MN Ed-Fi Suite v3.5.2, Data Standard v3.3.0-a: Course Course Associations

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Summary

Supports associations from State, District, and College courses.

Campus Expanded Summary:

MDE is looking for three categories of records, each involving the connection of one type of course data to another:

- DS: A District Course associated to a State Course
- DC: A District Course associated to a College Course
- CS: A College Course associated to a State Course

In each case, a set of courseCode/educationOrganizationId data is being associated with a different set of courseCode/educationOrganizationId data.

Required Resources (Upstream)

The following resources must be sent prior to this resource:

- Courses

Dependent Resources (Downstream)

The following resources are dependent on this resource (must be sent after this resource):

- N/A

Error Log

The following are potential Tier 1 (Ed-Fi API generated) or custom (Campus generated) errors you may receive when posting, updating, or deleting this resource. Please keep in mind that the "Error Message" below may not match your exact error message.

Error Message	Possible Causes / How to Fix
400: Validation of '**RESOURCE**' failed. **FIELD** is required.	An element of the JSON that is required is missing and needs to be added. - Double check that all bolded data elements below are reporting a valid value and no data elements below are reporting an invalid value.
400: '**RESOURCE**' failed. **RESOURCE** reference could not be resolved.	A resource that was referenced from a difference resource does not yet exist. - Resync the resource being mentioned in the error, then resync the errored resource. Alternatively, the resource being referenced may be incorrect. This can happen with Schools and the Ed-Fi School ID being used as an example. Double check the referenced values being sent are valid.

403: Authorization denied. The claim does not have any established relationships with the requested resource.	The key/secret being used does not have permission to send a record for the resource / referenced resource. • Double check your API credentials (key/secret). Sometimes specific keys/secrets cannot report specific resources. • The referenced person (student, staff, parent, contact, etc.) has not yet been associated to the key /secret. Resync their "linking" resource (Students Student School Associations, Staffs Staff Education Organization Assignment Associations, etc.) then resync the errored resource. • The referenced person (student, staff, parent, contact, etc.) may not exist in the ODS yet. Resync the "person" resource and the "linking" resource (Students Student School Associations, Staffs Staff Education Organization Assignment Associations, etc.) then resync the errored resource.
404: Failed to delete '**RESOURCE**'. Record does not exist.	The attempt to delete a specific Ed-Fi record ID in the ODS failed because it did not exist. • This error can be ignored. The ID was cleared from the Ed-Fi Identity Mapping Report and will not attempt to delete again.
409: A natural key conflict occurred when attempting to create a new resource '**RESOURCE**' with a duplicate key.	The Ed-Fi API has a natural key system alongside a standard REST ID system. This error is often protecting against the erroneous creation of a duplicate record in the API. However, it may also indicate that the natural key requirements of the Ed-Fi API have not been satisfied, and the key needs to be modified. • Check for duplicate data in your Campus site. If no duplicate data can be found, report the issue to Campus Support. ○ This can be caused by numerous issues. Our code may be attempting to send duplicate records when it should not. The natural key (bolded fields below) may not be unique enough to satisfy Ed-Fi requirements in all cases. Most times this error will require a code change to fix.
409: The resource (or a subordinate entity of the resource) cannot be deleted because it is a dependency of the '**RESOURCE**' entity.	The resource that the application is attempting to delete is referenced from another entity. • Use the Delete Tool to delete the referenced resource in the error message. Then retry the delete on the original resource that errored.

500: Internal Server Error.	Something unexpected happened and no specific error message could be returned. • This issue usually occurs when the ODS is having issues. Confirm that there are no issues with the ODS the data is being sent to and then attempt to retry the errored record. • Contact Campus Support if 500 errors continue to occur, can be replicated consistently, and the ODS the data is being sent to has no ongoing issues. ◦ There is a chance that Campus Ed-Fi code is sending an invalid JSON request resulting in the 500 error. ◦ There is a chance that an Ed-Fi Data Standard / API bug is causing the issue. ◦ Investigation is needed in these cases as there are many different potential causes.

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DS: District Course to State Course
Object Triggering Logic

Action	Business Rule(s)

Post	Reports a record when a Course exists in the configuration year.
	
	• A record is only reported for Courses in a Calendar in the same School Year as the Ed-Fi Connection sending the record.
	  ○ School Year dates are defined in School Year Setup.
	    ■ If Start Date is NULL, 07/01/StartYear will be used.
	    ■ If End Date is NULL, 06/30/EndYear will be used.
	• Do not report a record if the any of the following exclusions are present:
	  ○ Course Inactive
	  ○ Course State Exclude
	  ○ Course Cross Site
	  ○ Course State Code is NULL
	  ○ Course Section Enrollment Type is *DP: PSEO Direct Pay*
	  ○ Calendar Exclude
	  ○ Calendar MCCC Exclude
	  ○ School Exclude

Delete /Post
 	
Put
	A DELETE / POST will be performed if the data element being altered is part of the resource's natural key. A PUT will be performed otherwise.
	
	• When any of the following information is changed on Course Information:
	  ○ Course ID (New Course)
	  ○ Active
	  ○ State Exclude
	  ○ Section Enrollment Type
	  ○ State Code
	• Changes to Resource Preferences mappings **do NOT trigger**. A manual resync must be performed on the resource if mappings are changed.

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Delete	
	• When a Course is deleted. • When a Course is now excluded in some way. • When a record is in the Ed-Fi Identity Mapping Report but cannot be found on the Campus site.

Object Data Elements Logic

Data element labels below in **BOLD** are part of the natural key of this resource and are required data elements for the record to send through Ed-Fi.

- The Mandatory / Conditional / Optional column indicates what the state requires for each data element. For Core Ed-Fi connections, it indicates what the data standard requires for each data element.

	Data Element Label	Business Rule(s)	Mandatory (M) Conditional (C) Optional (O)	Data Source GUI Path	Database Field	Uses Template Logic (✅ / ❌ / EXT)
1	**courseReference** (*reference*)	*A reference to the Courses resource associated with the Course Course Association being reported.* Reports the fields that are part of the Natural Key for the Courses resource for the originating course (Course 1). • Refer to the Courses resource documentation for additional information.	M	N/A	N/A	EXT

| 2 | **toCourseReference** (*reference*) | *A reference to the Courses resource associated with the Course Course Association being reported.*

 Reports the fields that are part of the Natural Key for the Courses resource for the "to" course (Course 2).

 • courseCode
  ○ Reports the **State Code** after removing leading 0's.
 • educationOrganizationId
  ○ Reports **999999000**. | M | N/A | N/A | EXT |

DC: District Course to College Course
Object Triggering Logic

Action	Business Rule(s)

Post	Reports a record when a Course exists in the configuration year **AND** the Course has values entered for College Code and College Course Code.
	
	• A record is only reported for Courses in a Calendar in the same School Year as the Ed-Fi Connection sending the record.
	   ◦ School Year dates are defined in School Year Setup.
	     ■ If Start Date is NULL, 07/01/StartYear will be used.
	     ■ If End Date is NULL, 06/30/EndYear will be used.
	• Do not report a record if the any of the following exclusions are present:
	   ◦ Course Inactive
	   ◦ Course State Exclude
	   ◦ Course Cross Site
	   ◦ College Code is NULL
	   ◦ College Course Code is NULL
	   ◦ Course Section Enrollment Type is *DP: PSEO Direct Pay*
	   ◦ Calendar Exclude
	   ◦ Calendar MCCC Exclude
	   ◦ School Exclude

Delete /Post
 	
Put
	A DELETE / POST will be performed if the data element being altered is part of the resource's natural key. A PUT will be performed otherwise.
	
	- When any of the following information is changed on Course Information:
	    ◦ Course ID (New Course)
	    ◦ Active
	    ◦ State Exclude
	    ◦ Section Enrollment Type
	    ◦ State Code
	    ◦ College Code
	    ◦ College Course Code
	- Changes to Resource Preferences mappings **do NOT trigger**. A manual resync must be performed on the resource if mappings are changed.

Delete	- When a Course is deleted. - When a Course is now excluded in some way. - When a record is in the Ed-Fi Identity Mapping Report but cannot be found on the Campus site.

Object Data Elements Logic

Data element labels below in **BOLD** are part of the natural key of this resource and are required data elements for the record to send through Ed-Fi.

- The Mandatory / Conditional / Optional column indicates what the state requires for each data element. For Core Ed-Fi connections, it indicates what the data standard requires for each data element.

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2	**toCourseReference** (*reference*)	*A reference to the Courses resource associated with the Course Course Association being reported.* Reports the fields that are part of the Natural Key for the Courses resource for the "to" course (Course 2). • Refer to the Courses resource documentation for additional information.	M	N/A	N/A	EXT

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CS: College Course to State Course
Object Triggering Logic

Action	Business Rule(s)

Post	Reports a record when a Course exists in the configuration year **AND** the Course has values entered for State Code, College Code, College Course Code **AND** the Course has a Section Enrollment Type of *DP: PSEO Direct Pay*.
	
	• A record is only reported for Courses in a Calendar in the same School Year as the Ed-Fi Connection sending the record.
	  ○ School Year dates are defined in School Year Setup.
	    ▪ If Start Date is NULL, 07/01/StartYear will be used.
	    ▪ If End Date is NULL, 06/30/EndYear will be used.
	• Do not report a record if the any of the following exclusions are present:
	  ○ Course Inactive
	  ○ Course State Exclude
	  ○ Course Cross Site
	  ○ State Code is NULL
	  ○ College Code is NULL
	  ○ College Course Code is NULL
	  ○ Course Section Enrollment Type is **NOT** *DP: PSEO Direct Pay*
	  ○ Calendar Exclude
	  ○ Calendar MCCC Exclude
	  ○ School Exclude

Delete /Post
 	
Put
	A DELETE / POST will be performed if the data element being altered is part of the resource's natural key. A PUT will be performed otherwise.
	
	• When any of the following information is changed on Course Information:
	   ○ Course ID (New Course)
	   ○ Active
	   ○ State Exclude
	   ○ Section Enrollment Type
	   ○ State Code
	   ○ College Code
	   ○ College Course Code
	• Changes to Resource Preferences mappings **do NOT trigger**. A manual resync must be performed on the resource if mappings are changed.

Delete	• When a Course is deleted. • When a Course is now excluded in some way. • When a record is in the Ed-Fi Identity Mapping Report but cannot be found on the Campus site.

Object Data Elements Logic

Data element labels below in **BOLD** are part of the natural key of this resource and are required data elements for the record to send through Ed-Fi.

• The Mandatory / Conditional / Optional column indicates what the state requires for each data element. For Core Ed-Fi connections, it indicates what the data standard requires for each data element.

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2	**toCourseReference** (*reference*)	*A reference to the Courses resource associated with the Course Course Association being reported.*
		
		Reports the fields that are part of the Natural Key for the Courses resource for the "to" course (Course 2).
		
		• courseCode
		   ○ Reports the **State Code** after removing leading 0's.
		• educationOrganizationId
		   ○ Reports **999999000**.
			M	N/A	N/A	EXT

Appendix

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