



# **Canvas API Documentation**

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# Canvas Connector Introduction

Campus Café offers a connector for the Learning Management System Canvas. The Canvas connector provides enroll/unenroll operations; when a student is enrolled in a course in Campus Café, the connector automatically pushes the enrollment to Canvas. When a student is dropped from a course in Campus Café, the connector prompts Canvas to unenroll the student in Canvas.

Currently, the connector does not create users, courses or sections in Canvas based on Campus Café. Users may be created individually or imported en masse using a CSV file. Courses and sections are created in Canvas individually or through CSV files and linked to Campus Café using a unique identifier.

## Users

Users in Canvas include instructors and students. These users only need to be established once in Canvas and are connected to Campus Café by a unique identifier known as SIS ID. The SIS ID corresponds to the individual's ID number in Campus Café. Regardless of the method, each user must be associated with his or her Campus Café ID number. In the Canvas Interface, the SIS ID is added and edited on the user screen.

### Alfred Albany

Name and Email	
Full Name:	Alfred Albany
Display Name:	Alfred Albany
Sortable Name:	Albany, Alfred
Default Email:	aalfred@test.com
Time Zone:	None
<a href="#">Edit</a>   <a href="#">Become</a>   <a href="#">Merge with Another User</a>   <a href="#">Delete from Jason Abel</a>	

Login Information	
<a href="#">aalfred@test.com</a>	
SIS ID: 770033387	
Integration ID:	
<a href="#">Add Login</a>	

## Methods of loading users

1. Individually in Canvas via Admin → People, consult Canvas help documentation
2. Through a Single Sign On (SSO), consult Canvas help documentation and your SSO provider
3. Through a CSV file import, consult Canvas help documentation at [https://canvas.instructure.com/doc/api/file.sis\\_csv.html](https://canvas.instructure.com/doc/api/file.sis_csv.html)

Campus Café provides a pre-defined report for a user upload. The report Canvas User SIS Import is available in Base Reports under the Administrator Reports folder.

**NOTE:** If you receive a warning in Canvas that the import failed because it “Couldn't find Canvas CSV import headers.”, try resaving the file. Open the file exported from Campus Café in Microsoft Excel. Go to File Save As and for the type choose “CSV (Comma delimited) (\*.csv)”. See below. Upload the new file.



## Courses and course sections

Courses are the virtual classroom where all the content resides and where student users can learn and interact with instructors and peers.

Sections in Canvas are a group of students that have been organized for administrative purposes. When users are enrolled in a course, they are actually enrolled in one of the sections of that course. **As such, Canvas requires each course - “course shell” - contain at least one section.** It is possible to place more than one section in course, but it is not possible to put sections within sections. All sections of a course share the same content.

If a course is taught by one instructor, sections can remain under one course. However, if each section is taught by a different instructor, those sections will need to be housed under separate courses.

Each unique course **section** requires a SIS ID to be associated with Campus Café. The SIS ID for course section in Canvas is constructed from the Term, Course Number, and Course Section with a tilde between each field. (Term~CourseNumber~CourseSection) For example, the course CIS 123, Section 1 offered in the term 202010 would be “202010~CIS123~1”.

**Important:** It is crucial that all courses and related sections are built prior to registration for that course. If a course does not include a section, the sync will fail.

### Creating courses and sections

Courses may be created individually in the Canvas interface or in batch by uploading the courses and sections CSV files, the later which can include the SIS ID. These files are dependent on accounts and terms being configured in Canvas.

### Batch import using CSV

For batch CSV uploads, consult Canvas documentation at [https://canvas.instructure.com/doc/api/file.sis\\_csv.html](https://canvas.instructure.com/doc/api/file.sis_csv.html)

Campus Café provides pre-defined reports to assist with this upload process. The reports are available in Base Reports under the Administrator Reports folder.

- Canvas Course SIS Import contains the course shell information
- Canvas Section SIS Import contains the course section information

**NOTE:** If you receive a warning in Canvas that the import failed because it “Couldn't find Canvas CSV import headers.”, try resaving the file. Open the file exported from Campus Café in Microsoft Excel. Go to File Save As and for the type choose “CSV (Comma delimited) (\*.csv)”. See below. Upload the new file.



## Individually create course and set course section SIS ID

For individual creation consult Canvas documentation as the process will vary depending on Canvas configuration and your institution's business process. Be sure to set the SIS ID.

1. In Canvas, navigate to the course
2. Click Settings
3. Click Sections
4. Click the Section
5. Click Edit Section

Section Name:

SIS ID:

6. Click Update Section

# Create Canvas Role

A role in Canvas is required to join to the service account user that will serve as the bridge between Canvas and Campus Café.

1. Log in to Canvas
2. Click Admin
3. Click the desired account
4. Click Permissions
5. Click Account Roles
6. Click Add Role
7. Name the role (e.g. Campus Café API)
8. Click Save
9. Ensure the account permissions enabled for the below  
(note: some permissions are required for future features of the connector):
  - Courses – add / edit /delete
  - Courses – view list
  - Course Content – view
  - Course Sections – add / edit / delete
  - SIS Data – manage
  - SIS Data – read
  - Users – add / remove students in courses
  - Users – add / remove teachers, course designers, or TAs in courses
  - Users – view list

# Create Canvas Service User

This user will act as the bridge between Canvas and Campus Café.

1. Click Admin
2. Click the desired account
3. Click Settings
4. Click the Admins tab
5. Click +Account Admins
6. In the Add More box, choose the role created earlier
7. Enter an email address to associate with the account
8. Click Continue
9. Click OK Looks Good, Add This 1 User

# Create Canvas Developer Key

The next step to configure Canvas requires an administrative account to complete.

1. Log in to Canvas
2. Click Admin
3. Choose an account
4. Click Developer Keys
5. Click the + Developer Key and click +API Key to bring up the developer key creation dialog
6. Enter a descriptive key name (e.g. Campus Café)
7. Enter an email address associated with the service account created
8. In the Redirect URIs box enter  
<Campus Café host URL>/cafeweb/CanvasOauth2Callback  
Example: [HTTPS://www.someUniversity.edu:8080/cafeweb/CanvasOauth2Callback](https://www.someUniversity.edu:8080/cafeweb/CanvasOauth2Callback)  
The Redirect URIs value is the Uniform Resource Indicator that Canvas will use to return success or failure information to Campus Café. This value will also be stored in Campus Café and is one way in which Canvas confirms that web service calls are legitimate. The format of this URI follows:
9. Click Save
10. Canvas should return to a list of Developer Keys now including the key just created
11. Locate the developer ID, which is a string of numbers to the right of the owner email.  
Copy for future use.
12. Click the Show Key button to reveal the secret key. Copy for future use. Keep the Client Secret secure for security purposes.
13. Under the State Column, click On



# Campus Café Configuration

Campus Café requires configuration to manage enrollments in Canvas. This is accomplished by setting the developer key and related information.

## Web App configuration

The next step in configuring the Canvas Connector.

1. Log in to Campus Café
2. Navigate to Admin → Web App Config
3. In the search box, enter Canvas to return the relevant values and update as follows:

`CANVAS_BASE_URL` – this is the URL of your Canvas instance. *Example:*  
*HTTPS://someUniversity.instructure.com*

`CANVAS_CLIENT_ID` – the Client ID is the Developer ID number generated during the creation of a developer key in Canvas. Found on the Developer Keys page in Canvas.

`CANVAS_CLIENT_SECRET` – the key generated during the creation of a developer key in Canvas. Found on the Developer Keys page in Canvas. Note that the Client Secret is labeled “key” and will be hidden unless clicked.

`CANVAS_EMAIL` – email account that should receive Campus Café Canvas Connector error notifications.

`CANVAS_FILE_PATH` – the server location of a file that is used to store token information. Use “./token.obj” by default. It is possible to use another location for special circumstances.

`CANVAS_REDIRECT_URI` – Enter the same value that was input into the developer key dialog (see above). *Example:*  
*HTTPS://www.someUniversity.edu:8080/cafeweb/CanvasOauth2Callback*

4. Contact Campus Café and request a server restart to load these values.

## Create Canvas token

For the sync to work, a pair of tokens, the Access Token and Refresh Token, is created. Canvas uses OAuth2 to authorize web service operations.

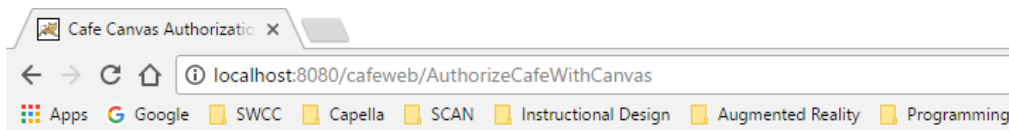
### Generate the token

1. Log in to Campus Café with an account that possesses permission 293, which enables access to the Custom Control Maintenance button
2. Once logged into Campus Café, proceed to the following URL:

<hostURL>/cafeweb/AuthorizeCafeWithCanvas

Example: <https://XXX-web.scansoftware.com/cafeweb/AuthorizeCafeWithCanvas>

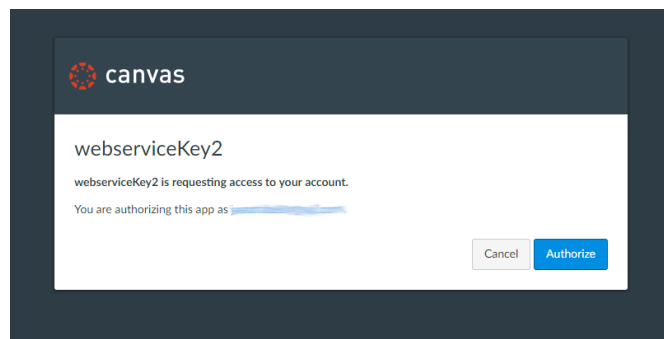
3. Click on the hyperlink to authorize Campus Café with Canvas.



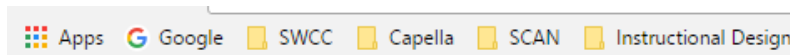
Follow the link below to authorize Campus Cafe to perform enrollment operations on Canvas.

[Request Authorization](#)

4. The Canvas log in page will appear. Log in with an account with sufficient privileges (see above) to perform enrollments in Canvas.
5. To create the token, click on “Authorize”



6. You will be sent to the redirect URI



**Authorization process completed.**

[Return to Campus Cafe](#)

# Enrollments

## Set enrollment/drop sync

To set Campus Café to automatically enroll and drop students based on registration, complete the following:

1. Navigate to Admin → Custom Control Maintenance
2. In the search box, enter Moodle (Campus Café leverages the same technology to connect both Canvas and Moodle, hence the Moodle name)
3. Locate the control with ProgramId Moodle, Seq Num 1 and Parm 3 and click the pencil icon to edit
4. In the Parameter Value 3 box enter Y
5. Click Save and back

## Update enrollments with CSV file

Institutions may use a CSV file to sync enrollments. This process may be helpful if registrations occurred prior to the Canvas course and section data being created.

Consult Canvas help documentation at [https://canvas.instructure.com/doc/api/file.sis\\_csv.html](https://canvas.instructure.com/doc/api/file.sis_csv.html)

To facilitate this process, Campus Café provides a pre-defined report. The Canvas Enrollment SIS Import is available in Base Reports under the Administrator Reports folder. The report includes an option to show student enrollments or teacher assignments.

# Canvas Final Grade Import

Campus Café offers a course final grade synchronization feature in the Campus Café Canvas integration. This allows a user with the Final Grades File Import permission (permission 1169) to access the final grade import web page.

## Set grade override rule

To accommodate different school grade determination policies, Campus Café includes a custom control setting to modify the behavior of the final grade sync.

1. Navigate to Admin → Custom Control Maintenance
2. In the search box, enter Moodle (Campus Café leverages the same technology to connect both Canvas and Moodle, hence the Moodle name)
3. Locate the control with ProgramId Moodle, Seq Num 2 and Parm 6 and click the pencil icon to edit
4. In the Parameter Value 6 box enter set the value to ‘Y’ to overwrite grades that have already been set in Campus Café when running the Canvas sync. This setting will not overwrite ‘I’ (for incomplete) or ‘W’ (for withdrawal) grades set in Campus Café. When the setting is set to ‘N’ or is left at the default, once a grade is set in Campus Café, it is not overwritten during subsequent executions of the sync for the same semester.
5. Click Save and back

## Sync grades

1. Navigate to Registrar → Final Grades Import
2. In the Semester to Synchronize box, choose the term to import grades
3. Click Synchronize. This will begin the synchronization process, in which Campus Café will cycle through each of the courses in the term and make a RESTful call to Canvas.

The screenshot shows the Campus Café user interface. At the top, there is a navigation bar with a home icon, a menu icon, and the Campus Café logo. Below the navigation bar, the page title is "Final Grade File Import". A sub-header reads: "Select the final grades file to import grades into Campus Cafe. If a matching record is not found, or if duplicates are detected (more than one record is found in Campus Cafe that matches the import data) it will be listed below." There are two buttons: "Choose File" (with "No file chosen" text) and "Import Records". Below this, there is a section titled "Final Grade Learning Management System Synchronization" enclosed in a green border. This section contains the text: "Select the semester to synchronize. The process will connect to the configured LMS and attempt to sync final grades file to Campus Cafe. If a withdrawal date is set for an enrollment, the sync will bypass it." Below this text is a dropdown menu labeled "Semester to Synchronize:" with the text "-- choose one --" and a "Synchronize" button.