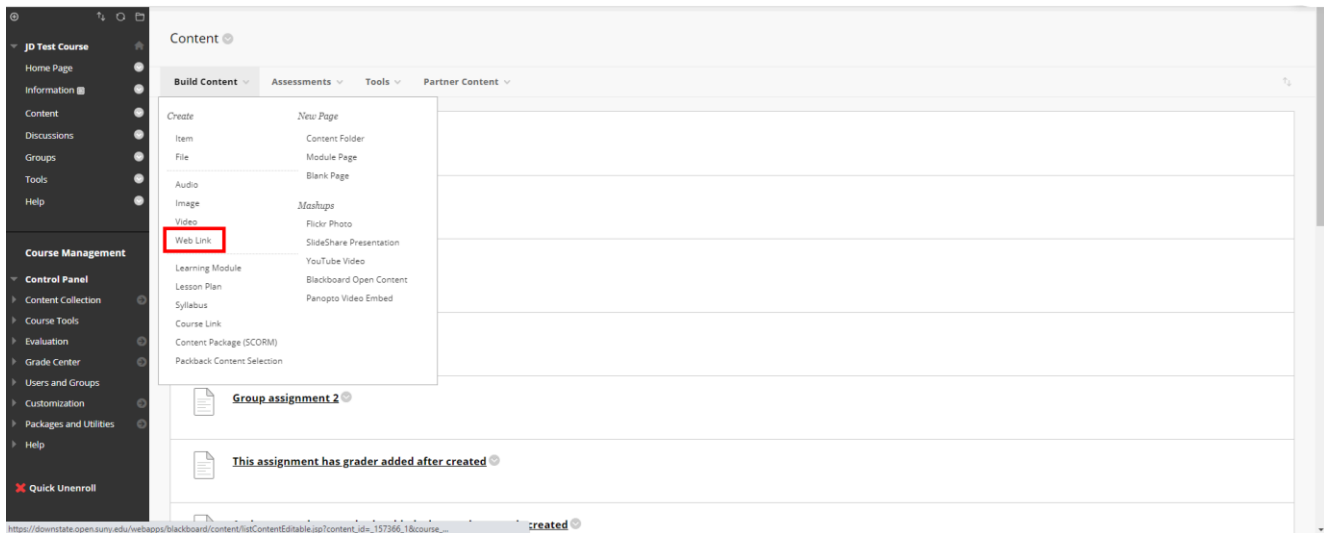> *These keys were emailed to you. Contact us at* www.simtics.com/contact/ *if you need these resent.*

Send user data: Send user data over any connection

User Fields to Send: Check all

Allow Membership Service Access: Yes.

4. Finally, click "Submit"

Step 2: Creating a Link to SIMTICS within your Course

1. Within your course, click on the **Build Content** dropdown
2. Select **Web Link**
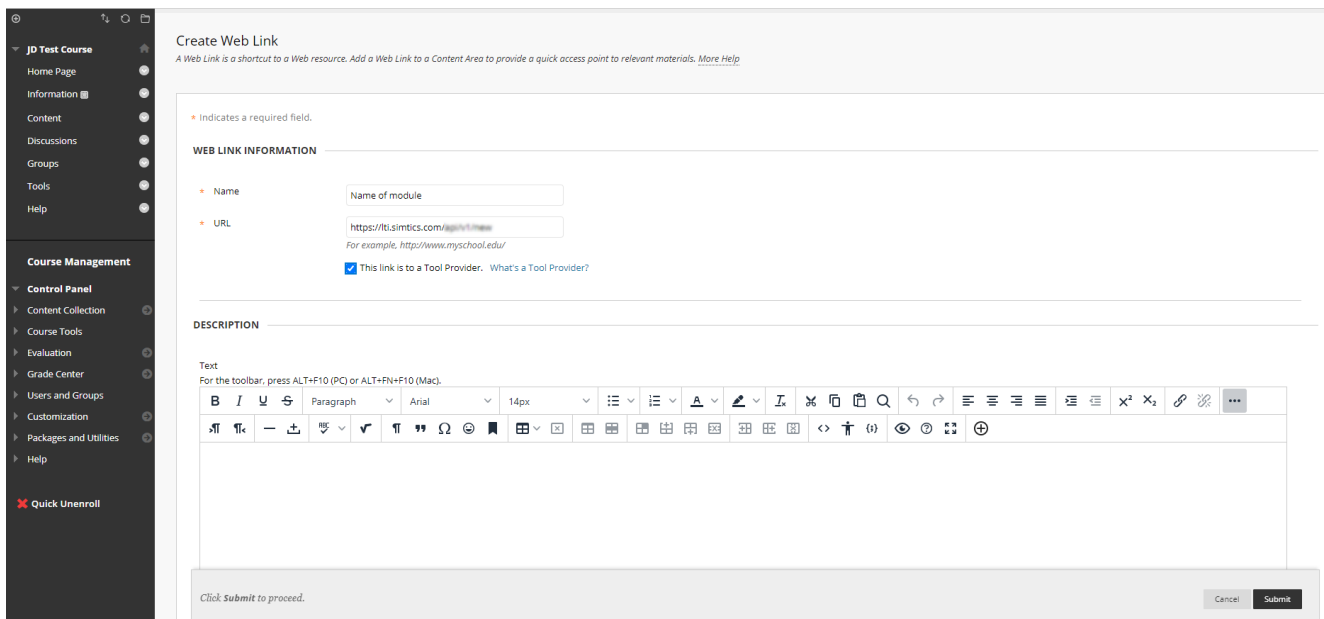
3. The following window should appear, complete as shown:

Name: Set a Title for this web link according to the SIMTICS module to which you want to link.

The Title should be different for each assignment so you can distinguish between them. Each SIMTICS module has a unique name that you can use.

URL: https://lti.simtics.com/api/v1/start/TUT

The URL contains the SIMTICS module code of the SIMTICS module you wish to run. The above URL will run the Tutorial module (TUT). Simply switch these 3 letters "TUT" out for another module to run that specific module for this web link. For example, running "Basic Life Support – ADULT" has the code "BLSA2". The resulting URL would be…

https://lti.simtics.com/api/v1/start/BLSA2

This link is to a Tool Provider: Ensure this is checked

Grading: The bottom section can be customized to however you'd like it to be.

Hit **Submit**.

4. All done! Now check that the module link is working as intended. Run the newly created link. You should see something similar to the screenshot below – however the module you see will be directly related to the course code you used in the custom parameters for this step so, for example, if you used another SIMTICS module code, you will see that module instead.
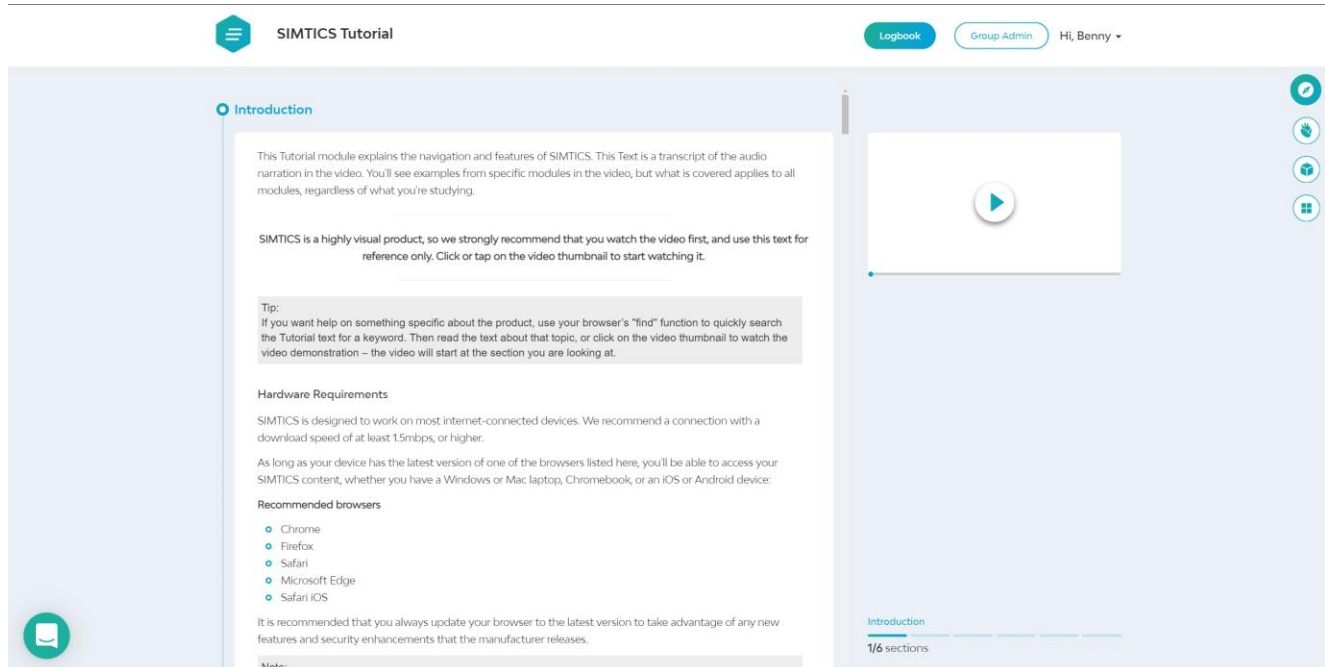
If you do not see the module you expect, or if no module launches at all, go back and check that you used the correct module code in the URL.

Using Optional Custom Parameters in Blackboard

Optional custom parameters allow you to control elements or behavior of the SIMTICS module, such as what scores are passed back, what the student can see, and more.

Below is a list of custom parameters that can be used within this version of Blackboard. Be aware that this way of setting up Blackboard currently doesn't support every custom parameter, as the custom parameter are limited to being within the URL, unlike other popular LMS's.

Here are two ways SIMTICS can be customised in Blackboard from the URL. You can include as much or as little of the custom parameter URLs below as you'd like to use.

https://lti.simtics.com/api/v1/start/TUT/simulation/test/send-max-score/with-content/allow-repeat

simulation/test: Locks the module in Test Mode Simulation only

with-content: Adds the Explore and Anatomy tab to the above parameter

send-max-score: Rather than sending the most recent grade to Blackboard, SIMTICS send the best grade of all time from that student to Blackboard.

allow-repeat: Allows the user to have more than one attempt within the same session.

https://lti.simtics.com/api/v1/start/TUT/quiz/owl/send-max-score/allow-repeat

quiz: Locks the module in Quiz mode only.

"owl" / "flash": Chooses the mode of quiz.

The combination of these two parameters could mean you have a learn (Explore, Anatomy) + Simulation web link with the first URL that the student first completes, then afterwards they access a second web link with the second URL that passes their Quiz grade back instead.

As mentioned earlier, Blackboard can only receive one score per web link, and by default that score is the Test Mode Simulation. Other web links with the above custom parameter must be used to receive different grades from SIMTICS.

Managing user accounts after Blackboard Integration

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

IMPORTANT: Students should now use Blackboard as their sole method of access to SIMTICS as:

- A new SIMTICS account is set up when a user clicks on their first SIMTICS link in Blackboard. This permanently connects the user's new SIMTICS account to their account on Blackboard, which enables single sign-on and score pass-back to Blackboard gradebook. We refer to this as a SIMTICS 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 Blackboard. If students log in directly at the SIMTICS website, instead of going through Blackboard, scores cannot automatically transfer to the gradebook.

- If you have the automatic reporting system feature enabled (see the end of the introduction section of this document), instructors can use the same Blackboard links to access the reporting system.

- If you do not have the automatic reporting system feature, 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.

Quick Tips

- 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 Blackboard. They need to always check that their score displays before they move on to another component or exit SIMTICS entirely. It can sometimes take up to 10 minutes for the score to be updated in Blackboard.

- The SIMTICS LTI usernames are auto-generated based on your school's id in our system plus user id information that is passed from Blackboard. 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 this Blackboard integration 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.

If you encounter any problems with these steps, or have any questions, please contact us using the chat bot on our website or the contact form at www.simtics.com/contact/