

Grades

Overview

The Grades product integration allows campusM to list a user's grades per course and per term.

Vendors

Grades can be retrieved with:

- [Ellucian Banner XE / 9](#)
 - [Ellucian Colleague \(custom\) ERP systems](#)
 - [Ellucian Colleague \(Web API\)](#)
 - [RESTful API](#)
 - [Oracle PeopleSoft](#)
-

User Experience

The following section describes information relating to the user experience for the Grades product integration.

User Activities

- The user selects the Grades tile and a list of terms appears.
 - The user selects a term and the grades associated with that term appear.
-

Authentication

The Grades product integration requires the user's identifier from the vendor's system. This is obtained with the token based authentication attributes.

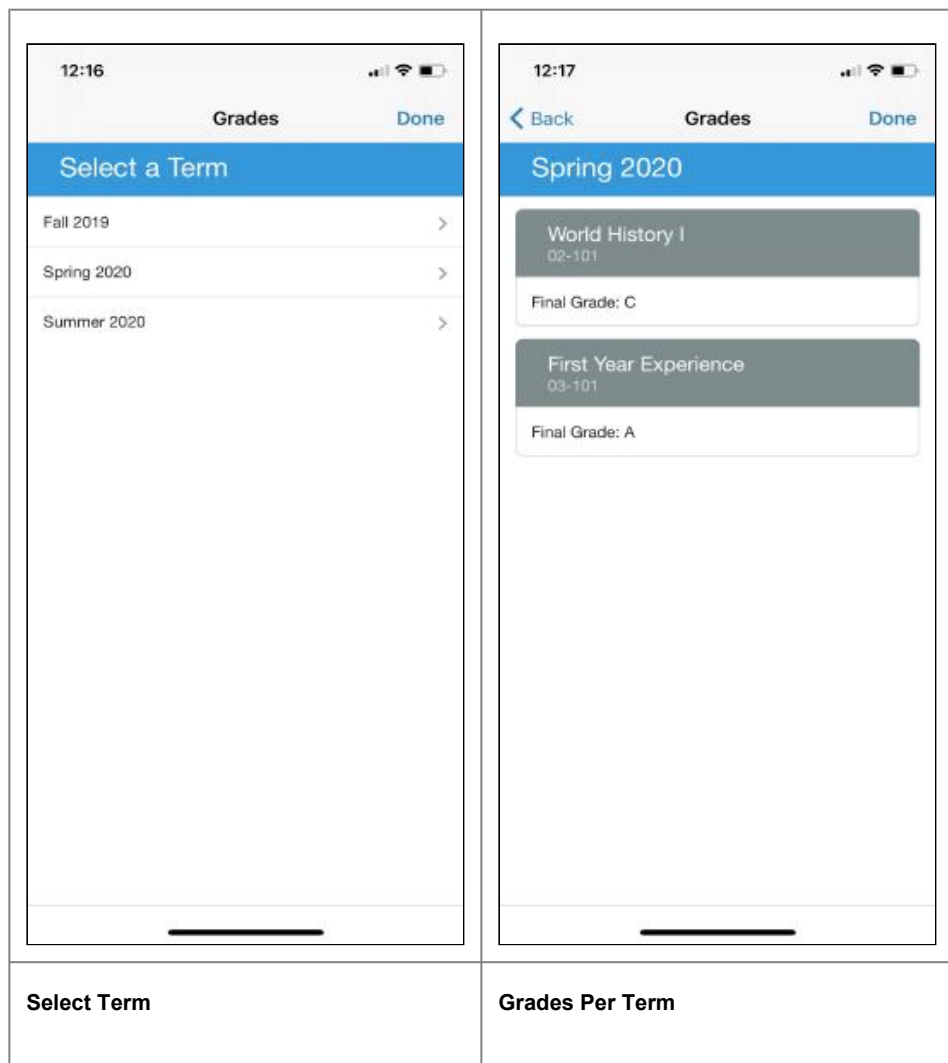
The connection to the vendor is handled as part of the generic API Configuration under the Vendor section. The first part of the API Configuration details the URL to which to connect and any parameters that are required. The second part relates to the API Authentication for the URL, which is vendor-specific, and could also be specific to the vendor instance the client is running. For example, although all Banner integration so far use Basic Authentication on the Banner server, its possible for a vendor to use something different.

Offline Support

None. Users must be online to retrieve their grades data.

Screenshots

The following is an overview of the Grades product integration user interface for a reference when configuring it:



Technical Overview

The following section describes technical information for the Grades product integration.

Prerequisites

The following prerequisites are required to configure the Grades product integration:

- User identifier mapping
 - If you have CMAuth configured, map the relevant vendor ID in the integration profile (Additional Mapping), for example: `bannerId=employeeID`, where `employeeID` is the relevant user attribute on the vendor's backend

system.

- If you have LDAP configured, verify that the relevant attribute is returned as an attribute from the LDAP response.
- Access to the client's API – access is required for your data center's IPs range.
- campusM test users with a valid vendor ID available through the IDP attributes. The ideal types of test user include:
 - A test user with grades for the current valid term and any older terms, if possible.
 - A test user with no grades at all.
 - A test user that is not on the vendor's backend system.

Required Format

Select one of the following links for the required format for that vendor:

- [Ellucian Banner XE \(and Banner 9\) Vendor](#)
- [Ellucian Colleague \(Custom\) Vendor](#)
- [RESTful API](#)
- [Oracle PeopleSoft Vendor](#)

Ellucian Banner EX (and Banner 9) Vendor

- campusM uses two API calls to fetch grades data:
 - The first call is to retrieve all of the available terms of the student:

```
https:// {HOST}/StudentApi/api/terms
```

- The second call is to retrieve the grades data for the selected term:

```
https://{HOST}/StudentApi/api/students/{userId}/grades?term={termId}
```

- The following is an example of a JSON response for the Terms API:

```
[
  {
    "version": 0,
    "id": 1,
    "acyr_code": {
      "version": 0,
      "id": 16,
      "code": "2010",
      "description": "2019-2020"
    },
    "code": "202040",
    "description": "Summer 2020",
    "endDate": "2020-07-23",
    "financialAidPeriod": 1,
    "financialAidProcessingYear": "9293",
    "financialAidTerm": "1",
    "financialEndPeriod": 12,
    "housingEndDate": "2020-07-23",
```

```

    "housingStartDate": "2020-06-03",
    "startDate": "2020-06-03",
    "trmt_code": {
      "version": 0,
      "id": 2,
      "code": "M",
      "description": "Summer Semester"
    }
  }
]

```

- The following is an example of a JSON response for the Grades API:

```

[
  {
    "courseNumber": "101",
    "courseTitle": "World History I",
    "creditHour": 3.0,
    "crn": "70029",
    "gradeFinal": "C",
    "gradeInAcadHistory": "C",
    "gradeMidterm": "D",
    "gradeRolled": "Y",
    "level": {
      "code": "UG",
      "description": "Undergraduate"
    },
    "registrationStatus": {
      "code": "RE",
      "description": "***Registered In-Office**"
    },
    "classFormat": {
      "code": "L",
      "description": "Lecture"
    },
    "sequenceNumber": "02",
    "subject": {
      "code": "HIS",
      "description": "History"
    },
    "term": {
      "code": "201870",
      "description": "Fall 2018"
    }
  },
  {
    "courseNumber": "101",
    "courseTitle": "First Year Experience",
    "creditHour": 1.0,
    "crn": "70825",
    "gradeFinal": "A",

```

```

    "gradeInAcadHistory": "A",
    "gradeMidterm": "A",
    "gradeRolled": "Y",
    "level": {
      "code": "UG",
      "description": "Undergraduate"
    },
    "registrationStatus": {
      "code": "RE",
      "description": "***Registered In-Office**"
    },
    "classFormat": {
      "code": "L",
      "description": "Lecture"
    },
    "sequenceNumber": "03",
    "subject": {
      "code": "ORI",
      "description": "Orientation"
    },
    "term": {
      "code": "201870",
      "description": "Fall 2018"
    }
  }
}

```

Ellucian Colleague (Custom) Vendor

- campusM uses two API calls to fetch grades data:

- The first call is to retrieve all of the available terms of the student:

```
https://{HOST}/ColleagueApi/students/{userId}/terms
```

- The second call is to retrieve the grades data for the selected term:

```
https://{HOST}/ColleagueApi/students/{userId}/academic-credits
```

- A direct connection to the Ellucian Colleague (custom) API is required. Any middleware or client-specific implementation causes the API response to deviate from what the cloud platform is expecting.
- The following is an example of a JSON response for the Terms API:

```

[
  {
    "Term": "2020S",
    "Description": "Summer Semester 2020"
  },
  {
    "Term": "2020CS",
    "Description": "Summer Cohort Semester 2020"
  }
]

```

```
]
```

- The following is an example of a JSON response for the Grades API:

```
{
  "AcademicTerms": [
    {
      "TermId": "14/X1",
      "GradePointAverage": 0,
      "Credits": 6,
      "ContinuingEducationUnits": 0,
      "AcademicCredits": [
        {
          "Id": "1010776",
          "CourseId": "86",
          "StudentId": null,
          "SectionId": null,
          "CourseName": "EN-000",
          "Title": "Eng Lit/Comp. AP Testing",
          "VerifiedGradeId": "P",
          "VerifiedGradeTimestamp": "2014-10-22T16:13:00",
          "Credit": 6,
          "GpaCredit": 0,
          "GradePoints": 0,
          "CompletedCredit": 6,
          "ContinuingEducationUnits": 0,
          "Status": "TransferOrNonCourse",
          "StatusDate": null,
          "TermCode": "14/X1",
          "MidTermGrades": [],
          "GradingType": "Graded",
          "SectionNumber": "",
          "HasVerifiedGrade": true,
          "AdjustedCredit": 6,
          "IsNonCourse": false,
          "StartDate": null,
          "EndDate": null,
          "IsCompletedCredit": true,
          "ReplacedStatus": "NotReplaced",
          "ReplacementStatus": "NotReplacement"
        }
      ]
    }
  ],
  "NonTermAcademicCredits": [
    {
      "Id": "1003018",
      "CourseId": "804",
      "StudentId": null,
      "SectionId": null,
      "CourseName": "FL-000X",
```

```

    "Title": "Foreign Language Equivalency",
    "VerifiedGradeId": "P",
    "VerifiedGradeTimestamp": "2015-10-29T12:28:26",
    "Credit": 0,
    "GpaCredit": 0,
    "GradePoints": 0,
    "CompletedCredit": 0,
    "ContinuingEducationUnits": 0,
    "Status": "TransferOrNonCourse",
    "StatusDate": null,
    "TermCode": "",
    "MidTermGrades": [],
    "GradingType": "Graded",
    "SectionNumber": "",
    "HasVerifiedGrade": true,
    "AdjustedCredit": 0,
    "IsNonCourse": true,
    "StartDate": null,
    "EndDate": null,
    "IsCompletedCredit": true,
    "ReplacedStatus": "NotReplaced",
    "ReplacementStatus": "NotReplacement"
  }
],
"GradeRestriction": {
  "IsRestricted": false,
  "Reasons": []
},
"TotalCreditsCompleted": 0,
"OverallGradePointAverage": 0,
"StudentId": null
}

```

Colleague (Web API)

campusM uses several API calls to fetch grades data:

- The first is because the Colleague Web API authenticates via a session token:
 - <https://{HOST}/colleagueApi/session/proxy-login>
- The second call is to retrieve all relevant terms for the student:
 - <https://{HOST}/colleagueApi/terms>
- The third call is to retrieve the grades data for the selected term. This will re-use any available session token or re-authenticate with the proxy-login API:
 - <https://{HOST}/colleagueApi/students/{username}/academic-credits>

RESTful API

- campusM uses two API calls to fetch the grades data:
 - The first call is to retrieve all of the available terms for the student:

```
https://{HOST}/getTerms?userId={userId}
```

- The second call is to retrieve the grades data for the selected term:

```
https://{HOST}/getGrades?termId={termCode}&userId={userId}
```

- The Terms API returns a JSON response with the following structure:

```
[
  {
    "termId": 1,
    "description": "Fall 2020",
    "termCode": "202010"
  },
  {
    "termId": 2,
    "description": "Spring 2020",
    "termCode": "202020"
  }
]
```

- The grades per term API returns a JSON response with the following structure:

```
[
  {
    "id": "1",
    "title": "Grade for Intro to Bio",
    "finalGrade": "A",
    "midTermGrade": "B",
    "termCode": "202010",
    "courseCode": "BIOB 170",
    "courseName": "Intro to Bio",
    "linkUrl": "https://www.google.com/",
    "linkText": "View more information",
    "additionalDetails": "A minimum of a C is needed for this course for a Biology Degree."
  },
  {
    "id": "2",
    "title": "Grade for Test Course",
    "finalGrade": "75%",
    "midTermGrade": "75%",
    "termCode": "202010",
    "courseCode": "C01",
    "courseName": "Test Course",
    "linkUrl": "https://www.google.com/",
    "linkText": "View more information about Test Course",
    "additionalDetails": "A minimum of a C is needed for this course for a Math Degree."
  }
]
```

Attribute Mapping for RESTful API getTerms

External Field Name	Internal CampusM Field Name	Description	Mandatory Yes/No	Data Type	Default	Example
Term ID	termId	A unique ID for the term	Yes	String	-	1
Term Description	description	A description for the term (displayed to the end user for term selection)	Yes	String	-	Fall 2020
Term Code	termCode	The code for the term (this is used to associate grades with relevant terms)	Yes	String	-	202010

Attribute Mapping for RESTful API getGrades

External Field Name	Internal CampusM Field Name	Description	Mandatory Yes/No	Data Type	Default	Example
Grade Information ID	id	A unique ID for the course grade information	Yes	String	-	1
Grade Title	title	The title for the course grade information	No	String	-	Grade for Intro to Bio
Final Grade for the Course	finalGrade	The final grade the student achieved for the course (optionally displayed to the end-user)	No	String	-	A
Midterm Grade for the Course	midTermGrade	The midterm grade the student achieved for the course (optionally displayed to the end-user)	No	String	-	B
Term Code	termCode	The code for the term (this is used to associate grades with relevant terms)	Yes	String	-	202010
Course Code	courseCode	The code for the course (optionally displayed to the end-user)	No	String	-	BIOB 170
Course Title	courseName	The name of the course	Yes	String	-	Intro to Bio
Link URL	linkUrl	The URL provided to link to additional information	No	String	-	https://www.google.com/
Link Text	linkText	The display text for the link URL (optionally displayed to the end-user)	No	String	-	View more information
Additional Details	additionalDetails	Additional information (optionally displayed to the end-user)	No	String	-	A minimum of a C is needed for this course for a Biology Degree.

Oracle PeopleSoft

Create a PeopleSoft query that meets the requirements described below.

Query Format

The Terms API and Grades API both follow the same request format:

```
GET https://{domain and base path}/{PeopleSoft query name}/JSON/NONFILE
```

Basic Authentication must be set on the service.

Query Parameters:

isconnectedquery=n

maxrows=0

prompt_uniquepromptname={the relevant value; this is configurable in the Product Integration configuration page}

prompt_fieldvalue={the relevant value; this is configurable in the Product Integration configuration page}

json_resp=true

Here is an example for the Terms API call (assume basic auth is set):

```
GET https://example-domain.edu/PSIGW/RES...S/JSON/NONFILE
```

isconnectedquery=n

maxrows=0

prompt_uniquepromptname=EMPLID

prompt_fieldvalue=EXAMPLEID01

json_resp=true

Here is an example for the Grades API call (assume basic auth is set):

```
GET https://example-domain.edu/PSIGW/RES...S/JSON/NONFILE
```

isconnectedquery=n

maxrows=0

prompt_uniquepromptname=EMPLID,TERM_CODE

prompt_fieldvalue=EXAMPLEID01,0931

json_resp=true

The domain and base path in these examples is: `https://example-domain.edu/PSIGW/RES...ery.v1/PUBLIC/`

The query name for the Terms example is: `EXAMPLE_QUERY_TERMS`

The query name for the Grades example is: `EXAMPLE_QUERY_GRADES`

The ending path should always be: /JSON/NONFILE

Expected Terms Response

The response must follow the format below. campusM expects the names of the row attributes to match this example.

```
{
  "status": "success",
  "data": {
    "query": {
      "numrows": 2,
      "queryname=": "EXAMPLE_QUERY_TERMS",
      "rows": [
        {
          "attr:rownumber": 1,
          "TERM_DESCRIPTION": "Fall 2024",
          "TERM_CODE": "0931"
        },
        {
          "attr:rownumber": 2,
          "TERM_DESCRIPTION": "Spring 2025",
          "TERM_CODE": "0941"
        }
      ]
    }
  }
}
```

Expected Grades Response

The response must follow the format below. campusM expects the names of the row attributes to match this example.

```
{
  "status": "success",
  "data": {
    "query": {
      "numrows": 2,
      "queryname=": "EXAMPLE_QUERY_GRADES",
      "rows": [
        {
          "attr:rownumber": 1,
          "COURSE_NAME": "Example Course Name",
          "FINAL_GRADE": "A",
          "COURSE_CODE": "FA-464-01",
          "TERM_CODE": "0931"
        },
        {
          "attr:rownumber": 2,
          "COURSE_NAME": "Another Example Course Name",

```


Configuration Option	Description	Mandatory	Data Type	Default	Example
	<ul style="list-style-type: none"> • API Key • OAuth Using User App Authentication – select an OAuth integration profile (from the Integration Profiles configured in App Settings) and choose where the access token should be added, Header or URL. • OAuth Using Client Credentials – select this if you are using a preliminary token call to get the access token. 				
Terms Configuration <i>For Banner XE only</i>					
Exclude By Term Code	<p>Enter one or more term codes, or partial codes, to exclude.</p> <p>Include '%' in the code for a wildcard sequence, e.g. '%5' will exclude any term code ending in 5. Entering just '5' will exclude any term code that includes a 5 anywhere in it.</p>	No	List		%5
Exclude By Term Description	<p>Enter one or more term descriptions, or partial descriptions, to exclude.</p> <p>Use '%' for a wildcard sequence, e.g. '%Test' will exclude any term description ending with Test. Entering just 'Test' by itself will exclude any term description that includes Term anywhere in it.</p>	No	List		Non-Academic
API Configuration for Colleague (Web API)					
URL to retrieve the information	The URL for the API server. The protocol, hostname, and optionally port (if required) are needed.	Yes	URL		https://(HOST)
URL Query Parameters	Any query parameters required for the Colleague (Web API) server. Currently none.	No	Parameter		
URL Path Parameters	Any path parameters required for the Colleague (Web API) server. Currently none.	No	Parameter		
General Headers	<p>Any additional headers required for the Colleague (Web API) server. We currently require one set as follows:</p> <ul style="list-style-type: none"> • Header Key: X-CustomCredentials • Header Value: colleaguewebapitoken <p>The header key can be changed if your Colleague server</p>	Yes	Header		

Configuration Option	Description	Mandatory	Data Type	Default	Example
	accepts a different key name, but the value cannot be changed.				
Authentication Type	Select one of the following options based on your Colleague server setup: <ul style="list-style-type: none"> No Auth Basic Auth 	No	Drop-Down list		Auth
Parameter Input Option	The parameter input option for Colleague ID required for the Colleague Web API. Possible values: <ul style="list-style-type: none"> Username Token Property Constant Typically, this is the user's "username" attribute.	Yes	Drop-Down list		Username
Proxy ID	Required to fetch the session token	Yes	String		
Proxy Password	Required to fetch the session token	Yes	String		
Token Expiry	The time in hours to store a Web API session token for up to a maximum of 24 hours.	No	Integer	1	
Limit Terms From	Limit Terms From Set a cut-off date, and terms that start before this date are not shown	Yes	String		2021-01-01
Include Drops	Include dropped credits when fetching grade records	No	Checkbox	Unchecked	
Grades Page					
Show Course Code	Shows the course code on the Grades detail page	No	Checkbox	Checked	
Show Midterm Grade	Shows the midterm grade for each course, if available. <hr/> Note Not applicable for either Colleague vendor. <hr/>	No	Checkbox	Unchecked	
Show Final Grades	Shows the final grade for each course, if available.	No	Checkbox	Checked	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	<hr/> <p>Note Only available for Banner XE.</p> <hr/>				
Show Additional Details	<p>Shows additional details for each course, if available.</p> <hr/> <p>Note Only available for Restful API.</p> <hr/>	No	Checkbox	Checked	
Show Grade Links	<p>Shows the additional information link for each course, if available.</p> <hr/> <p>Note Only available for Restful API.</p> <hr/>	No	Checkbox	Checked	
Past Terms (in days)	<p>Shows pas terms for the last number of days.</p> <hr/> <p>Note Only available for Banner XE.</p> <hr/>	No	String	0	
Next Terms (in days)	<p>Shows future terms for the next number of days.</p> <hr/> <p>Note Only available for Banner XE.</p> <hr/>	No	String	0	
Look and Feel					
Primary Theme Color	Used for the Screen Title header and other header elements.	No	Hex code	#444444	
Secondary Theme Color	Used for the Grade block headers.	No	Hex code	#6f8ea4	
Text/Labels					
Term Page Title	Used for the Terms page header.	No	String	Terms	
Term Page Subtitle	Used for the Terms page header.	No	String	Please choose a term to view grades	
Final Grade	The phrase used to describe a final grade for a course.	No	String	Final Grade	

Configuration Option	Description	Mandatory	Data Type	Default	Example
Text					
Midterm Grade Text	The phrase used to describe a midterm grade for a course.	No	String	Midterm Grade	
Additional Details Text	Show Additional Details must be enabled. This sets the label for the additional details field.	No	String	Additional Details	Additional Details Text
Grade Link Text	Show Grade Links must be enabled. This text will appear if a grade link was included in the service, but no description for the link was included.	No	String	View more information	Grade Link Text
No data Message	This message will appear when there is no data	No	String	No Grades found	
Terms Service Failure Message	This message will appear when the integration is unable to reach or process the Terms API correctly.	No	String	The page is having trouble fetching academic terms - please try again shortly.	
No Terms Message	This message will appear when there are no terms	No	String		
Service Failure Message	This message will appear when the integration is unable to reach or process the service call correctly.	No	String	The page is having trouble fetching your grades - please try again shortly.	
Import/ Export Configuration					
You can configure product integration and then export it to another campusM environment, for example, from sandbox to production or from preview to production.					
Export	Create a JSON file with all product integration configuration.	No			
Import	Use this option in order to load configuration from JSON of an exported product integration.	No			