



SIS Integration for Banner and Colleague

Setup and User Guide

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Introduction	2
Benefits of the Integration	2
Minimum Requirements	2
Integration Scope and Supported Ethos Data Models	2
Supported Ethos Data Models	3
What is Not Supported in the EK-Ethos Integration	3
LMS vs. SIS for Data Import	3
Setup & Configuration	4
Step 1: API Connection & Data Mapping	5
Step 3: Refresh Enrollments	12
Reporting	13
Appendix A: Setup Checklists for SIS	14
Banner	14
Colleague	15
Appendix B: Ethos Course and Section Objects	16
Change Log	17



Introduction

EvaluationKIT by Watermark [“EK”] enables institutions to connect *directly* with Banner and Colleague via the Ellucian Ethos API, providing EK administrators with an additional option to:

1. Import course, section and student and instructor enrollments into EK course evaluation projects
2. Import student enrollments into EK general (institutional) surveys

Benefits of the Integration

Institutions using Banner or Colleague can take advantage of this integration by replacing the need to:

1. Import course, section and student and instructor enrollment information from the LMS where the LMS derives this information from the SIS.
2. Upload a course, section and enrollment CSV file into EK.

Minimum Requirements

Watermark supports Ellucian Ethos API, v16.0.0, which requires the following minimum SIS-specific API versions for activation of this connection in EK:

- Banner Ethos API, v9.17
- Colleague Ethos API, v1.25

Prerequisite setup tasks are required within the Banner and Colleague SIS systems - see *‘Banner and Colleague Setup Checklists’ at the end of this document.*

Integration Scope and Supported Ethos Data Models

This integration supports “read” (API “GET”) transactions directly from Banner and Colleague into EK projects.

- There is no limit imposed on the number or frequency of course and enrollment imports from the SIS into EK.
- EK Admins can import one, some or all courses and corresponding enrollments, including refreshes, for an academic period.
 - Each academic period requires a separate import action.



Supported Ethos Data Models

The following core Ethos Data Models are supported in the EK-Ethos integration:

Courses	Section Registrations
Course Statuses	Section Registration Statuses
Sections	Persons
Section Statuses	Instructors
Section Instructors	Academic Periods
	Academic Levels

What is Not Supported in the EK-Ethos Integration

- Teaching Assistants
 - The Ethos API version can't readily distinguish between an instructor and a teaching assistant (TA). Therefore, if one or more TAs teaches a course section, TAs can be imported as instructors from the SIS into an EK course evaluation.
 - The EK configuration provides an EK Admin with the option to generate a separate course evaluation for each instructor, including each TA when imported as an instructor.
- User Groups
 - The Ethos API does not currently support the concept of student user groups that may be applicable to EK course evaluations.
 - If more granular segmentation of students and course sections are required for a course evaluation, LMS integration and CSV file import options currently supported in EK remain data import options.

LMS vs. SIS for Data Import

Whether to use the LMS or SIS for data import, either courses or enrollment refreshes, is best determined by the institution itself. EK enables EK admins to select either or both the LMS and SIS to bring data into course evaluation projects.



Here are some considerations and options to take into account when deciding which system to import courses and enrollment refreshes from:

- If you have been using the LMS to import courses, for example, and that has been working well to meet the evaluation needs of the institution, continue to use it.
- If you manually download data into a csv from the SIS and then manually upload it into EK, then enabling the direct connection between Banner or Colleague and EK, replacing the manual effort, is probably a good choice for your institution.
- If you want to take advantage of both the LMS and SIS integrations with EK, consider creating projects for each system and monitor results.

EK will match course and enrollment data imported from the SIS with user information imported from the LMS to trigger survey notifications to students in the LMS.

Setup & Configuration

Before an institution can configure the Banner or Colleague SIS connection in EK, the institution must email a request to activate the connection to eksupport@watermarkinsights.com.

There are also prerequisite setup tasks in the SIS before the connection is operational, including submitting a request to Ellucian to enable the Banner or Colleague Ethos API in the SIS for connectivity to EK. This request must include the API version for the specific SIS, as noted under 'Minimum Requirements' above. A detailed integration steps will be provided to clients requesting activation of the SIS integration.

Configuration Sequence Overview

1. Add SIS URL (<https://integrate.elluciancloud.com>) and API token
2. Add course and enrollment data mapping
3. Select and import courses
4. Re-sync users (enrollment refresh)



Step 1: API Connection & Data Mapping

Log into EK and navigate to Accounts > Integrations.

Click on 'Ellucian Banner' (or 'Ellucian Colleague') – only the SIS used by the institution will display. These settings will apply to all EK course evaluation projects for your institution.

Banner and Colleague are displayed in the sample below for illustration purposes only.

The screenshot shows the EvaluationKIT interface with the 'Accounts' menu open and 'Integrations' selected. The 'Integrations' section lists various systems: CAS, LTI, Open Authentication (OAuth), Shibboleth, Historical Data, Blackboard, Canvas, Brightspace, Moodle, and Schoology. Under Schoology, 'Banner' and 'Colleague' are listed, with 'Banner' and 'Colleague' highlighted by a red box. Other sections include Site Settings, Reporting, Custom Question, Monitoring, and Search.

Setup

The screenshot shows the 'Banner Integration' setup page. The 'Setup' section includes fields for 'Banner Server Url' (https://pt3082.bipphop.com:443), 'API Token' (.....), and 'Ethos Version' (16). There are buttons for 'Save', 'Test', and 'Push to Sub Accounts'. The 'Data Mapping' section includes fields for 'Course Code Template', 'Section Title Type' (Select), 'Person Credentials Type' (bannerid), and 'Person Email Type' (Select). There is a checkbox for 'Use Email Preferred' and a 'Save Mappings' button.



Enter/select the following required information, then Save:

1. Banner (or Colleague) Server URL for your institution.
2. API token generated when you enabled the API in your SIS with Ellucian.
3. Ethos Version = “16” (Ellucian Ethos API version; not the Banner or Colleague API version).

Click ‘Save’

- Displays the ‘Data Mapping’ section and enables EK to retrieve course, section, person and person email type selections defined in your SIS.

Once you save the data mapping parameters in EK, do not change them to ensure you do not drop enrollments in a course evaluation project.

Data Mapping

Course Code Template

1. The ‘Course Code Template’ enables you to define and tailor the structure of the course code created in EvaluationKIT when importing courses from your SIS in order to match to your LMS course code.
 - a. This is a free form text (string) field that includes and can be a combination of:
 - i. Structured ‘Course’ and ‘Section’ data objects as defined by the Ethos data objects;
 1. See Appendix B: Ethos Course and Section Objects for a full list of available data combinations.
 - ii. User-defined entries [*alphanumeric and special characters except { }*].
2. Implementation of SIS Integration
 - a. The Watermark Implementation Team will request the course code structure you need defined and will enter it on your behalf in the Course Code Template during the Ethos Integration implementation process.
 - b. You will have read.write access to this field but, if you provided the correct mapping, you should not change the equation entered in this field.
 - c. If, however, you change the course code structure in the LMS, you will have to change the equation created in the Course Code Template to keep the SIS and LMS in sync.
3. You must use at least one {course.x} **or** {section.x} object in the Course Code Template to map courses to create the appropriate course code you need. You may use multiple course and/or section objects as appropriate to your need.
 - a. Course and Section objects are the ‘parent’ whereas the available data objects associated with each are “children”. For example:
 - i. {course.number} and {section.academicPeriod.code}



- b. As illustrated in the previous example, each object used must be separated by a period.
- 4. You may add any user defined text in combination with the structured data to create the course code you need. An example of a complete course code construct might be:
 - a. {course.number}~{section.academicPeriod.code}
 - b. {section.number}.{section.academicPeriod.code}.{section.code}

Select the appropriate option in each of the following required fields:

- 1. Section Title Type
 - a. Specifies how an imported course should be titled in a course evaluation.
 - b. Selections include:
 - i. Short Section Title
 - ii. Long Section Title
 - iii. Short Course Title
 - iv. Long Course Title
- 2. Person Credentials Type
 - a. Specifies how imported instructor and student enrollments should be identified in a course evaluation.
 - b. Selections, which may vary based on the configuration within your SIS, include:

Banner	Colleague
bannerid bannerSourceid bannerUdcid bannerUserName elevatid person email type	colleaguePersonid colleagueUserName elevatid person email type

- 3. Persons Email Type
 - a. Specifies the email that should be used for each person enrollment imported into a course evaluation. Applied to all enrollments imported into EK.
 - b. Selections may vary depending on what has been configured in your SIS – e.g., School, Business, Personal, etc.
 - c. Use Email Preferred
 - i. The ‘Person Email Type’ setting allows an override, applying a person’s preferred email address, if specified in the SIS.



Click 'Save Mappings'.

Step 2: Import Courses

Select the course evaluation project in the 'Projects' tab for which SIS courses and enrollments should be synced and imported into the project.

The screenshot shows the 'Projects' page in EvaluationKIT. At the top, there are navigation tabs: Home, Surveys, Projects, Results, and Account. The page title is 'Create and Manage Projects'. Below this, there is a search section with fields for Name, Status, Type, and Folder. There are also checkboxes for 'Show My Projects Only' and 'Show Suspended Only'. Below the search section is a table of projects.

ID	Name	Type	Status	Created Date	Start Date	End Date	Edit	Copy	Delete
66836	Elucian Banner Test 2	Course Evaluation	Not-Deployed	12/19/2019 10:12 AM	12/18/2019 12:00 AM	1/31/2020 12:00 AM			
66835	Elucian Banner Tests	Course Evaluation	Not-Deployed	12/17/2019 1:50 PM	12/19/2019 12:00 AM	1/31/2020 12:00 AM			
66834	Canvas Tests - Q4 2019	Course Evaluation	Not-Deployed	12/16/2019 11:12 AM	12/18/2019 12:00 AM	1/31/2020 12:00 AM			
66833	Marc demo SIS	Course Evaluation	Not-Deployed	12/12/2019 1:48 PM	12/10/2019 12:00 AM	1/31/2020 12:00 AM			

Any courses previously imported into the project will be displayed in the Courses table.

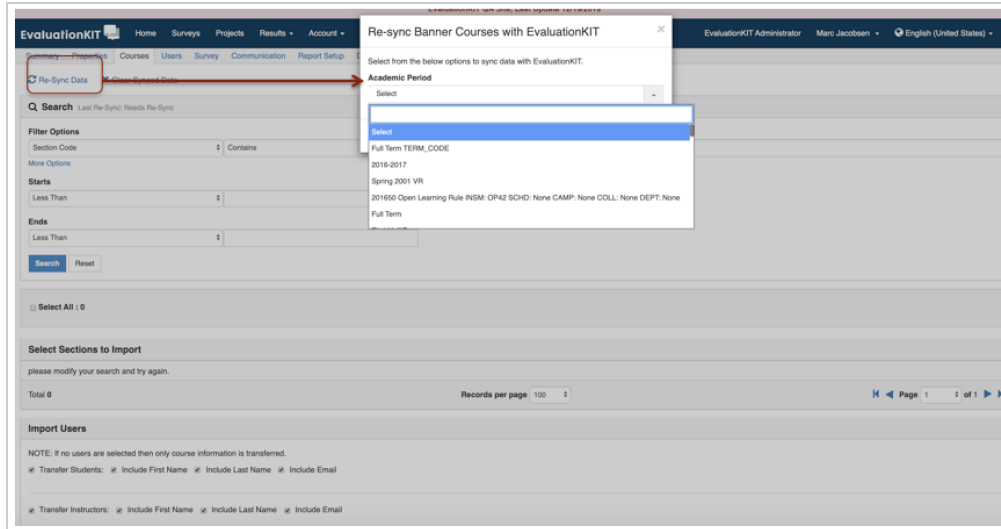
In the 'Data Import' drop down, select Ellucian Banner (or Ellucian Colleague) to re-sync courses and corresponding enrollments from the SIS.

The screenshot shows the 'Data Import' dropdown menu for the 'Ellucian Banner Tests' project. The dropdown menu is open, showing options: Excel, Blackboard, Canvas, Brightspace, Moodle, FTP as Data Source, Ellucian Banner, and Ellucian Colleague. The 'Ellucian Banner' option is highlighted. Below the dropdown menu, there are fields for Course Code, Title, Call#/Unique ID, Hierarchy Level, Instructor/Teaching Assistant Email, Instructor/Teaching Assistant Username, Enrollment, and Crosslisted. There is also a search section with 'Search' and 'Reset' buttons.

Resync Data

Click 'Re-Sync Data' and select the academic period for which active courses and corresponding enrollments should be retrieved from the SIS.

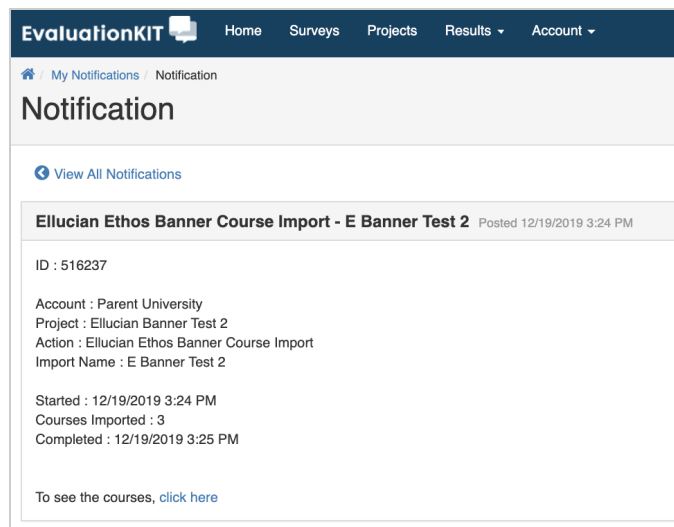
If an academic period is not specified (*drop down selection = 'Select'*), all active courses in the SIS will be synced.



A green status bar - "Data source is being re-synced" will display on the bottom of the page.

To verify that a re-sync is completed:

1. Click on 'Notifications' in the drop down under your login (*your name in the upper right corner of the page*)
2. Click on the notification related to the project for which you just re-synced course data
3. Verify the notification status = Completed
 - a. You can also review the courses re-synced from within the notification



Search & Select Courses for Import

Search for the course(s) you want to include in this project - e.g., "Spring 2020". Then select the course section(s) synced from the SIS that you want to import into the project. To narrow the list of sections to import, specify one or more filters.



The screenshot shows the EvaluationKIT interface for a project named 'Ellucian Banner Test 2'. The page has a dark blue header with navigation links like 'Home', 'Surveys', 'Projects', 'Results', and 'Account'. Below the header, there are tabs for 'Summary', 'Properties', 'Courses', 'Users', 'Survey', 'Communication', 'Report Setup', and 'Deploy Project'. A search bar is present with the text 'Q Search' and 'Last Re-Sync: 12/19/2019 2:43 PM'. Below the search bar, there are filter options for 'Section Code' (set to 'Contains') and 'Starts' (set to 'Less Than'). A 'Search' button and a 'Reset' button are also visible. Below the filters, there is a 'Select All : 250' option. The main content area is titled 'Select Sections to Import' and contains a table with the following columns: Course Title, Course Subject, Subject Code, Course Number, Section Code, Section Number, Section Title, Section Academic Period, Section Start, and Section End. The table lists several course sections with their respective details.

Course Title	Course Subject	Subject Code	Course Number	Section Code	Section Number	Section Title	Section Academic Period	Section Start	Section End
20th Century American Lit	English Literature	ENGL	103	10025	001	20th Century American Lit	Full Term	1/4/2002 12:00 AM	5/15/2002 12:00 AM
20th Century American Lit	English Literature	ENGL	103	10048	001	20th Century American Lit	Full Term	1/16/1995 12:00 AM	5/12/1995 12:00 AM
Accounting for Info. Systems	Accounting	ACCT	2340	10006	001	Accounting for Info. Systems	Fall 1995	8/28/1995 12:00 AM	12/15/1995 12:00 AM
Accounting for Lawyers	LAW	LAW	7760	10085	001	Accounting for Lawyers	Law 1995	9/4/1995 12:00 AM	12/15/1995 12:00 AM
Accounting Info. Systems	Accounting	ACCT	2430	10007	001	Accounting Info. Systems	Fall 1995	8/28/1995 12:00 AM	12/15/1995 12:00 AM

Additional Import Settings

You can set the additional configurations for an import from the SIS (mirrors current LMS import functionality in EK).

- Import student and/or instructor first name, last name and/or email
- Create a unique course section for each instructor when multiple instructors, including TAs, are teaching a course section
- Add the instructor name to the course title – e.g., to differentiate between same name course sections for each instructor
- Specify survey and report access dates based on course dates
- Specify a data import name for the import file
- Receive or opt-out of an email confirmation for this data import



Import Users

NOTE: If no users are selected then only course information is transferred.

Transfer Students: Include First Name Include Last Name Include Email

Transfer Instructors: Include First Name Include Last Name Include Email

Create Unique EvaluationKIT Course Sections for each Instructor Optional

Use this feature only if you have multiple instructors teaching a course and would like to create separate course sections / surveys in EvaluationKIT for each instructor. NOTE: an alternate approach is to use the Team - Taught Question feature in EvaluationKIT.

Create a unique course section for each instructor enrolled in the selected course(s).

Add Instructor to Course Title Optional

Add instructor first name and last name to course title using one of the below formats.

NOTE: title for courses with multiple instructors will not change.

None

CourseTitle: Firstname
 CourseTitle: FirstnameLastname
 CourseTitle: Firstname, Lastname
 CourseTitle: Lastname
 CourseTitle: LastnameFirstname
 CourseTitle: Lastname, Firstname

Generate Course-Level Dates Based on Course Dates Optional

Survey :

Course Level Survey Start Dates
 Day
 Bef
 the Ellucian Course
 End
 Dates for Selected Courses
(or enter a course level START date manually for all courses)

Course Level Survey End Dates
 Day
 Bef
 the Ellucian Course
 End
 Dates for Selected Courses
(or enter a course level END date manually for all courses)

Administrator:

Course Level Report Access Start Dates
 Days
 Bef
 the Ellucian Course
 End
 Dates for Selected Courses
(or enter a course level START date manually for all courses)

Course Level Report Access End Dates
 Days
 Bef
 the Ellucian Course
 End
 Dates for Selected Courses
(or enter a course level END date manually for all courses)

Instructor

Course Level Report Access Start Dates
 Days
 Bef
 the Ellucian Course
 End
 Dates for Selected Courses
(or enter a course level START date manually for all courses)

Course Level Report Access End Dates
 Days
 Bef
 the Ellucian Course
 End
 Dates for Selected Courses
(or enter a course level END date manually for all courses)

Import Options Optional

Data Import Name

I would like to receive confirmation emails for this data import.

[Import Data](#)

Click 'Import Data' to import courses and corresponding enrollments from the SIS.

Imported courses will be added to the Courses table.

Courses - Spring 2019 Course Evaluations										
Code	Title	Unique ID	Hierarchy Level	Start Date	End Date	Students	Instructors	TA	Edit	
COISAD	Systems Analysis and Design	COISADU-Sp2019	College Of Information Technology	N/A	N/A	4	3	3	Edit	
QADSe001	Selenium	QADSe001U-Sp2019	QA Dept	N/A	N/A	5	3	3	Edit	
PDPPL001	Principles of Programming Languages	PDPPL001U-Sp2019	Programming Dept	N/A	N/A	2	1	1	Edit	
colNDN	Normalization/De-Normalization	colNDNU-Sp2019	DBMS Dept	N/A	N/A	2	2	1	Edit	
JUH's(1@#%&*)Course	History's (1@#%&*)Course	JUH's(1@#%&*)Course-Sp2019	ParentU QA	N/A	N/A	3	2	2	Edit	
pdCO001	C#.Net	pdCO001U-Sp2019	Programming Dept	N/A	N/A	2	1	2	Edit	
ADPC	Algebra Prarent Course	ADPCU-Sp2019	Algebra Dept	N/A	N/A	1	1	1	Edit	
ADCh2	Algebra Child2 Course	ADCh2U-Sp2019	Algebra Dept	N/A	N/A	1	1	1	Edit	
ADCh1	Algebra Child1 Course	ADCh1U-Sp2019	Algebra Dept	6/26/2019 12:00 AM	6/30/2019 12:00 AM	3	2	1	Edit	

Total 9 Records per page 100 Page 1 of 1

EK retrieves course and enrollment data exactly as they are defined and stored within the SIS with the exception of the 'Course Code', which is a concatenation of the course subject and course number, enabling EK to match a course between the SIS and LMS to trigger correct course survey notifications to students within the LMS.



Courses Table

For each course imported from the SIS, course detail is displayed:

- Course title
- SIS course unique ID
- Hierarchy level “ownership” of the course
- Course start and end dates
- Active student enrollments
- Active instructor enrollments

As noted previously, TAs are not distinguishable from instructors; therefore, the TA column will always display ‘0’ for each course imported from the SIS.

Editing Imported Course Data

You have the option of editing the Course Code, Course Title, Unique ID and Hierarchy Level or individual courses to correct any data quality issues that may have existed in the SIS. You can also add cross-listed courses, report mapping, course level dates and optional metadata. Keep in mind that if you re-import course data, any manual changes you made will be overwritten.

Step 3: Refresh Enrollments

As with LMS course imports, you can set an automatic enrollment refresh schedule for Banner or Colleague to add and/or drop students and/or instructors.

The screenshot displays the EvaluationKIT web interface. At the top, there is a navigation bar with 'EvaluationKIT' logo and user information. Below the navigation bar, the main content area is titled 'Elucian Banner Tests Users'. A 'Data Import' dropdown menu is open, showing options: Excel, Blackboard, Canvas, Brightspace, Moodle, FTP as Data Source, Elucian Banner (highlighted), Elucian Colleague, and Opt-Out Users. Below the dropdown, there are search filters for First Name, Last Name, Username, Email, User Type (set to All), User Status (set to Any), Course Unique ID, and Show Users (set to All Users). At the bottom, a table shows 'No users found.' and a pagination bar indicating 'Page 1 of 1'.



The screenshot shows the 'Add Refresh Schedule' form in the EvaluationKIT interface. The form is titled 'Add Refresh Schedule' and is located under the 'Users' tab of the 'Enrollment Refresh' section. The form includes several input fields and checkboxes:

- Refresh Date & Time: A date and time picker.
- Refresh every day(s): A dropdown menu set to '1', followed by 'from:' and 'to:' date pickers.
- Exclude courses where survey has ended.
- Refresh Students: Includes sub-options for 'Add Students to EvaluationKIT' and 'Drop Students from EvaluationKIT'.
- Refresh Instructors: Includes sub-options for 'Add Instructors to EvaluationKIT' and 'Drop Instructors from EvaluationKIT'.

A 'Save' button is located at the bottom left of the form. Below the form, there is a section titled 'Enrollment Refresh Status' with a refresh icon, showing 'No Enrollment Refresh Scheduled'.

Instructor and students enrollments will be updated and displayed in the Courses table.

Reporting

SIS imports are added to existing Account Notifications page in EK.

The screenshot shows the 'Account' settings page in the EvaluationKIT interface. The page is titled 'Account' and is located under the 'Results' tab. The page is divided into several sections:

- Site Settings:** Site Information, Manage Administrators, Manage Dashboard, Customize Login Page, Student View & Messages, Outgoing Email Settings.
- Account Notifications:** Contact Setting, Hierarchy Builder, Hierarchy Mapper, Report Mapper, Project Folders, Permissions.
- Reporting:** Response Rate Tracker Settings, Results Settings, Student Reporting Setup, Mobile Use Reporting, Custom Question, Custom Question Settings.
- Monitoring:** Settings, Results, Custom Questions, Manage Courses.
- Integrations:** CAS, LTI, Open Authentication (OAuth), Shibboleth, Historical Data, Blackboard, Canvas, Brightspace, Moodle, Ellucian Banner, Ellucian Colleague, FTP.
- Search:** Users, Courses, API, Documentation.



Appendix A: Setup Checklists for SIS

A login to the Ellucian website pages is required to access the links contained in the setup checklists below.

Banner

https://resources.elluciancloud.com/bundle/ellucian_workflow_acn_configure/page/r_auth_source_setup_banner.html

Task	Location	Reference
1. Install the Ellucian Messaging Service (EMS) on your Banner Web API server.	Banner's Web API server	Install the Ellucian Messaging Service
2. Configure and deploy the Web APIs for Banner.	Banner's Web API server	Banner Integration API Installation Guide
		Banner Ethos API Handbook
3. Add each Ellucian Ethos Data Model as a resource to Banner.	Ellucian Ethos Integration	Add the resources that are owned by Banner
4. Configure BEP (Banner Event Publisher) for EMS/AMQP.	Banner	Banner Event Publisher documentation library in the Ellucian Customer Center
5. Turn on the database triggers in Banner for each data model.	Banner	Banner Ethos API Release Guide
6. Configure and deploy the EMS Adapter to read from the EMS and publish to Ellucian Ethos Integration.	Banner's Web API server	Configure the Ellucian Message Adapter



Colleague

https://resources.elluciancloud.com/bundle/ellucian_workflow_acn_configure/page/r_auth_source_setup_colleague.html

Task	Location	Reference
1. Install the Ellucian Messaging Service (EMS) on your Colleague Web API server.	Colleague's Web API server	Install the Ellucian Messaging Service
2. Configure and deploy the Web APIs for Banner or Colleague.	Colleague's Web API server	Setting Up Colleague Web API
3. Add each Ellucian Ethos Data Model as a resource to Colleague.	Ellucian Ethos Integration	Add the resources that are owned by Colleague
4. Configure EDX (Envision Data Exchange), the business event publisher for EMS/AMQP.	Colleague	Setting Up Ellucian Ethos Integration for Colleague Web API
5. Turn on the database triggers in Colleague for each data model.	Colleague	Colleague Ethos Integration APIs
6. Configure and deploy the EMS Adapter to read from the EMS and publish to Ellucian Ethos Integration.	Colleague's Web API server	Configure and deploy the Ellucian Messaging Adapter



Appendix B: Ethos Course and Section Objects

The following Ethos and Course object lists are comprehensive but you would like not use the majority of child objects to create a course code in EvaluationKIT to match the LMS course code.

Course (<i>Ethos element</i>)	Section (<i>Ethos element</i>)	
id	id	MaxEnrollment
titles	description	reservedSeatsMaximum
description	startOn	waitlist
subject	endOn	crossListed/notCrossListed
topic	code	billing
categories	number	chargeAssessmentMethod
course levels	instructionalPlatform	alternateIDs
InstructionalMethod Details	academicPeriod	reportingAcademicPeriod
hours	censusDates	
owninginstitutionUnits	course	
schedulingStartOn	courseCategories	
schedulingEndOn	credits	
number	site	
academicLevels	academicLevels	
gradeSchemes	gradeSchemes	
credits	courseLevels	
billing	instructionalMethods	
waitlistMultipleSections	hours	
administrativePeriod	instructionalDeliveryMethod	
status	status	
additionalClassifications	duration	



Change Log

Version	Date	What Changed
1.3	Jan 9, 2020	Original public release
1.4	Nov 2, 2020	Added Course Code Template for course import mapping: Setup & Configuration > Data Mapping