

Appendix C: Business rules and errors

Introduction

In this CI Technical User Guide, in the above section “Conformance with the MedBiquitous specifications and business rules,” the relationship between the MedBiquitous specifications and the business rules is described. Business rules are in this appendix so that they can all be viewed in one place, but are also distributed throughout this Guide so that each business rule can be considered in the context of the elements or attributes to which is it relevant. The business rules can be thought of as additional requirements to ensure quality. For example, in the MedBiquitous specifications, there are fields for sequence block (e.g., course/module) start and end dates. The business rules stipulate that a course end date cannot occur *before* the start date.

The business rules must be met by a CI XML data file for it to upload successfully and be received by the AAMC. Before a CI XML data file can be checked for compliance with the business rules, the CI XML data file must first comply with the MedBiquitous specifications and be properly formed. (How to check a CI XML data file for compliance with the MedBiquitous specifications is described above in the section “Conformance with the MedBiquitous specifications and business rules” section). Only once a CI XML data file is properly formed, complies with the MedBiquitous specifications, and meets all the business rules, can a school’s reports be generated. There are three categories of AAMC CI business rules:

- Core rules (CR)
- Competency Framework (CF) (relates to the MedBiquitous Competency Framework and Object Specifications)
- Curriculum Inventory Structure (CS) (relates to the MedBiquitous Curriculum Inventory Specifications)

Please note that the following business rules are for the 2021-2022 curriculum uploaded beginning August 1, 2022. For business rules for the 2021 upload, please see the AAMC CI business rules on [Resources for CI Developers](#).

If you have used earlier editions of the business rules, you will note that this Guide contains new information around business rules, such as text of error messages, what errors mean in plain language, etc. This new, additional information is intended to facilitate resolving errors in CI data as they occur. You may notice some business rules no longer included – these rules from previous years, such as CR03 or CS13, have been removed because they are not possible to trigger. Because those rules referred to errors in XML according to the MedBiquitous specifications, the XML file would not be allowed to progress to be evaluated for compliance with business rules.

Some business rules have more than one circumstance that can trigger them, so the error message you receive may depend on the specific circumstance within your CI XML file. All possible business rule error messages are provided in the following pages.

Business rules that are new or edited for 2022 are identified with an asterisk (e.g., CF04*).

Business rules errors in the CI Portal and CI Staging

If a CI XML data file triggers one or more Competency Framework (CF) or Curriculum Inventory Structure (CS) business rule errors, an email notification will be sent to the CI primary admin, and the message will appear the Activity History panel on the **Upload** tab, titled, “Submission Error: AAMC Business Rules.” A single piece of data in your CI can result in 1 or more errors if it does not meet the business rules. The CI Portal checks your data for all errors each time a CI XML data file is uploaded.

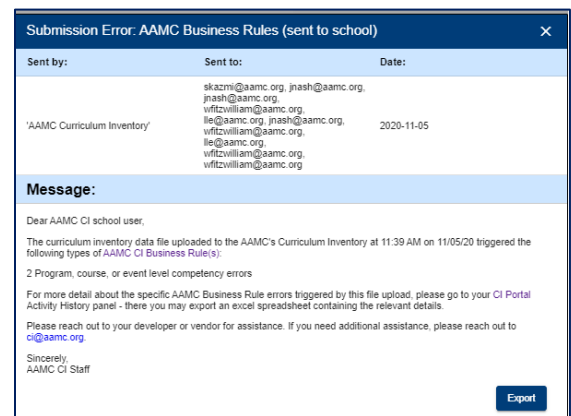
Activity History			
Date	Subject	Type	User
11/05/2020 11:48 AM	Business Rule Error Log Downloaded	User Action	Walter Testacct
11/05/2020 11:39 AM	Submission Error: AAMC Business Rules (sent to school)	EMAIL	System Generated

Core rule (CR) errors *do not* trigger email notifications because they indicate fundamental flaws in the XML formatting.

The message will show:

1. Which type of error(s) have been triggered. The possible types of business rule errors include (in alphabetical order):

- Core rules error
- Learning objective error
- Learning objective relationship error
- Course/module error
- Data length error
- Event error
- Phase level error
- Report ID, year, or report date error



2. An “export” button which downloads an Excel file detailing the business rule error type(s) and description.

Once the issues causing the error(s) are resolved in the CMS, a new CI XML data file can be uploaded to confirm that all business rule errors have been resolved and no additional errors have been introduced.

For more information regarding the business rules functions’ in the CI Portal and CI Staging and email notifications, please see the CI Portal User Guide on [Resources to Establish Your CI](#).

Core rules (CR)

Core rules must be met before additional business rules for the competency framework (CF) and the curriculum inventory structure (CS) are evaluated. If it is detected that a submission does not meet a core rule: a) processing of the submission discontinues, and b) an error notification window appears that describes the invalid core rule. CR errors do not trigger email notifications. To see the details of which CR errors were triggered, you can login to the CI Portal (or CI Staging), go to your Upload (2022)

tab, and export the error details from your Activity History. Some CRs may provide popup messages within the CI Portal (or CI Staging) if a CR is violated.

Rule ID number	Description	Error message(s)	What does this error mean?
Approved data sender?			
CR01	Data senders must be certified via AAMC’s on-boarding process before a Web service will allow them to send data. A data sharing attempt from an uncertified Sender will be rejected. It is not possible to send an error notification for this rule error because, unlike subsequent rules, this rule is evaluated as soon as a Sender attempts to connect to the AAMC Web service.	Unable to validate the sender information. Please contact the AAMC CI Administrator.	Schools may upload their CI data to the AAMC through the CI Portal. However, CI participating vendors and schools with institutionally developed software systems may choose to use a Web Service to share a school’s CI data with AAMC. If this error is triggered, it means someone other than a certified sender attempted to send data to the AAMC. Vendors, please remember you must communicate any updates to your IP addresses (or ranges) for both the CI Portal and CI Staging annually by June 1.
CR02	Schools must select their data Sender via the CI Portal ‘Manage Sender’ tab. Before a submission is validated against core rules (CR), the AAMC web service will verify that the Sender (e.g., a vendor) has been selected by the school as their Sender.	You are an unauthorized sender for the provided institution ID. Please contact ci@aamc.org .	In the CI Portal, in the Manage Sender tab, schools select who is going to create their CI XML file, and who is going to send/upload their CI XML file to the AAMC. A school must designate a given vendor as their data sender before the AAMC can accept a CI XML file from a vendor on a given school’s behalf.
Institution identified?			
CR04	The <InstitutionID> must match an AAMC institution ID for a school. If the institution ID does not match an AAMC-provided institution ID, the submission is rejected. Please contact ci@aamc.org if you do not know your AAMC institution ID.	The provided institution ID %s does not match an AAMC institution ID.	Each medical school/institution is assigned an institution ID by AAMC. If an ID other than the AAMC-assigned ID is inserted in the <InstitutionID> tag of the CI XML file, an error will result.

Rule ID number	Description	Error message(s)	What does this error mean?
Submission file size below 25MB?			
CR05	A CI XML data file is not allowed to exceed 25 megabytes in size. If the file is greater than 25MB, the submission is rejected. Files with size > 25MB can be compressed/zipped and uploaded. A compressed/zipped file may be larger than 25MB; however, it is extremely unusual for a single zipped CI XML data file to exceed 25MB.	The submission cannot be processed because it exceeds the size limit of 25MBs. Files larger than 25MBs and should be compressed or zipped and uploaded. Please contact ci@aamc.org for more information.	A CI XML file that is greater than 25 megabytes (MB) must be compressed/zipped to be successfully uploaded. The AAMC CI is not able to recommend a zip/compression software program because of differences in computer systems. If you are unsure how to compress or zip a file, please contact your school's IT support for assistance.

Competency Framework (CF) and Competency Object Rules

The following rules are evaluated only once all core rules (CR) have been met. If it is detected that a submission does not meet a competency framework or competency object rule, a) processing of the submission continues to the extent possible and b) upon completion of processing, an error email notification is sent to summarize all CF and CS rule errors. As described in the following rules, program-level-competencies are required. Each program objective must be mapped to one or more PCRS competency statement. To see the details of which CF errors were triggered by a given CI XML file, you can login to the CI Portal (or CI Staging), go to your Upload (2022) tab, and export the error details from your Activity History.

Rule ID number	Description	Error message(s)	What does this error mean?
<CompetencyObject> tags			
CF01	Within <Expectations>, <CompetencyObject> tags must be used to identify all competencies except for PCRS that are in the school's <CurriculumInventory>. An error is generated if an event, sequence block, or program competency URI is referenced within <CurriculumInventory> without the presence of a corresponding <CompetencyObject> tag.	Unable to validate the sender information. Please contact the AAMC CI Administrator.	Each learning objective must be written out. If you get this error, it means that the learning objective's URI is in your XML file, but the actual text for the learning objective is missing from the <CompetencyObject> section of your XML. Each learning objective needs both the URI and learning objective's actual text in your XML file.

	<CompetencyObjects> may be referenced via their URIs by <Includes>, <Relation>, or <CompetencyObjectReference> tags.		
Rule ID number	Description	Error message(s)	What does this error mean?
CF02	Within <Expectations>, <CompetencyObject> tags cannot share the same URI. An error is generated if there are duplicate <CompetencyObject> tags within <Expectations>.	The following URI is used in more than one competency object definition: %s.	Each learning objective needs a URI so it can be referenced by a course/module or event. A learning objective's URI must be unique; URIs cannot be used more than once. If you get this error, it means that a URI has been used more than once to identify a learning objective.
CF03	Within <Expectations>, <CompetencyObject> tags must not be used to identify PCRS competencies. The Curriculum Inventory will automatically integrate PCRS information (e.g., competency description) based on the URI. An error is generated if a <CompetencyObject> tag attempts to use a URI reserved by the PCRS framework.	URI %s identifies a PCRS competency. This URI cannot be used within a competency object definition.	A school's learning objectives need to have their own URIs – those learning objectives cannot use the PCRS identifiers, even if the text of the learning objective is identical to the PCRS learning objective. If you get this error, it means you have used a PCRS URI (identifier) for one of your school's own learning objectives.
CF04*	The level of all <CompetencyObject> tags must be identified using the <Category> sub-element, as in the following example: <co:Category term="program-level-competency"/> Valid terms include: a. program-objective-domain b. program-level-competency c. sequence-block-level-competency d. event-level-competency An error is generated if a <CompetencyObject> does not have a <Category> sub-element with one of the above terms. This is of importance upon evaluation of <Relation> tags. Category terms are case sensitive (e.g., the term 'Event-Level-Competency' is	A category has not been defined for competency object %s. An invalid category %s is specified in competency object %s.	There are four valid hierarchical levels of competency objects: a. program objective domains, b. program objectives, c. course/module learning objectives, and d. event learning objectives. If you get this error, it means at least one learning objective has not been designated with one of the four categories (e.g., program-objective-domain, program-level-competency, sequence-block-level-competency, event-level-competency).

Rule ID number	Description	Error message(s)	What does this error mean?
CF05	One or more <CompetencyObject> tags must exist with the “program-level-competency” <category> assigned. An error is generated if a submission does not include one or more program-level competencies.	No competency objects have been categorized as program-level. At least one program-level competency is required.	A school's CI must include program objectives. If you get this error, it means your CI submission is missing your school's program objectives.
CF06	All sequence block-level <CompetencyObject> tags must have a corresponding <CompetencyObjectReference> tag within a <SequenceBlock> tag. An error is generated if a sequence block-level competency object is not referenced by at least one sequence block.	The sequence block-level competency object %s must be referenced by at least one sequence block.	Each course/module learning objective must be referenced by at least one course/module. If you get this error, it means the identified course/module learning objective(s) were not referenced by any courses/modules.
CF17	All event-level <CompetencyObject> tags must have a corresponding <CompetencyObjectReference> tag within an <Event> tag. An error is generated if an event-level competency object is not referenced by at least one event.	The event-level competency object %s must be referenced by at least one event.	Each event learning objectives must be referenced by at least one event. If you get this error, it means that the identified event level learning objective(s) were not referenced by any events.
CF22*	A <CompetencyObject> with a “program-objective-domain” <Category> cannot be referenced in a <CompetencyObjectReference> tag.	Program-objective-domains cannot be referenced. Course %s references program-objective-domain %s Program-objective-domains cannot be	Program objective domains cannot be referenced by curricular content. They can only be related to program objectives. If you get this error, it means that one of your courses or events is referencing the identified program objective domain.

		referenced. Event %s references program- objective- domain %s Program- objective- domains cannot be referenced. Integration Block %s references program- objective- domain %s	
Rule ID number	Description	Error message(s)	What does this error mean?
CF16	The Title sub-element for each <lom> for each <CompetencyObject> should not contain characters outside of the Unicode Latin script and must contain at least one alphabetic character.	The Title sub-element for %s must contain at least one alphabetic character.	Learning objectives' text need to use written words. If you get this error, it means the specified learning objective is missing actual words (e.g., it is blank, it uses numbers instead of words, etc.).
CF18	The identifier and catalog sub-element for each <lom> must be defined for each <CompetencyObject>. An error is generated if no URI is provided for the competency object, or the URI catalog is not declared as <lom:catalog>URI</lom:catalog>.	You need to provide an identifier (URI) for the following competency so it can be referenced and related in your submission: %s	Learning objective identifiers need to be indicated as unique identifiers. URI is the sort of identifier used in the CI, and it's defined as a type of catalog. If you get this error, it means the named competency object didn't get its unique identity marked with <lom:catalog>URI</lom:catalog> exactly. See Appendix E for examples.
CF20*	The <Title> of a <CompetencyObject> with a "program-objective-domain" <Category> must be greater than 5 characters in length, and less than 200 characters in length.	Program-objective-domain %s must be greater than 5 characters in length.	If you get this error, it means the specified program objective domain is outside the accepted character counts for program objective domains.

		Program-objective-domain %s must be less than 200 characters in length.	
Rule ID number	Description	Error message(s)	What does this error mean?
CF16	The Title sub-element for each <lom> for each <CompetencyObject> should not contain characters outside of the Unicode Latin script and must contain at least one alphabetic character.	The Title sub-element for %s must contain at least one alphabetic character.	Learning objectives' text need to use written words. If you get this error, it means the specified learning objective is missing actual words (e.g., it is blank, it uses numbers instead of words, etc.).
<Includes> Tags			
CF07*	<Includes> tags should contain any competency – including PCRS, program-objective-domain, program-level, sequence block-level, and event-level competencies – that is subsequently used in a <Relation> tag. An error is generated if a <Relation> tag refers to a competency URI that does not have a corresponding <Includes> tag.	Competency object %s is referenced in a 'Relation' tag but was not referenced in a corresponding 'Includes' tag.	Each learning objective that has a relationship to at least one other learning objective must be included in the competency framework. If you get this error, it means the identified learning objective has a relationship with another learning objective but was not identified for inclusion within the competency framework.
CF08	The same URI cannot be present in two or more <Includes> tags. An error is generated if a duplicate URI is identified in <Includes> tags.	Competency object %s is referenced by more than one 'Includes' tag.	Each learning objective's URI (unique ID) must be listed in the "Includes" portion of the competency framework only once. If you get this error, it means the same learning objective URI has been listed in the "Includes" portion of the competency framework more than once.
<Relation> Tags			
CF09*	<CompetencyFramework> relationships that map program-level, sequence block-level, and event-level competency pairs must be specified in a <Relation> tag using either the #broader or #narrower relationship. Valid relationships are described by	Invalid relationship. %s cannot be #broader than %s.	Learning objective relationships must be documented in a hierarchical order – program objective domains contain program objectives, program objectives contain course/module objectives (i.e., sequence blocks), which contain event objectives. The direction of the relationship (e.g., program

	the relationship tables in Appendix D. An error is generated if a relationship of the type is not specified in conformance with the relationship tables.	Invalid relationship. %s cannot be #narrower than %s.	objective is hierarchically superior to course/module objective), is communicated using the concepts of "broader" and "narrower" in the MedBiquitous competency framework specifications. If you get this error, it means that broader relationship has been used when narrower relationship was expected, or vice versa.
Rule ID number	Description	Error message(s)	What does this error mean?
CF10	All program-level competencies must be mapped to one or more PCRS competency statements. An error is generated if a program-level competency does not have a corresponding <Relation> tag that relates it to a PCRS URI.	The program-level competency object %s does not have a corresponding 'Relation' tag	Each program level learning objective must be related to at least one PCRS competency statement. If you get this error, it means that you have at least one program objective that is missing its relation to a PCRS competency statement.
CF21*	Each <CompetencyObject> with a "program-objective-domain" <Category> must have a valid <Relation> to at least one <CompetencyObject> with a "program-level-competency" <Category>.	Program-objective-domain %s must have a valid relationship with a program-level-competency object	Each program objective domain must be related to one or more program objective. If you get this error, it means the identified program objective domain has not been related to even one program objective.
CF19*	A <Relation> containing a <CompetencyObject> with a "program-objective-domain" <Category> must also include a <CompetencyObject> with a "program-level-competency" <Category> using either the #broader or #narrower relationship, depending on how the competency relationship is structured. See Appendix D.	Program-objective-domain %s may not have a relationship with the sequence block-level competency %s. Program-objective-domain %s may not have a relationship with the	Program objective domains may only be related to program objectives. If you get this error, it means the identified program objective domain has a relationship with the identified competency object which is not a program objective.

		<p>event-level competency %s.</p> <p>Program-objective-domain %s may not have a relationship with the program-objective-domain %s.</p> <p>Program-objective-domain %s may not have a relationship with the PCRS %s.</p>	
Rule ID number	Description	Error message(s)	What does this error mean?
CF11	<p>Program-level competencies may not be mapped to domain-level PCRS (e.g., 1.00 - 'Patient Care'); they must be mapped to PCRS such as 1.07 - 'Develop and carry out patient management plans'). An error is generated if a program-level competency attempts to map to a domain-level PCRS URI.</p>	<p>Invalid relationship. The program-level competency object %s may not be related to a domain-level PCRS.</p>	<p>The PCRS contains 8 domains, and within those 8 domains, dozens of competency statements. Each school program objective must be related to at least one individual PCRS competency statement and cannot be related to any PCRS domains. This error means at least one program objective is related to a PCRS domain (e.g., 1.00 - Patient Care).</p>
CF12	<p>Mapping of program-level competencies to PCRS must be specified in <Relation> tags using a #related relationship. An error is generated if a <Relation> tag that includes a PCRS URI uses a #broader or #narrower relationship.</p>	<p>Invalid relationship. The relationship between program-level competency %s and PCRS %s cannot be #broader or #narrower.</p>	<p>There are three competency relationship types, broader, narrower, and related. PCRS may only have the <i>related</i> relationship and may only have the related relationship with program level learning objectives. If you get this error, it means the PCRS have been assigned a broader or narrower relationship with the program-level learning objective, instead of a related relationship.</p>

CF23*	A program-objective-domain cannot be narrower than a program-level-competency.	Invalid relationship. Program-objective-domain %s cannot be #narrower than program-level-competency %s.	In each relationship among two learning objectives, one is listed first, and one is listed second. If the program objective is listed first, and the program objective domain is listed second, the only relationship that can be used is broader. If you get this error, it means that the identified program objective domains were documented as being narrower than the identified program objectives.
Rule ID number	Description	Error message(s)	What does this error mean?
CF24*	A program-level-competency cannot be broader than a program-objective-domain.	Invalid relationship. Program-level-competency %s cannot be #broader than program-objective-domain %s.	In each relationship among two learning objectives, one is listed first, and one is listed second. If the program objective domain is listed first, and the program objective is listed second, the only relationship that can be used is narrower. If you get this error, it means that the identified program objectives were documented as being broader than the identified program objective domains.
CF13	Mapping of sequence block-level or event-level competencies directly to PCRS is not allowed. They must be mapped through program-level competencies. An error is generated if a <Relation> tag includes a PCRS URI #related <Relationship> with any competency other than a program-level competency.	Invalid relationship. %s cannot be #related to %s. A #related relationship must reference a PCRS and a program-level competency.	PCRS competency statements cannot be linked to course/module or event level learning objectives. If you get this error, it means that there is a relationship between a PCRS competency statement and a course/module or event level learning objective.
CF14	Relationships must not result in circular references as described in the 'Note about Hierarchical Conflict' section (pp. 33-36) of the Competency Framework Specification , version 1.0. An error is generated if a circular reference between competencies is detected.	A hierarchical conflict exists in the competency framework due to a circular reference among multiple 'Relation' tags, as follows: %S	The MedBiquitous competency framework must be considered as a logical structure - program objectives contain course/module objectives, which contain event objectives. For example, if A is over B and B is over C, then C cannot be over A. If you get this error, it means that there is an illogical relationship among two or more learning objectives.

		%s and %s are referenced in two conflicting relationships (one #broader and one #narrower).		
Rule ID number	Description	Error message(s)	What does this error mean?	
CF15	Several sub-elements and attributes of the CompetencyFramework or CompetencyObject elements are restricted in text length. The maximum allowable field lengths are summarized below. An error is generated if any field exceeds its maximum allowable length. Please note that this field size restriction relates to English characters; if any foreign characters are in the text, allowable characters size might reduce.	The following text contained in the CompetencyFramework or in a CompetencyObject tag exceeds the maximum allowable field length of %s : %s.	Each field (e.g., learning objective, course/module title, etc.) in a CI submission has a maximum character count. The maximum character counts vary by field. If you get this error, the business rule error message will specify which text has exceeded the maximum number of characters allowed for that field.	
		Parent Element	Sub-element or Attribute	Max Length
		CompetencyFramework	Lom:General:Title	1500
			Lom:General:Description	1500
		CompetencyObject	Lom:Entry (i.e., URI)	1500
			Lom:Title	1500
	Lom:Description		1500	

Curriculum Inventory Structure (CS) Rules

The following rules are evaluated only once all core rules (CR) 2 have been met. If it is detected that a submission does not meet a curriculum inventory structure (CS) rule, a) processing of the submission continues to the extent possible and b) upon completion of processing an error notification is sent via email that summarizes all CS and CF rule errors. To see the details of which CS errors were triggered by a given CI XML file, you can login to the CI Portal (or CI Staging), go to your Upload (2022) tab, and export the error details from your Activity History.

Rule ID number	Description	Error message(s)	What does this error mean?
	<CurriculumInventory> Tag		

CS01	The <ReportID> sub-element must be unique for each of a school's submissions and may only use alphanumeric characters (i.e., no punctuation or symbols). An error is generated if a school's submission uses the same <ReportID> as one of its prior submissions or uses invalid characters in the <ReportID>.	Report ID %s includes invalid characters. Only alphanumeric characters are allowed (i.e., no punctuation). Report ID %s matches the ID of a previous submission for institution ID %s.	Each CI XML file includes a <ReportID> that is supplied by the data sender (school or vendor). If you get this error, it means that the CI XML data file uploaded to the AAMC re-used a previously used <ReportID> or that the <ReportID> used characters other than letters or numbers.
Rule ID number	Description	Error message(s)	What does this error mean?
CS02	Submissions are checked to ensure they contain information for only the previous academic year (AY). Schools must submit data with <ReportingStartDate> and <ReportingEndDate> in between July 1 (of the previous year) and June 30 (of the current year). For example, in a submission for AY 2022, it would be an error if the reporting start date is before July 1, 2021. An error is generated if the <ReportingStartDate> does not precede the <ReportingEndDate>. Dates at the sequence block or event level are <u>not</u> checked to ensure they are within the previous academic year. Dates specified at these levels that fall within 8 years of the date range for a previous academic year will not cause an error or rejection.	<p>The reporting end date is not within acceptable date limits.</p> <p>The reporting end date precedes or matches the reporting start date.</p> <p>The reporting start date is not within acceptable date limits.</p>	The CI XML data file includes fields for <ReportingStartDate> and <ReportingEndDate>. The reporting dates must be within the span of July 1 of the previous year and June 30 of the current year, and the start date must precede the end date.
<AcademicLevels> Tag			
CS03	The number of academic levels, or phases, are defined by <LevelsInProgram> and each academic level is defined as a <Level> within the <AcademicLevels> tag. An error is generated if there is a mismatch between	The number in 'LevelsInProgram' tag does not correspond with the number of levels defined in 'Level' tags.	In a CI XML file, a school indicates how many phases (i.e., academic levels) their curriculum includes. If you get this error, the number you indicated in <LevelsInProgram> was not the same as the number of phases indicated with <Level> tags.

Rule ID number	Description	Error message(s)	What does this error mean?
CS04	<p>A <Level> that is not defined within the <AcademicLevels> tag cannot be referenced by a sequence block. An error is generated if a <SequenceBlock> attempts to refer to an undefined academic level.</p>	<p>The level ID %s referenced by sequence block ID %s does not have a corresponding 'Level' tag. The Ending Academic level ID %s referenced by sequence block ID %s does not have a corresponding 'Level' tag. The Starting Academic level ID %s referenced by sequence block ID %s does not have a corresponding 'Level' tag.</p>	<p>In your CI XML file, you must define your phases (i.e., academic levels) before you reference them by course/modules (i.e., sequence blocks). If you get this error, it means that the identified course/module(s) references a phase which was not listed in the <AcademicLevels> section of your XML.</p>
CS05	<p><Level> sub-elements of the <AcademicLevels> tag must have sequential numbers (i.e., the <i>number</i> attribute) starting with 1. An error results if a submission has academic levels that are not sequential <u>or</u> does not start with 1. An error is also generated if a submission has academic levels with duplicate level ID values.</p>	<p>The level ID %s is used to identify more than one 'level' tag definition. The 'Level' tags should be in sequence starting with 1. A skip in the sequence or irregular sequence of 'Level' tags is not allowed. They may continue up to 10. The sequence of 'level' tags should begin with 1.</p>	<p>Phases must be identified as happening sequentially, i.e. 1, 2, 3, 4, and the list must start at 1. If you get this error, either the phases did not start at 1, and/or that the phase numbers are not in sequential order.</p>

CS06	Each academic level must be referenced by at least one sequence block. An error is generated if a <Level> tag is not referenced by at least one <SequenceBlock> tag.	At least one sequence block must reference the level ID %s.	Each phase (i.e., academic level) must have at least one course/module (i.e., sequence block) in it. If you get this error you have indicated a phase as part of your curriculum without populating it with any course/modules.
Rule ID number	Description	Error message(s)	What does this error mean?
CS25*	Each <SequenceBlock> must include a <StartingAcademicLevel> that precedes its <EndingAcademicLevel>. A business rule error is generated if the <StartingAcademicLevel> occurs after the <EndingAcademicLevel>.	The Starting Academic Level for Sequence %s must precede or be equal to the Ending Academic Level.	Each course/module must document in which phase of the curriculum it begins and end (required in the MedBiquitous CI Specifications). The majority of course/modules may begin and end in the same phase (e.g., begins in Phase 1, ends in Phase 1), but this element allows schools to model longitudinal courses which cross over more than one phase. If you get this error, it means that a given phase start (e.g., phase 2) occurs before the phase end (e.g., 1).
<SequenceBlock> Tag			
CS07	<SequenceBlock> tags must have unique identifiers (i.e., the id attribute). An error is generated if a <SequenceBlock> identifier is duplicated.	The sequence block ID %s is used to identify more than one sequence block definition.	Each course/module needs a unique identification code so it can be meaningfully integrated into the curricular structure. If you get this error, it means that a course/module unique ID was applied to more than one course/module, instead of using a unique ID code for each course/module.
CS17	The <Timing> sub-element of all <SequenceBlocks> tags must specify a <Dates> element. The <StartDate> must precede the <EndDate>. An error is generated if the start date and end date are not specified for a sequence block, or if the <StartDate> does not precede the <EndDate>.	The 'Dates' tag is not specified in the sequence block %s. The end date of %s precedes the start date.	Course/modules must have start and end dates, and the start date of a course/module must be before the course/module's end date. If you get this error, it means that either a start or end date for a course/module are missing, or a start date was incorrectly entered as occurring after the end date.
CS09*	The <Timing> sub-element of <SequenceBlocks> tags must specify <Dates> and <Duration>. An error is generated if the duration, start date, and end date is not specified for a sequence block.	The 'Dates' and 'Duration' tags are not both specified in the identified sequence block(s) %s.	All course/modules must have a duration in days as well as a start and end date. If you get this error, it means that the course/modules indicated in the error are missing their dates and/or duration.
CS20	The <StartDate> and <EndDate> sub-elements of <Dates>, a sub-	The start date for sequence block:	Your CI XML data file will have a reporting start and end date. All curriculum

	element of <Timing>, must be no earlier or later than 8 calendar years before or after the <ReportingStartDate> and <ReportingEndDate>.	%s must be no earlier or later than 8 years before or after the reporting end date. The start date for sequence block: %s must be no earlier or later than 8 years before or after the reporting start date.	experiences within the CI XML data file, including course/modules and events, must occur within 8 years of your CI XML data file's reporting start date and reporting end date.
Rule ID number	Description	Error message(s)	What does this error mean?
CS21	The <StartDate> and <EndDate> sub-elements of <SequenceBlockEvent>, a sub-element of <SequenceBlock>, must be no earlier or later than 8 calendar years before or after the <ReportingStartDate> and <ReportingEndDate>.	The end date in sequence block event %s referred in sequence block: %s must be no earlier or later than 8 years before or after the reporting start date. The start date in sequence block event %s referred in sequence block: %s must be no earlier or later than 8 years before or after the reporting start date.	Your CI XML data file will have a reporting start start and reporting end date. All course/modules and events must occur within 8 years of your CI XML data file's reporting start date and reporting end date.
CS16	If it is provided, the duration of a sequence block must be specified as a number of days. An error is generated if the <Duration> (sub-element of <Timing>) for a sequence block includes any units of time other than days. As described in rule	A unit other than days is used to specify duration in sequence block ID %s.	Course/module durations need to be specified in days, not other units of time (such as weeks or months). If you get this error, it means a unit other than days was used to document duration for a course/module.

Rule ID number	Description	Error message(s)	What does this error mean?
	CS09, duration is required for clerkship sequence blocks.		
CS10	When nesting sequence blocks, <SequenceBlockReference> must not result in circular references. An error is generated if a circular reference between sequence blocks is detected.	A hierarchical conflict exists in the curriculum structure due to circular references among sequence blocks, as follows: %s	Curricular structures must make logical sense - a 'parent' course/module may contain a 'child' course/module, but that 'child' course/module cannot then contain the 'parent' course/module.
CS24	A Sequence Block ID that is not defined by a corresponding <SequenceBlock> tag cannot be referenced by a sequence block. An error is generated if a <SequenceBlockReference> attempts to refer to an undefined sequence block.	Sequence %s referenced by sequence block %s does not have a corresponding 'Sequence' tag.	In your CI XML file, you must define your course/modules (i.e., sequence blocks) before you reference them as nested course/modules (i.e., sequence blocks). If you get this error, it means that the referenced course/module ID was not listed in the <SequenceBlock> section of your XML.
<Event> Tag			
CS11	<Event> tags must have unique identifiers (i.e., the id attribute). An error is generated if an <Event> identifier is duplicated.	The event ID %s is used to identify more than one event definition.	Each event needs to be uniquely identified so it can be referenced by a course/module. If you get this error, it means an event ID code has been used for more than one event.
CS15	All <Event> tags must be referenced by at least one <SequenceBlockEvent> tag within a <SequenceBlock>. An error is generated if an <Event> is not referenced by one or more <SequenceBlock>.	Event %s is not referenced by any sequence block.	Events must be within a course/module. If you get this error, it means one or more events in your CI have not been assigned to a course/module.
CS18	An Event ID that is not defined by a corresponding <Event> tag cannot be referenced by a sequence block. An error is generated if a <SequenceBlock> attempts to refer to an undefined event.	Event %s referenced by sequence block %s does not have a corresponding 'Event' tag.	Course/modules cannot refer to events that do not exist in the CI XML file. If you get this error, it means that either the course/module identifier needs to be changed to one that exists in the CI XML data file, or the event needs to be documented before it can be referenced by a course/module.
CS12	Within <Event> tags, the <ResourceType>, <InstructionalMethod>, and	The %s specified in event ID %s is not a valid	Events may only use the standardized identifiers and their associated definitions to indicate their resources, instructional

	<p><AssessmentMethod> tags must reference a unique ID from the CI Standardized Vocabulary on Resources to Establish Your CI - this includes unique identification codes (i.e., UIDs) for each instructional and assessment method, and resource. An error is generated if a <ResourceType> does not match the unique ID of a resource, an <InstructionalMethod> does not match the unique ID of an instructional method, or an <AssessmentMethod> does not match the unique ID of an assessment method.</p>	<p>assessment method UID.</p> <p>The %s specified in event ID %s is not a valid instructional method UID.</p> <p>The %s specified in event ID %s is not a valid resource type UID.</p>	<p>methods, and assessment methods. The CI Standardized Vocabulary is available on from Resources to Establish Your CI. If you get this error, it means your CI XML has either used a word (e.g., lecture) instead of the unique ID code for the method or resource (e.g., IM013), or has used a code incorrectly.</p>
Rule ID number	Description	Error message(s)	What does this error mean?
CS14	<p>If one or more <InstructionalMethod> tags are provided, one and only one must be denoted as the primary. An error is generated if two or more <InstructionalMethod> tags are marked as primary.</p>	<p>More than one primary instructional method is specified in event ID %s. No primary instructional method is specified in event ID %s.</p>	<p>Each session (aka event) may have multiple instructional methods, but only one instructional method must be listed as the primary instructional method. If you get this error, it means either no instructional method was identified as primary, or more than one instructional method was identified as primary.</p>
CS27*	<p>The total amount of instructional method duration for an event cannot exceed the EventDuration for that event.</p>	<p>Event %s duration value, %s has been exceeded by the total instructional method duration for this event.</p>	<p>When instructional method(s) are tagged within events, a new attribute for instructional method duration allows time in hours and/or minutes to be assigned per instructional method. For example, perhaps in a 2-hour event, 1 hour is spent in lecture, and 1 hour is spent in demonstration. If you get this error, the total time for all instructional method(s) for a given event exceeds the total possible time for the event.</p>
CS19*	<p>Several sub-elements and attributes of the CurriculumInventory,</p>	<p>The %s of %s exceeds the maximum</p>	<p>Many of the fields in the CI standards have character count limitations. If you get this error, one or more of the fields in the CI</p>

	<p>Institution, SequenceBlock and other elements in the curriculum structure are restricted in text length. The maximum allowable field lengths are summarized below. An error is generated if any field exceeds its maximum allowable length. Please note that this field size restriction is for English characters; if any foreign characters are in the text, allowable characters size might reduce.</p>	<p>allowable field length of %s.</p>	<p>XML data file has exceeded the allowable character count. The error message will include which text has triggered the error, and the maximum allowable length for that given element or attribute.</p>																																																																	
	<table border="1"> <thead> <tr> <th>Parent Element</th> <th>Sub-element or Attribute</th> <th>Max Length</th> </tr> </thead> <tbody> <tr> <td rowspan="8">CurriculumInventory</td> <td>ReportID</td> <td>100</td> </tr> <tr> <td>Title</td> <td>4000</td> </tr> <tr> <td>ReportDate</td> <td>100</td> </tr> <tr> <td>ReportingStartDate</td> <td>100</td> </tr> <tr> <td>ReportingEndDate</td> <td>100</td> </tr> <tr> <td>Language</td> <td>100</td> </tr> <tr> <td>Description</td> <td>4000</td> </tr> <tr> <td>SupportingLink</td> <td>2048</td> </tr> <tr> <td rowspan="11">Institution</td> <td>InstitutionName</td> <td>4000</td> </tr> <tr> <td>Address:Organization</td> <td>500</td> </tr> <tr> <td>Address:StreetAddressLine</td> <td>200</td> </tr> <tr> <td>Address:City</td> <td>100</td> </tr> <tr> <td>Address:StateOrProvince</td> <td>100</td> </tr> <tr> <td>Address:PostalCode</td> <td>40</td> </tr> <tr> <td>Address:Region</td> <td>100</td> </tr> <tr> <td>Address:District</td> <td>100</td> </tr> <tr> <td>CountryName</td> <td>50</td> </tr> <tr> <td>CountryCode</td> <td>15</td> </tr> <tr> <td>AddressCategory</td> <td>15</td> </tr> <tr> <td rowspan="5">Program</td> <td>ProgramID</td> <td>200</td> </tr> <tr> <td>ProgramName</td> <td>4000</td> </tr> <tr> <td>EducationalContext</td> <td>4000</td> </tr> <tr> <td>Profession</td> <td>500</td> </tr> <tr> <td>Speciality</td> <td>500</td> </tr> <tr> <td>Parent Element</td> <td>Sub-element or Attribute</td> <td>Max Length</td> </tr> <tr> <td rowspan="4">Event</td> <td>ID</td> <td>30</td> </tr> <tr> <td>Title</td> <td>2000</td> </tr> <tr> <td>EventDuration</td> <td>15</td> </tr> <tr> <td>Description</td> <td>4000</td> </tr> </tbody> </table>	Parent Element	Sub-element or Attribute	Max Length	CurriculumInventory	ReportID	100	Title	4000	ReportDate	100	ReportingStartDate	100	ReportingEndDate	100	Language	100	Description	4000	SupportingLink	2048	Institution	InstitutionName	4000	Address:Organization	500	Address:StreetAddressLine	200	Address:City	100	Address:StateOrProvince	100	Address:PostalCode	40	Address:Region	100	Address:District	100	CountryName	50	CountryCode	15	AddressCategory	15	Program	ProgramID	200	ProgramName	4000	EducationalContext	4000	Profession	500	Speciality	500	Parent Element	Sub-element or Attribute	Max Length	Event	ID	30	Title	2000	EventDuration	15	Description	4000	
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