Rainbow Classroom

(Canvas Integration Guide)

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1   Document History

Edition	Date	Changes / Comments / Details
01	30/09/2020	Initial Canvas Integration Guide
02	05/03/2021	Overview has been added. Screenshots have been updated.
03	26/05/2021	Screenshots and details have been updated.
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05	06/08/2021	Screenshots and details have been updated for guest users.
06	25/07/2022	License details have been updated. **Section 2.1** Feature list has been updated. **Section 3.1** Screenshot has been updated. **Section 5.1** Screenshot has been updated.

2 Introduction

2.1 Overview – The Product

Rainbow Classroom is a SaaS (Software as a Service) solution that offers powerful collaboration and learning tools for education and training institutes. It enhances and provides a deep integration with industry leading Learning Management Systems (LMS). Organisations can keep their existing LMS e.g. Canvas and create an integrated learning and teaching experience for both students and teachers alike. The integration with LMS works via the LTI (Learning Tools Interoperability) protocol while the internal Canvas APIs are also used for extended integration.

Enhanced integration with Canvas enables education institutes to leverage new collaboration methods without having to spend energy on changing their existing LMS solutions. Rainbow Classroom provides a range of collaboration features for better management of classroom sessions including:

- Centralised administration
- Dashboard for live and upcoming classroom sessions
- KPIs and attendance module
- School and teacher level classroom configuration controls
- Audio and video conferencing
- Screen-share for both students and teachers
- Course content sharing
- Classroom session recording
- Online and offline whiteboards
- Workgroups for offline collaboration between students and breakout rooms for in-call collaboration
- Classwork
- Welcome Screen, Course Material and Links
- Watch Together
- Breakout & Exams rooms

More information on the back office administration and live classroom features that enrich the attendee experience can be found in Rainbow Classroom user and administration guides.

2.2 Overview – The Guide

The purpose of this document is to explain the process of integrating Rainbow Classroom with Canvas LMS. This guide expects the user to be a Canvas administrator, which is the access level required for the necessary configuration in Canvas to integrate Rainbow Classroom. Apart from course details, the integration also makes it easier for teachers and students to access the Rainbow Classroom directly from Canvas.

This guide goes through the administrative steps required for initial configuration along with screenshots to provide a better understanding and relevant context.

The Table of Contents is also provided at the beginning of this document which includes hyperlinks. These links can be used to jump to sections and topics of focus. Sometimes only small parts of the screen are shown to highlight a specific item or feature of the user interface.

3 Setup Canvas API Integration with Rainbow Classroom

Rainbow Classroom leverages Canvas's open APIs to build an extended learning experience. As part of the configuration of Rainbow Classroom, a new and unique access token needs to be setup in Canvas.

3.1 Creating a New Access Token in Canvas

Note: It is important to note that an access token can only be generated by a user that has been configured with a role of Canvas administrator.

Following are the steps to create a new and unique API access token for Rainbow Classroom.

1. Log into your Canvas account as an administrator.

2. Click on the **Account** link in the left menu and then click on **Settings** link, as shown below.
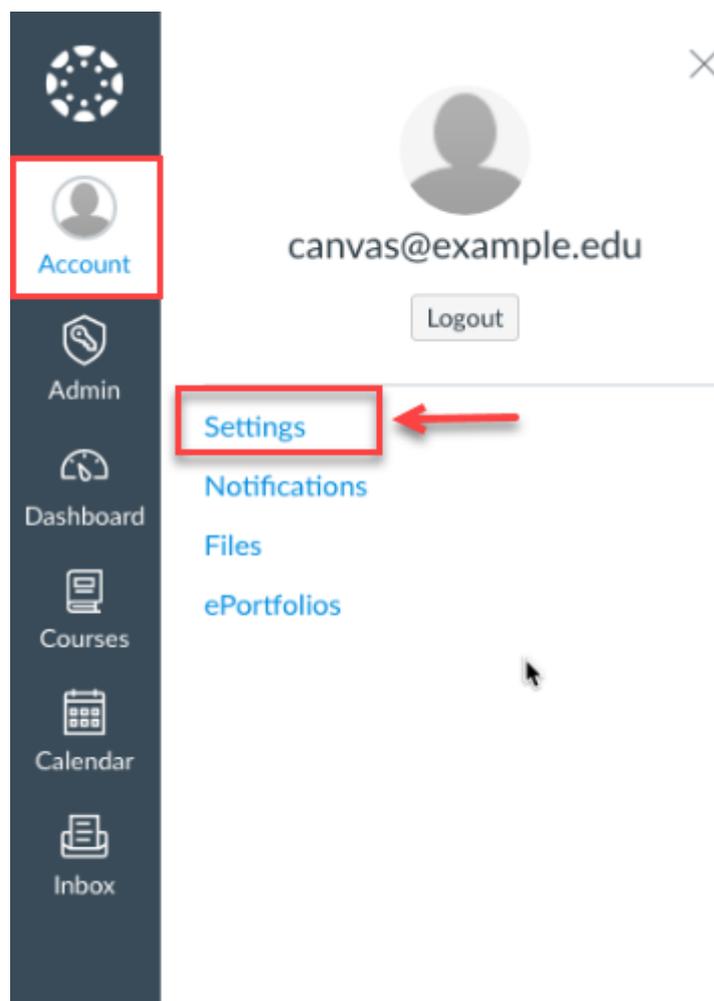
Screenshot - Canvas account settings

3. You will be presented with the account settings screen. On this screen, scroll down and click on the **New access token** button under **Approved Integrations** section, as shown below:
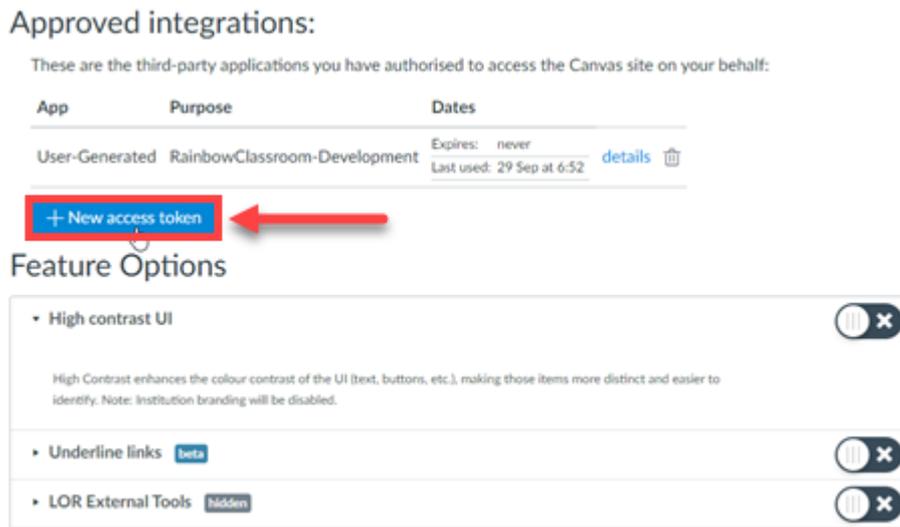
Screenshot - Access Token screen

4. The following dialogue of new access token will pop up. You need to describe the purpose in the respective field, select appropriate expiry date and click on **Generate Token** button as shown below:

Note: You can leave the Expires field blank for no expiration. If a date is mentioned then proper process should be put in place to ensure that Rainbow Classroom always has a valid access token for connectivity.
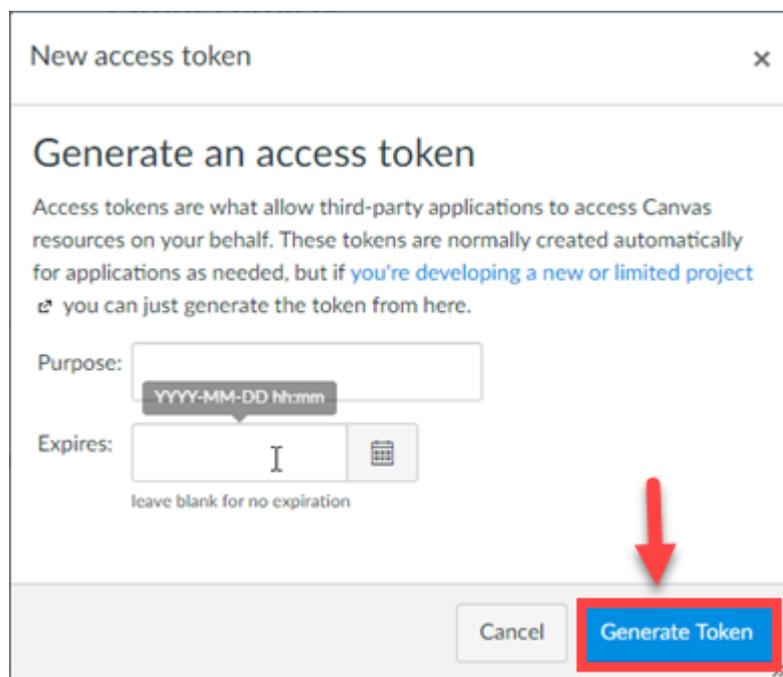
Screenshot - Generate Access Token

5. The following screen is displayed once you have clicked on **Generate Token** button. **Please copy the Token field and save it for the subsequent configuration of the Rainbow Classroom Administration**.
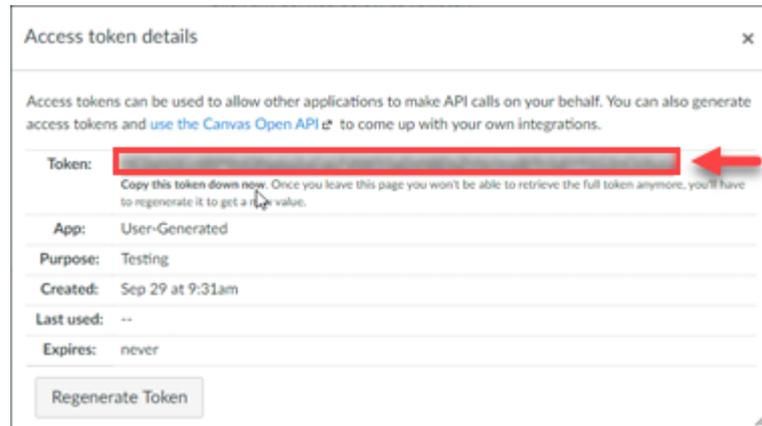
Screenshot – Access Token Details

IMPORTANT!! *If the token is not copied from the token generation screen or mislaid, it cannot be retrieved. The administrator will need to generate a new access token by repeating the above steps.*

3.2 Canvas Access Token in Rainbow Classroom Administration

Before proceeding with the other sections of this guide, the newly created API access token needs to be configured in the Rainbow Classroom Administration. It is outside the scope of this document to cover the configuration steps for Canvas connectivity in the Rainbow Classroom Administration.

Please refer to "Rainbow Classroom – Administration Guide for Organisation Admin (Canvas)" documentation to find out the configuration steps and the place where Canvas access token needs to be provided.

4 Setup Rainbow Classroom as Canvas (External) App

Rainbow Classroom can be added as an external app in Canvas. This makes Rainbow Classroom available right inside the Canvas courses screens for students, teachers and guests. Already logged in users can simply click on Rainbow Classroom button and instantly jump to respective Rainbow Classrooms.

Note: Rainbow Classroom uses Learning Tool Interoperability (LTI) standard to work as an integrated app in Canvas.

4.1 Creating a new Canvas App

Following are the steps to create a new "App" in Canvas:

1. Go to the **Admin** tab from the left menu and click on the specific admin account for which an administrator wants to create a new app in Canvas, as shown below.
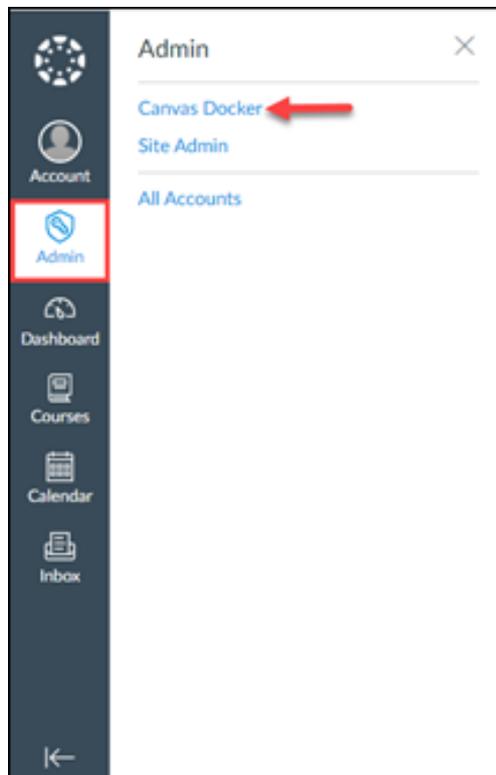
Screenshot - Admin account

You will be presented with the following screen that will display all the courses available in your Canvas account.
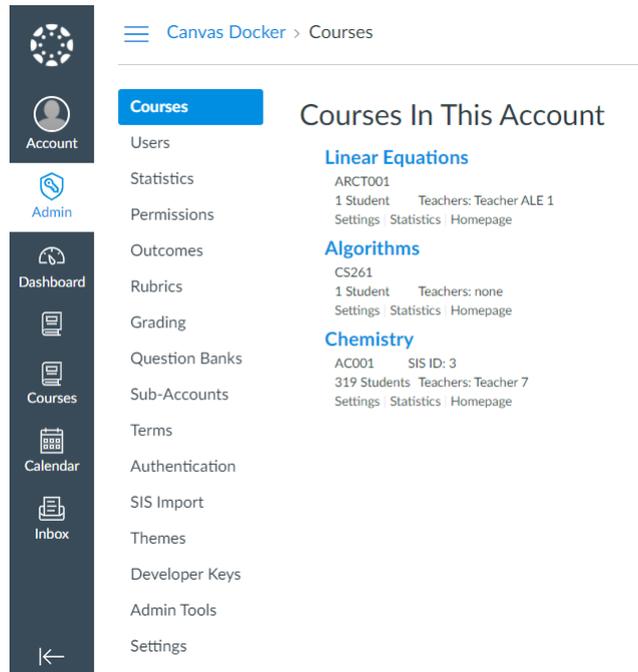
Screenshot- Courses

Note: It is recommended to use Global App Settings instead of creating apps one by one in each course. Nevertheless, it is entirely possible to create Rainbow Classroom in specific courses(s) if an organisation wishes to do so.

If the app needs to be created for all the courses, then jump to **Settings** menu as shown below:
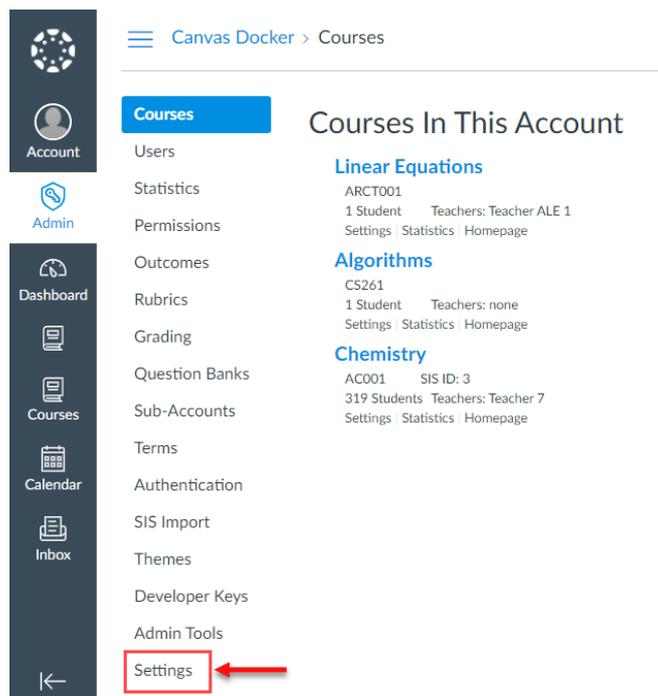
Screenshot- Courses

To create an app inside a particular course only, click on that course from the list. An example is shown below:
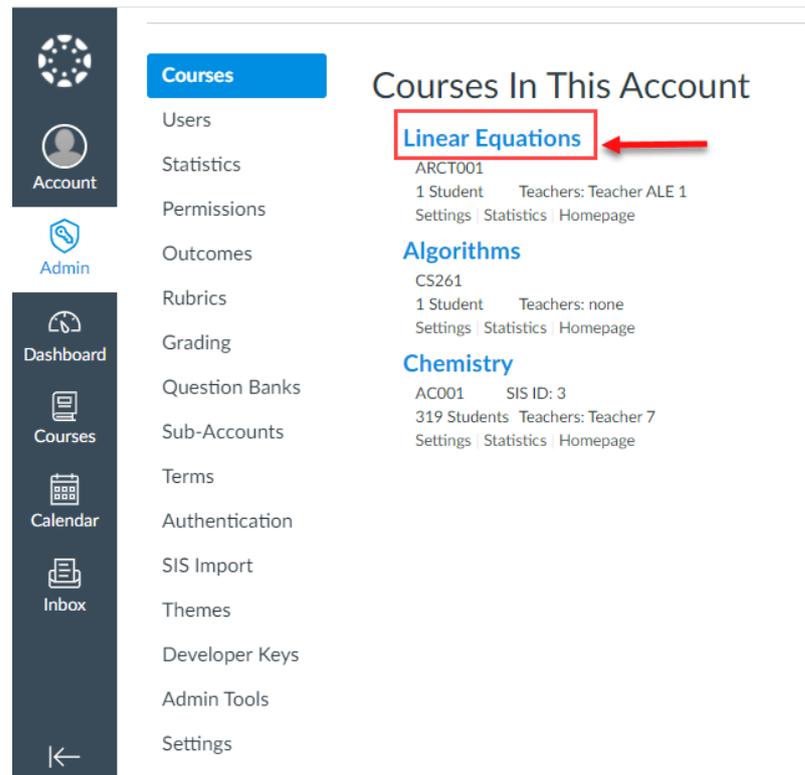
Screenshot- Courses

Selected course screen will be displayed. Click on the **Settings**, as shown below.
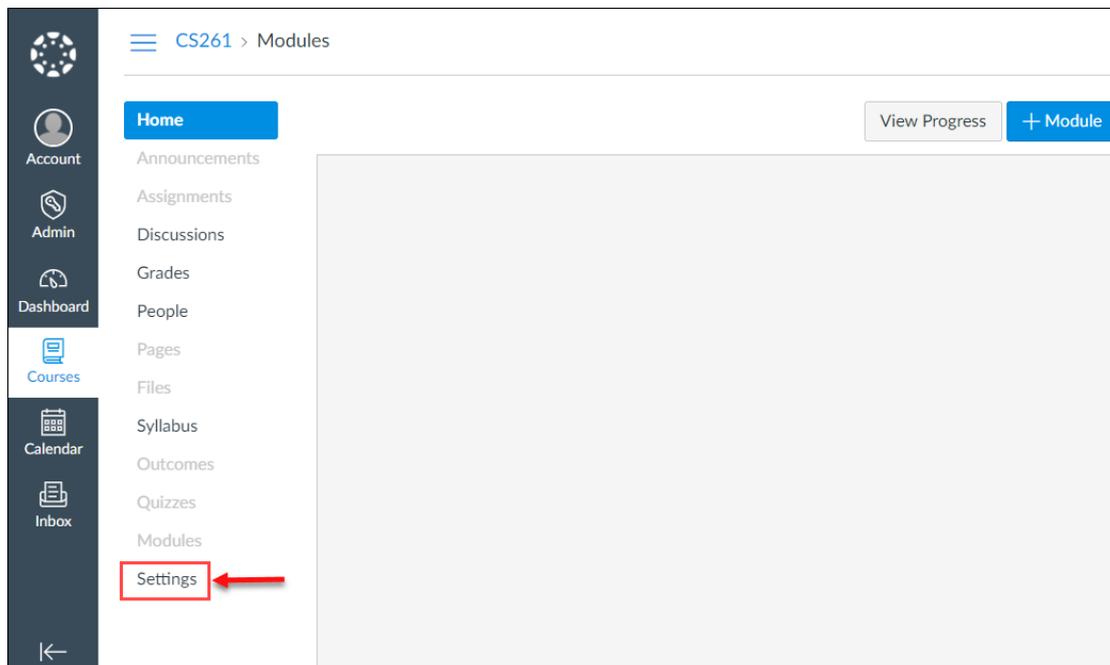
Screenshot- Course Settings Screen

2. On this screen, choose **Apps** from the upper tab and then click **+App** button to add an external app (Rainbow Classroom) to your Canvas courses, as shown below.

Screenshot- Add External App

3. You will be presented with a popup window.

Screenshot- Add External App

Here, provide the following details:

Configuration Type: Select **Manual Entry** from the dropdown menu of the respective field.

Name: Enter 'Setup Classroom in advance' in the respective field.

Consumer Key: Enter the consumer key provided by Rainbow Classroom team.

Shared Secret: Enter the shared secret provided by Rainbow Classroom team.

Launch URL: Enter the following URL of Rainbow Classroom setup in the respective field. (https://classroom.openrainbow.io/lti/launch_lti)

Domain: Enter the domain in the respective field.

Privacy: Select **Public** from the dropdown menu of the respective field.

Note: Privacy should be Public so that the external app (Rainbow Classroom) can read the initiator information.

Custom Fields: Enter the authentication token provided by Rainbow Classroom team.

Note: Please make sure to place 'token=' before entering the authentication token, as shown below.

Custom Fields

token=eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJBbWlnb1NvZGRYXJlIiwic3ViIjoiT1B DWFJBUEkiLCJlbWFpbCI6ImFzc2IzdGFuY2VAYW1pZ28tc29mdHdhcmUuY29tIiwicm9sZSI6Ik1hb nVmYWN0dXJlciIsIk1QVCI6IkZhbHNlIiwiaHR0cDovL3NjaGVtYXMubWljm9zb2Z0LmNvbvbS93cy8 yMDA4LzA2L2lkZW50aXR5L2NsYWltcy9yb3BlbnNpc3RlbnQiOiJUcnVliiwiaWF0IjoxNjIwODU3M Tg3LCJodHRwOi8vc2NoZW1hcy5taWNyb3NvZnQuQuY29tL3dzLzIwMDgvMDYvaWRlbnRpdHkvY2 xhaW1zL3ZlcnNpb24iOiJQcm9kdWN0aW9uIiwiZXhwIjoxOTY2NDU3MTg3LCJhdWQiOiJPUENY

One per line. Format: name=value

Description: Enter the description in the respective field.

IMPORTANT!! *It is important to note that you will receive* ***consumer key, shared secret*** *and* ***authentication token*** *via email only after the integration configuration of your organisation admin account for the Rainbow Classroom Administration. For more details, please refer to* ***"Rainbow Classroom – Administration Guide for Organisation Admin (Canvas)"*** *documentation.*

4. Click **Submit** button and a newly created app (Setup Classroom in advance) will be displayed in your external apps list, as shown below.

External Apps

+ App

Apps are an easy way to add new features to Canvas. They can be added to individual courses, or to all courses in an account. Once configured, you can link to them through course modules and create assignments for assessment tools.

See some LTI tools that work great with Canvas.

Name	
Setup Classroom in advance	⚙ ▾

Screenshot- External App

5. Repeat the process of adding an external app as described above. Once you're on the **Add App** screen, enter the following details:

Configuration Type: Select **Manual Entry** from the dropdown menu of the respective field.

Name: Enter 'Rainbow Classroom' in the respective field.

Consumer Key: Enter the consumer key provided by Rainbow Classroom team.

Shared Secret: Enter the shared secret provided by Rainbow Classroom team.

Note: Please make sure to place 'token=' before entering the authentication token, as shown below.

Custom Fields

token=eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJBbWlnb1NvZnR3YXJlIiwic3ViIjoiT1B
DWFJBUEkiLCJlbWFpbCI6ImFzc2IzdGFuY2VAYW1pZ28tc29mdHdhcmUuY29tIiwicm9sZSI6Ik1hb
nVmYWN0dXJlciIsIk1QVCI6IkZhbHNlIiwiaHR0cDovL3NjaGVtYXMubWljcm9zb2Z0LmNvbS93cy8
yMDA4LzA2L2lkZW50aXR5L2NsYWltcy9zc3BlcnNpc3RlbnQiOiJUcnVlIiwiaWF0IjoxNjIwODU3M
Tg3LCJodHRwOi8vc2NoZW1hcy5taWNyb3NvZnQuY29tL3dzLzIwMDgvMDYvaWRlbnRpdHkvY2
xhaW1zL3ZlcnNpb24iOiJQcm9kdWN0aW9uIiwiZXhwIjoxOTY2NDU3MTg3LCJhdWQiOiJPUENY

One per line. Format: name=value

Launch URL: Enter the following URL of Rainbow Classroom in the respective field that will allow users to redirect to Rainbow Classroom with a single click.

(https://classroom.openrainbow.io/lti/classroom)

Domain: Enter the domain in the respective field.

Privacy: Select **Public** from the dropdown menu of the respective field.

Note: Privacy should be **Public** so that the external app (Rainbow Classroom) can read the initiator information.

Custom Fields: Enter the authentication token provided by Rainbow Classroom team.

Description: Enter the description in the respective field.

Click **Submit** button and the secondly created app (Rainbow Classroom) will be displayed in your external apps list, as shown below.

Screenshot- External App

IMPORTANT!! *If you're creating the external apps for the particular course then all you have to do is create apps for each course using the same setup details that were sent to you by Rainbow Classroom team. There's no need to generate an access token each time when creating external apps inside a course.*

5 Add Rainbow Classroom App in Canvas Courses

The steps for setting up a classroom for your Canvas course are below:

5.1 Create a new Classroom Module for Teachers, Students and Guests

1. Go to your specified course by clicking on the **Admin** tab from the left menu > Click particular admin account > Click on the course, as shown below.
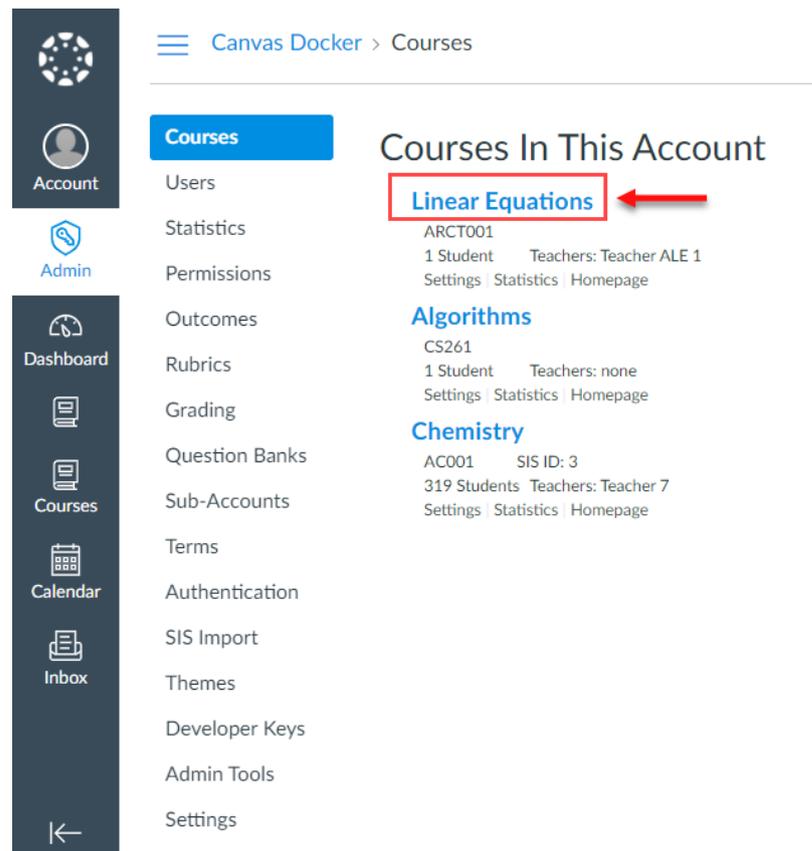
Screenshot- Canvas Courses

2. You will be presented with the following screen. Click on **+Module** button, as shown below.
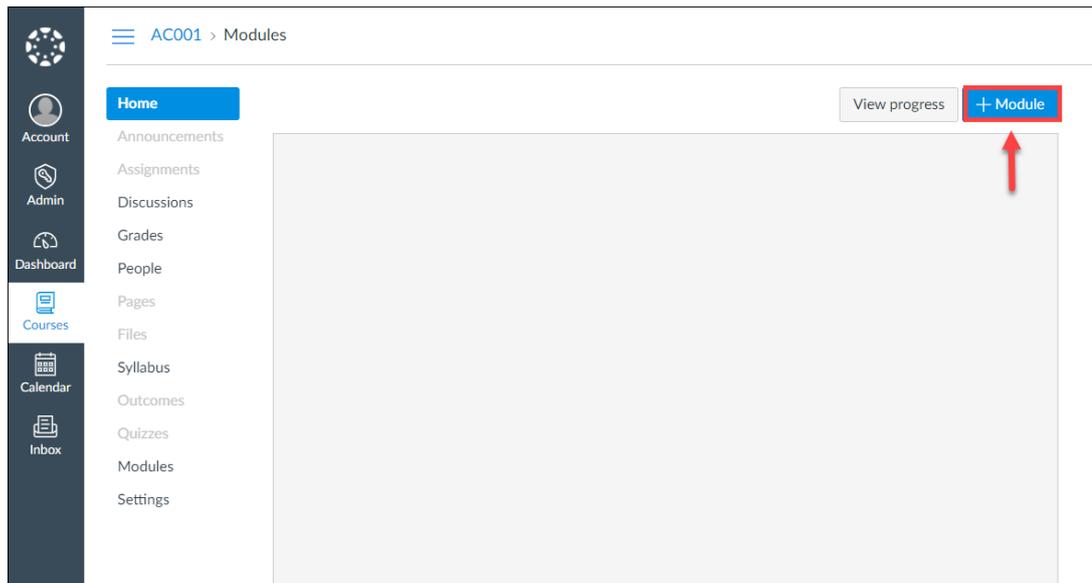
Screenshot- Add Module to a Course

3. A popup window will be displayed, as shown below.
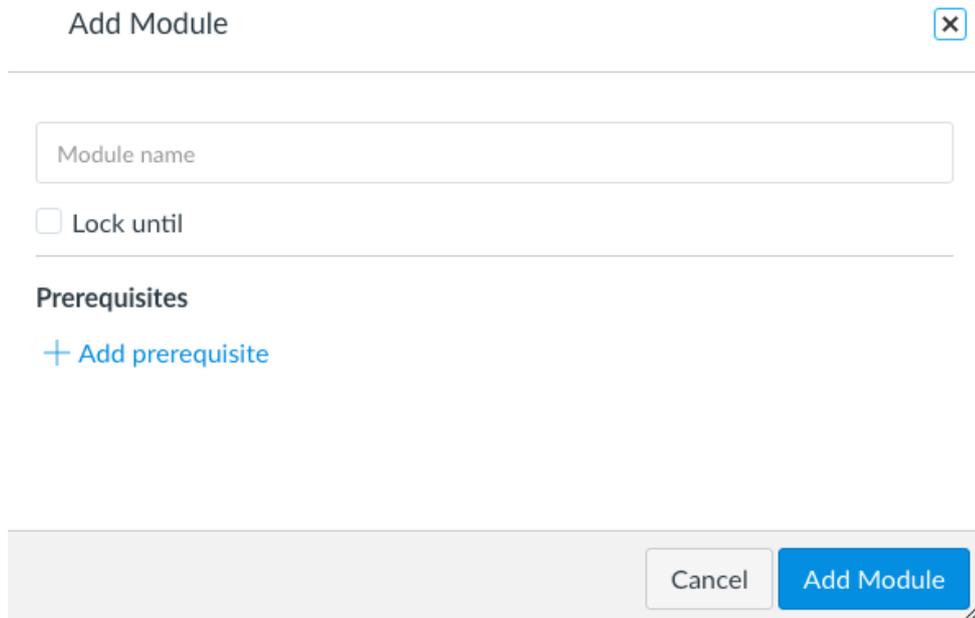
Screenshot- Add Module to a Course

Module Name: Enter the module name in the respective field.

Lock until: Check this box if you want to lock this module.

If you check this box then another field will appear so that you can specify date and time interval in which the module should be unlocked.
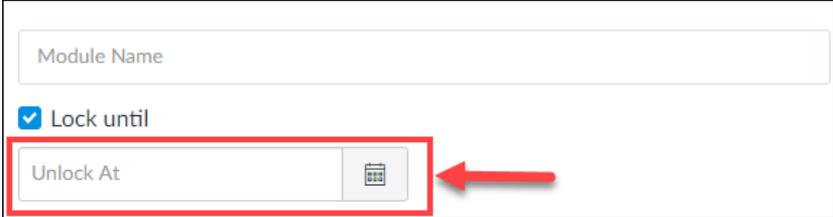
Screenshot- Add Module to a Course

Click on 🔳 icon to set the date and time interval, as shown below.
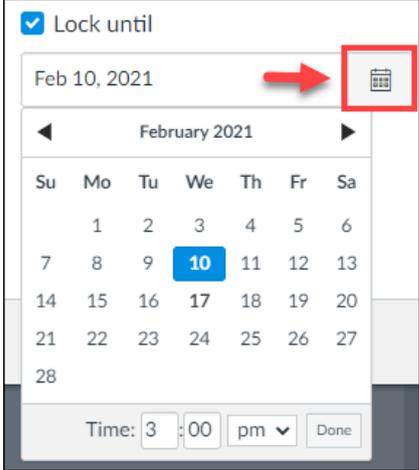
Screenshot- Add Module to a Course

Once done, click on **Add Module** button and a module will be added to your Canvas course, as shown below.

Screenshot- Add Module to a Course

5.2   Create a New Classroom Module for Teachers only

With Rainbow Classroom, teachers can setup Classrooms and provision new students and guests directly from Canvas.

1.   Go the module and click on the plus icon on the right side of the screen, as shown below.
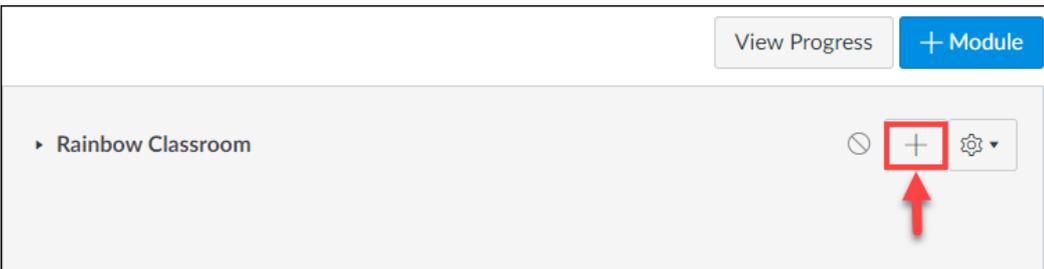
Screenshot- Add External Tool

2. You will be presented with a popup window of **Add Item to Module**. Choose **External tool** from the dropdown menu of the respective field, as shown below.
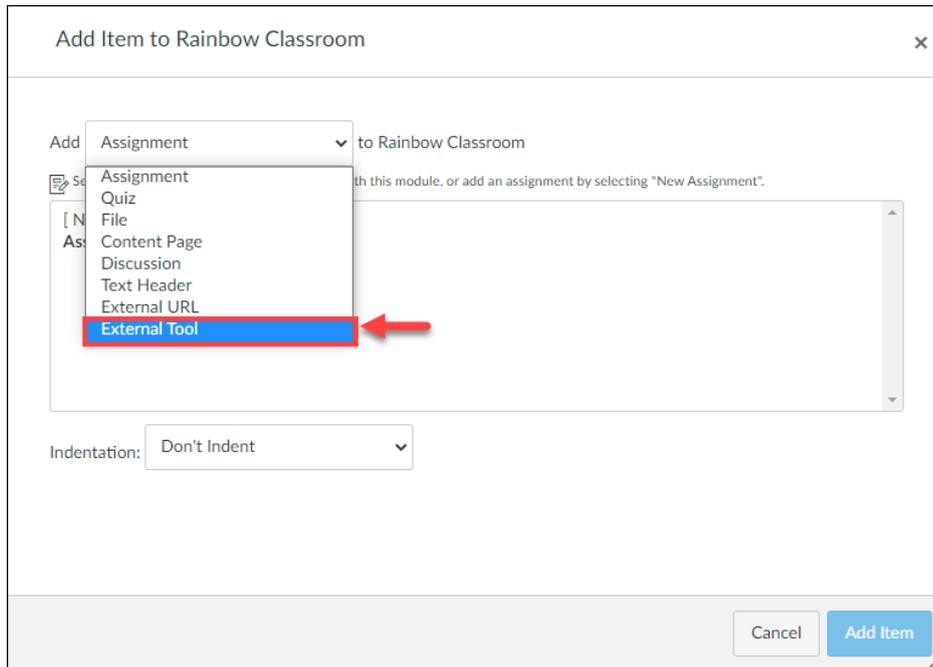
Screenshot- Add External Tool

3. Click on **Setup Classroom in advance** link from the list and then click on **Add Item** button, as shown below.
   Note: Once you click on the external tool link, the URL of the respective external tool and its page name will be automatically displayed in the **URL** and **Page Name** fields.
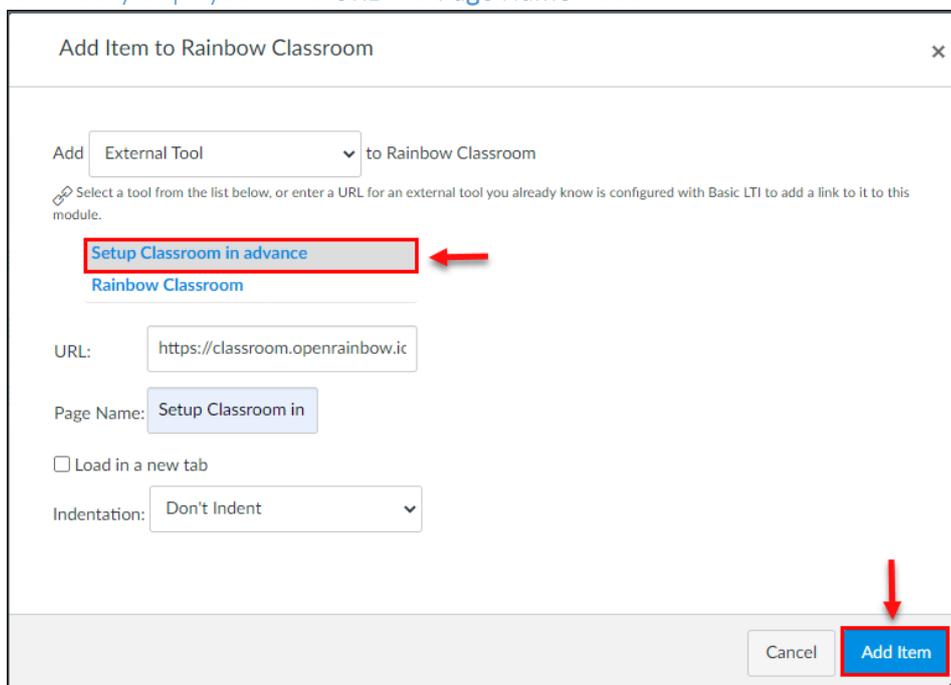
Screenshot- Add External Tool

4. Repeat the process of adding a classroom module as described above. This time select the **Rainbow Classroom** option from the external tools list and click on the **Load in a new tab** option that will launch Rainbow Classroom in a separate window. Once done, click on the **Add Item** button, as shown below.

   Note: Once you click on the external tool link, the URL of the respective external tool and its page name will be automatically displayed in the **URL** and **Page Name** fields.
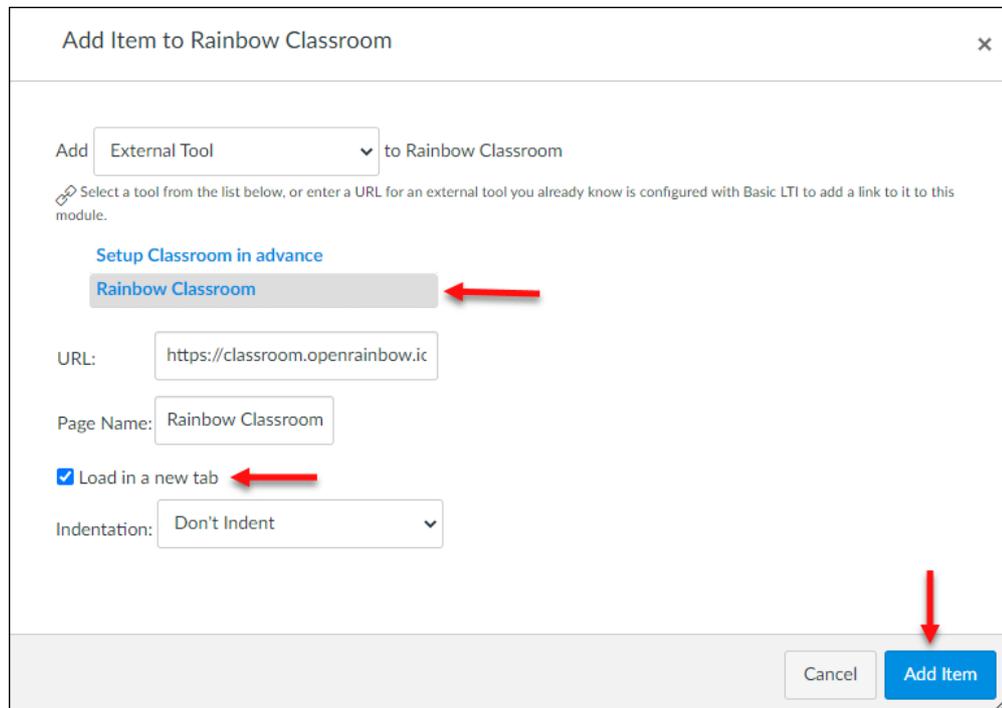
Screenshot- Add External Tool

One instance of an external tool will help to setup Rainbow Classroom session while the other will allow teacher, student and guests to redirect to Rainbow Classroom in order to start / join the respective classroom session.

Screenshot- External Tools

Note: Both instances of external apps are unpublished by default so it will not be available to students and guests. The Canvas administrator needs to publish only the **Rainbow Classroom** link so that students and guests can access it from their Canvas account and can join classroom session whenever they want. In order

to perform this task, click on ⊘ icon in front of Rainbow Classroom link and it will be published and available for the students and guests.

IMPORTANT!! *Only a teacher should access ‘Setup a Rainbow Classroom in advance’ so this option should not be published in order to hide it from students and guests.*

6   Running Rainbow Classroom directly from Canvas

The steps for setting up a classroom for your Canvas course are below:

6.1   Setup Classroom in Advance

Canvas administrators or teachers can configure classrooms via a single link (**Setup Classroom in advance**) in Canvas. This link opens a new window of Rainbow Classroom setup that works as an integrated app inside Canvas. The setup allows administrator and teacher to select/unselect sections against a particular course, add/remove participants from the classroom(s) and set classroom or individual student rules for the respective classroom sections.
Note: Teacher can setup the classroom each time before starting a new classroom session.

Following are the steps to setup Rainbow Classroom for your Canvas course:

1.   Click on the **Setup Classroom in advance** link added to your course module, as shown below.
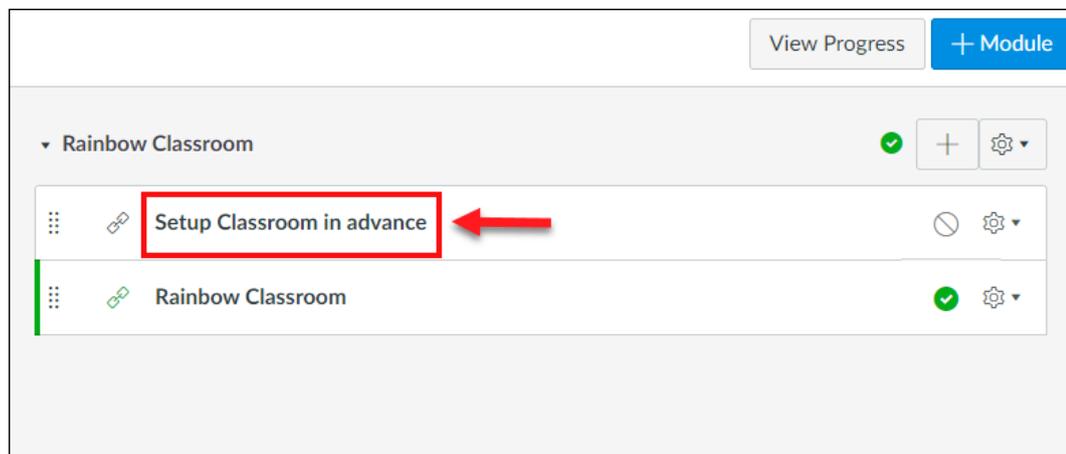
Screenshot- Setup Classroom

IMPORTANT!! *Please allow cookies on your browser in order to start the setup of the respective classroom.*

2.   Following screen will be displayed:
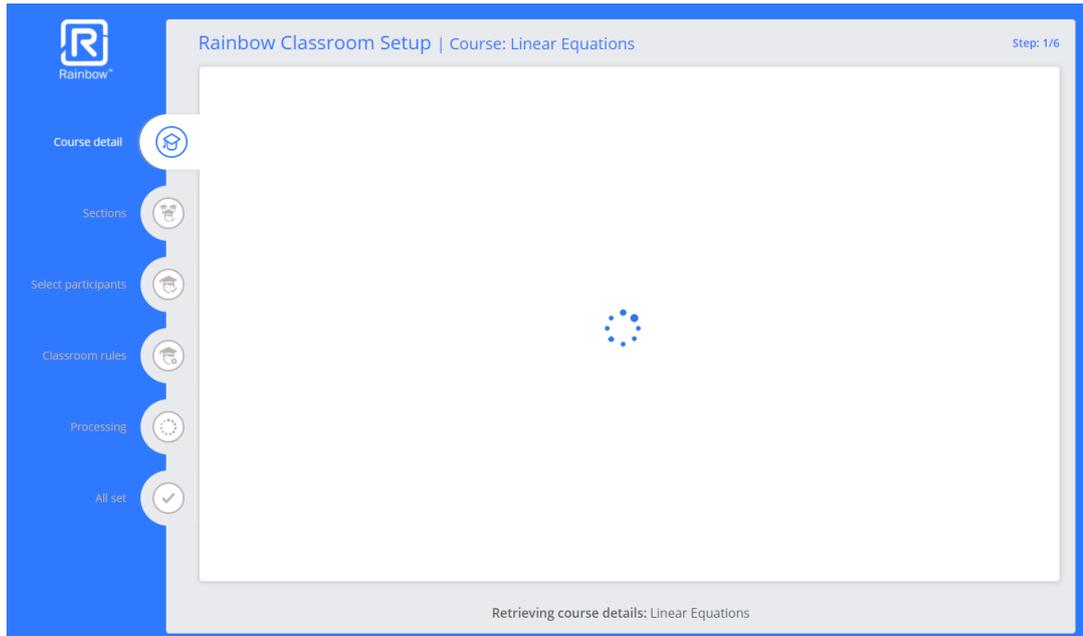
Screenshot- Setup Classroom

After retrieving the course details, all the available sections are displayed in the box on the left. You can move the sections associated with the course to the box on the right by first selecting the section and then using the arrow buttons, as shown below.
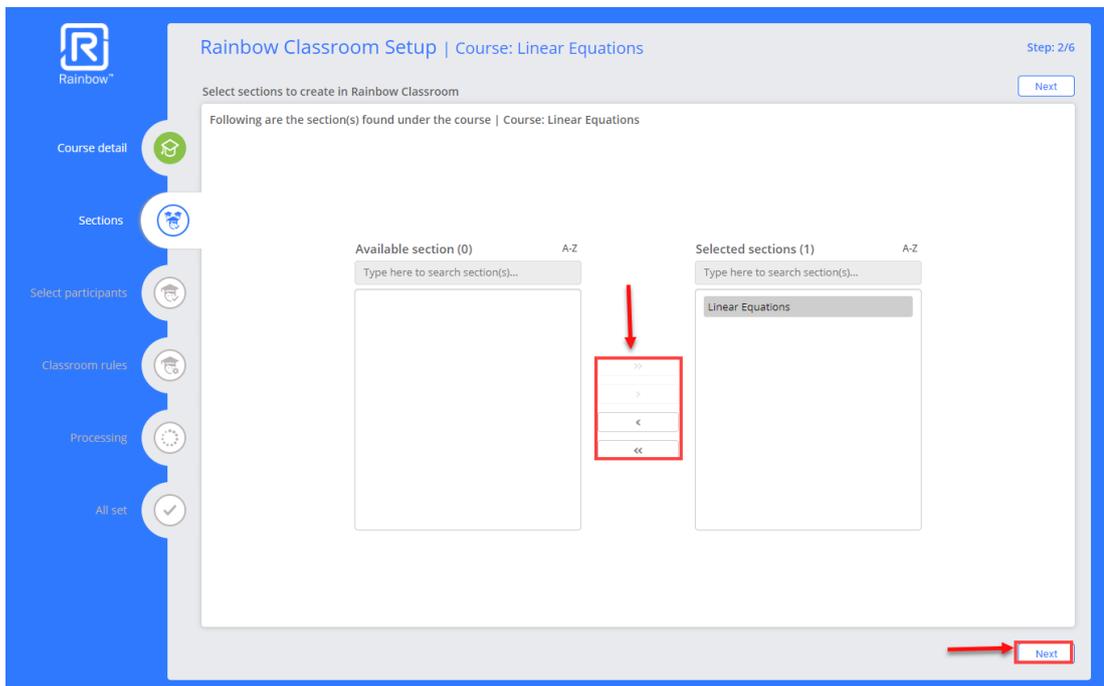
Screenshot- Select Sections

Once done, click **Next**.

Note: For each section, a separate Rainbow Classroom will be automatically created within the course.

3. On the **Select participants** screen, select the subscription plan of teachers, students and guests from their respective dropdowns, as shown below.
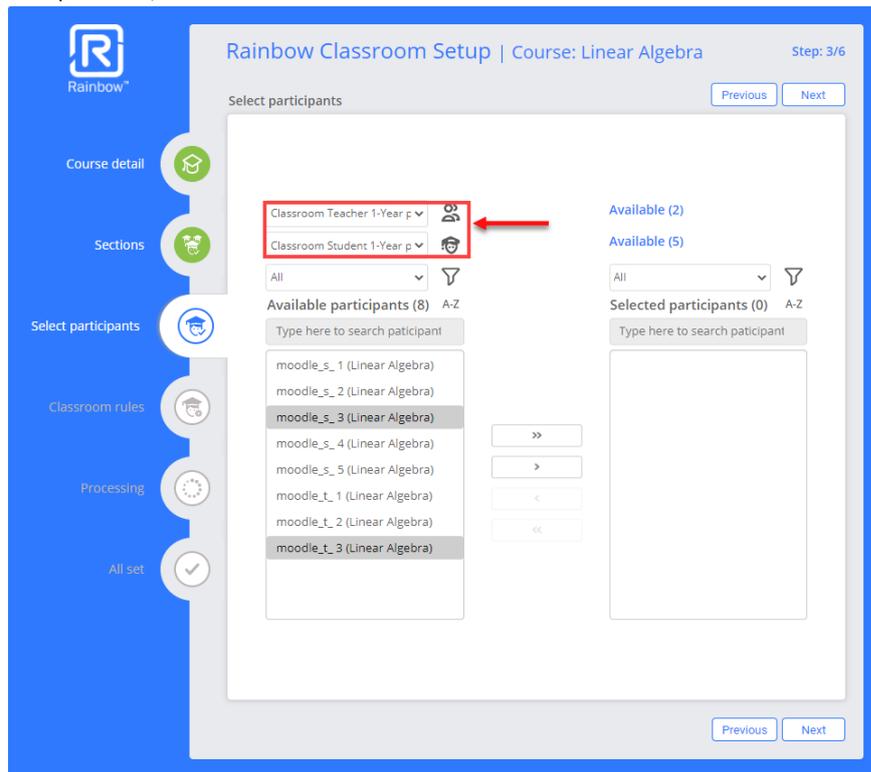
Screenshot- Select Participants

Note: You can filter the results of the participants for a specific section. The filter dropdown is available for the 'Available Participants' and 'Selected Participants' boxes. Select a section from the filter dropdown and its results will be displayed in their respective box. An example is displayed below.
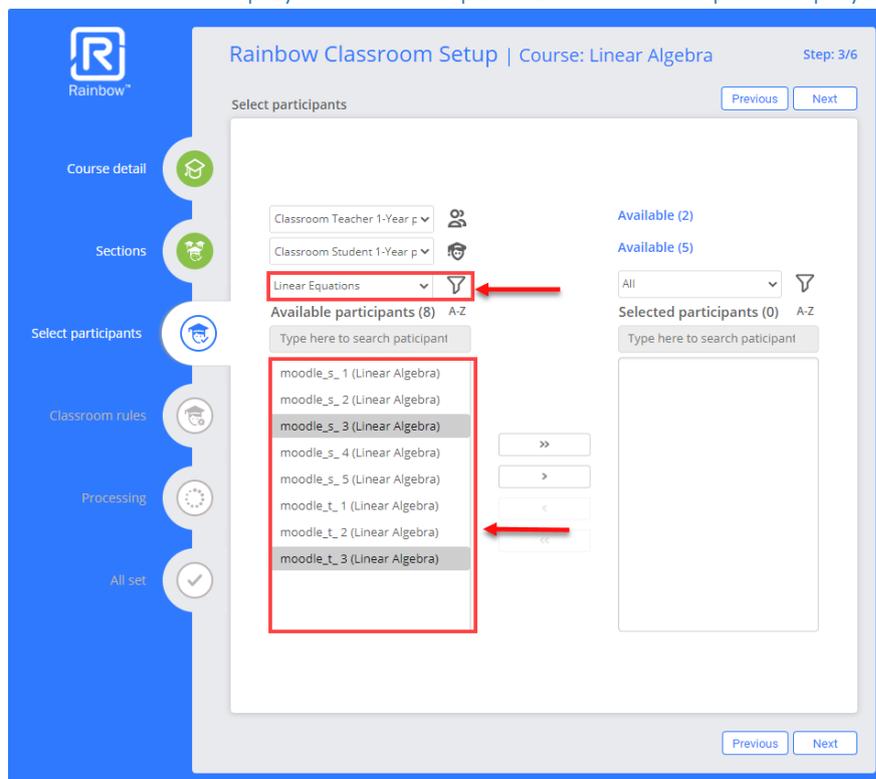
Screenshot- Select Participants

4. Next screen will help you set up classroom rules for multiple Rainbow features such as:
    - Chat
    - Audio
    - Video
    - Screen share
    - File Share
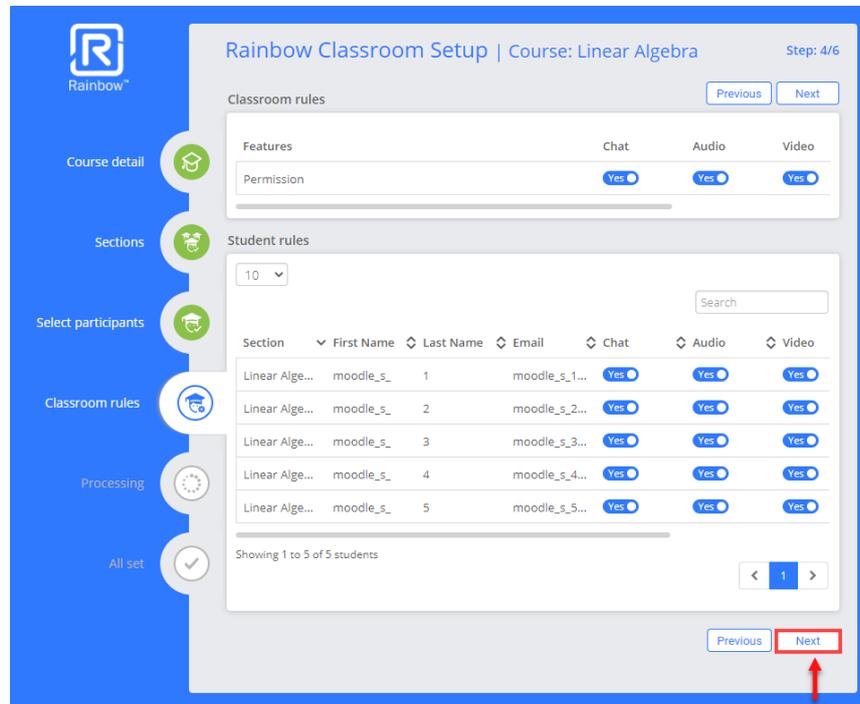
Screenshot- Set Classroom Rules

You can choose to disable/enable a feature for the entire virtual classroom (via **Classroom rules** section) or for each particular student (via **Student rules** section). Click **Next** once you are done setting up classroom rules.

Note: It is important to note that the permissions of the above-mentioned features will be disabled by default for any guests available in the classroom. However, the host can allow or decline permissions for the guests from Rainbow Classroom. For more details, please see 'Rainbow Classroom – Host Guide' documentation.

5. Your configuration will be processed and the following screen will be displayed with all the status details regarding sections and associated participants of the sections.

Screenshot- Processing Screen

Note: You can also export the above status details in an excel file by clicking on the **Export** button displayed at the top-right of the screen.

Screenshot- Processing Screen

Once the configuration is successfully implemented, a classroom is created for teacher and students to login to.

6.2   Start Rainbow Classroom from Canvas (As a Teacher, Student or Guest)

A teacher, student and guest can start or join a classroom session via a single sign-on link for a Canvas course that allows them to jump directly to Rainbow Classroom. It also enables them to open classroom session within Canvas without having to provide user credentials to Rainbow Classroom separately. Once a teacher / student redirects to Rainbow Classroom, they can start or join an audio/video live classroom session for a course.

The following are the steps to start/join a classroom session for your Canvas course:

1. Login to Canvas account as a teacher, student or guest. Go to any of the courses available in **Dashboard** tab, as shown below.
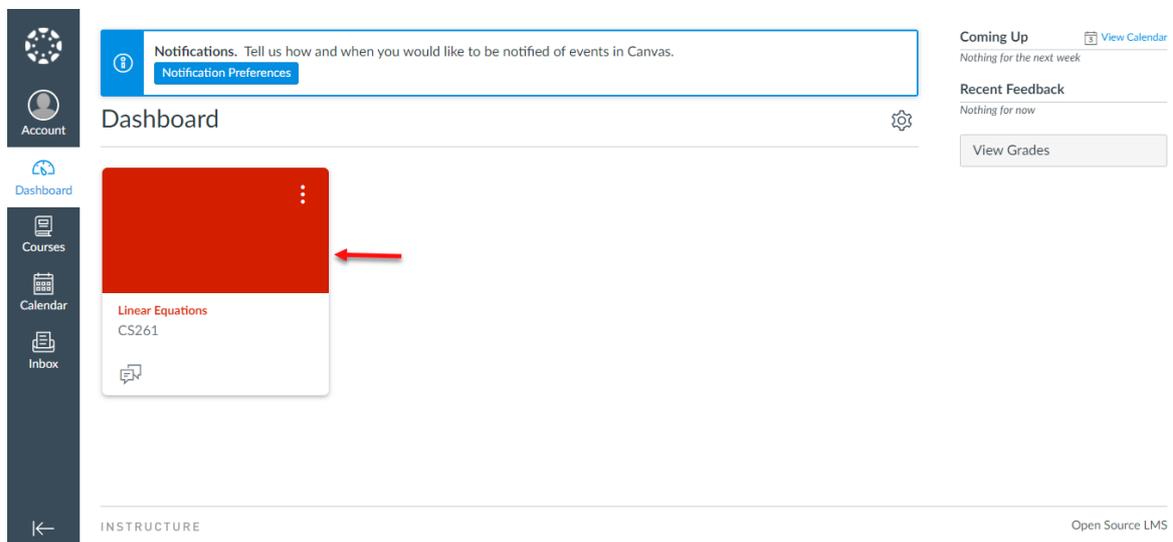
Screenshot- Dashboard screen of teacher/student account

2. On the next screen, click on the **Rainbow Classroom** link and you will be redirected to Rainbow Classroom.

Screenshot- Course

Following screen of Rainbow Classroom will be displayed.

Screenshot- Home Screen of Rainbow Classroom

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