

Programs of Study Module

- [Program of Study Concept](#)
- [PEMS Programs Module Overview](#)
- [Programs Table](#)
- [Subject and Subject Requirements Tables](#)
- [Classes Table](#)
- [Curriculum Table](#)
- [Transcript Tag Table](#)
- [Templates Table](#)
- [Program Planner View](#)

Program of Study Concept

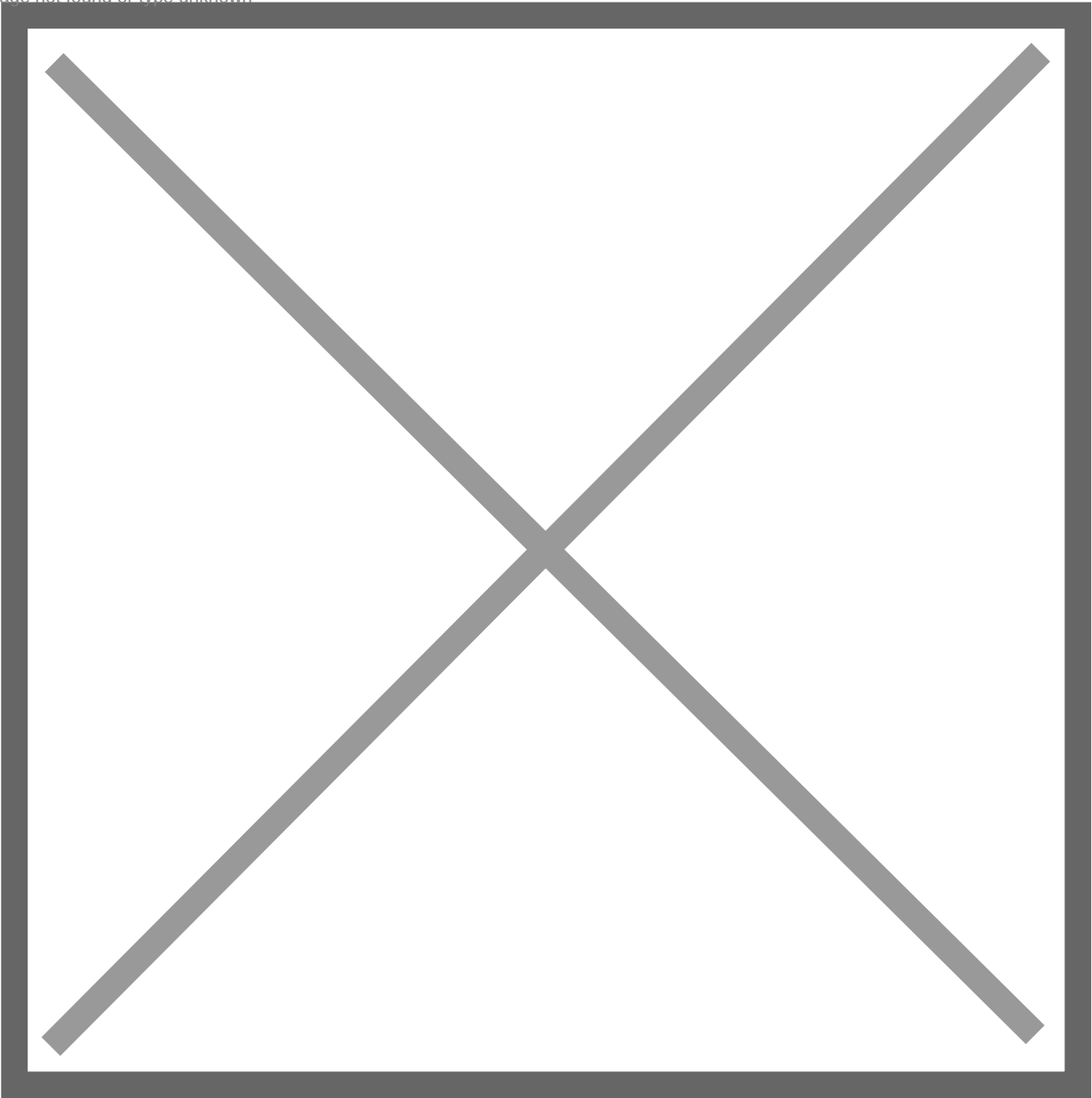
The image below shows a program of study, typically laid out in a Word Table. This program of study plans out the classes a student needs to take to earn a high school diploma and be prepared to take science and engineering classes in College.

In the left, grey-colored column are the subjects. For each subject, a number of units of course work are required. Units are also called credits and are assigned to each course. Sometimes these requirements are just describes as "years" of a subject. Across the header row are the years of study. High School is a 4-year degree, starting with 9th grade. Each year is broken in to two terms, or grading periods. The specific classes the student must take are shown in the rows as green or blue blocks. This table is able to show in which term the class must be taken, as many classes have a sequence. The planning process aims to distribute the work load rather evenly over the multiple years.

Above each row where the classes are shown is the text description of the requirements. For example, the "a-g" requirement is 4 years of English and the "NCAA" requirement is 4 years of English. "a-g" is a short way to describe college entrance requirements, and NCAA is a short way to describe college sports league requirements. In the US there are multiple organizations that establish high school graduation requirements that are above and beyond what is established by the jurisdiction. Depending on a student's future college or career plan, their high school degree must be able to meet their specific needs. One student may not need to meet any of theses requirements if they are not planning to go to college, another may need to only meet "a-g" if they are planning to go to college but not play sports, another may need to also meet NCAA if they want to go to college and play sports.

The complexity of meeting these requirements for each individual student falls to the school counselors. School counselors meet with students individually, understand the objectives, and help them plan their classes. Then the student selects their courses for the term. The counselor must then monitor compliance, ensuring students are completing to the plan. This is very labor intensive. PEMS is designed to automate these processes and reduce the need for the school counselors.

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At the bottom of the image you see a table showing the total years in each subject area. The various organization requirements are totaled. If a student completes this course plan, then the student will have complied with the various organization's requirements.

PEMS Programs Module Overview

Relevant Definitions

Classes. The name of the Class appears on the student's transcript. Classes are sometimes called *courses*. However, PEMS does not use the term 'course' in any of its modules. In general, the word 'course' can refer to a specific class, like Algebra 1, or it may also refer to the set of classes that lead to a degree or certificate. For example, "I followed a course at the University in wine making" could mean a series of classes. The word "class" also has a secondary meaning. A student can be in the "second grade class" which would mean all students in a particular classroom. PEMS uses the word class to mean the subject of study for which units are earned, commonly called a course, such as "Algebra I". **A class that is a subject of study for units can have different curriculum that fulfill it.**

Curriculum generally refers to the books and exercises used by the teacher to further the student's knowledge. In Moodle, the curriculum is a Moodle Course. Any class may be taught with multiple curriculum, or different text books, and so there are multiple Moodle courses that may be used to teach a Class.

Subjects are families of classes. For example, Algebra I, Geometry, and Algebra II are all in the subject of Math. Schools can define any subjects they need, and identify any class as belonging to that subject area. Subjects are mainly used to assist the administration in checking the student is meeting requirements when creating a plan .

A **transcript** is a report of completed enrollments. Transcripts are formatted in various ways to use the minimum amount of paper. A transcript shows the classes the student has taken at the school, the grades received and the units earned.

The **plans** are sometimes referred to as "Programs of Study." Plans are defined by the administrator as a series of classes taken across all subjects to meet an educational objective or graduation requirements over a grade span. Any number of plans may be developed, and a student may be assigned only one plan at a time. The plan contains the information needed to auto-enroll student in their classes (create enrollment records) in each term covered by the plan.

Term Labels are the names of the terms a school is running, like Spring, Fall, etc. The number of Term Label records indicates the number of terms the school operates. Term Labels indicate if that term is required or optional, like a summer term.

Enrollment is the process of signing up for a class. An enrollment record in the PEMS is the class as student takes in a specific term, and stores the student's final grade. The set of completed enrollments is the information displayed on the student's transcript.

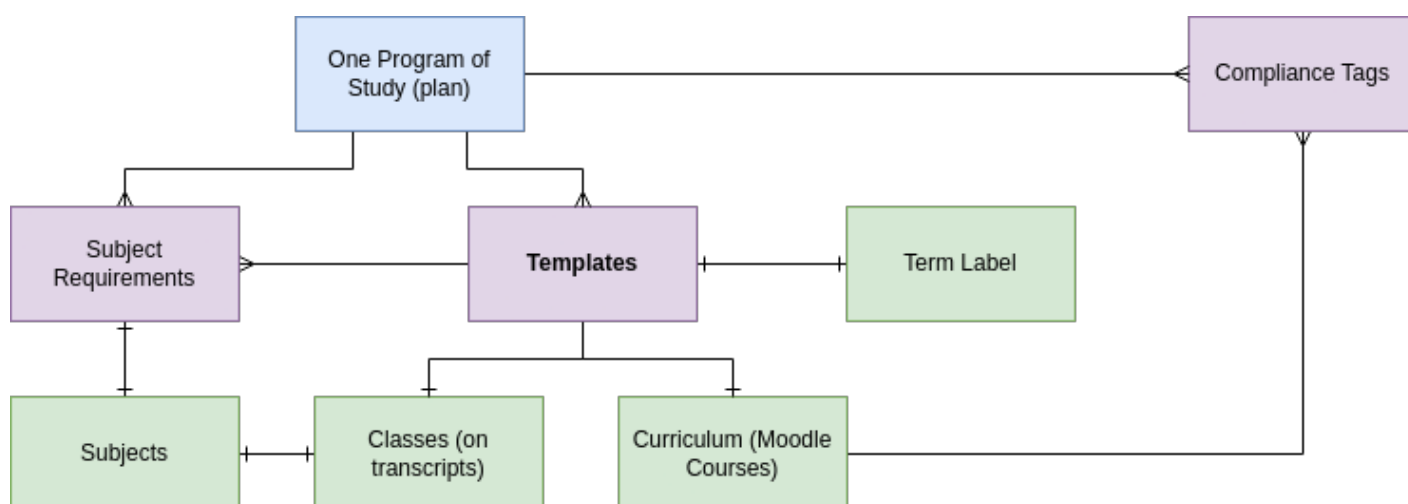
Specific Definitions for the Programs of Study Module

Templates are records that specify the sequence of classes to be taken under the plan. One plan will have multiple templates associated to that plan, each representing a class that must be taken to meet the plan's requirements. A template is a model of a student enrollment record. A template record specifies the class name, the corresponding curriculum, and the term the course should be taken in. PEMS copies all the template records associated with the student's plan to create the enrollment records for that plan. Enrollment records are copies of the template records that are associated with a specific student term (who and when).

Subject requirements are the number of units in total required in a subject area by a regulatory organization. For example, the NCAA may require 4 years of English and 3 years of math. The University of California may require 4 years of English and 4 years of math. The NCAA subject requirement for math is 3 years, the University of California subject requirement for math is 4 years. For University of California, the subject requirement is 4 years, the subject is math. *Note: sometimes requirements are described in 'years' of study, sometimes in credits, and sometimes in units.*

Compliance tags are used to help manage the different requirements of the various regulatory organizations. Not only do the regulatory organizations specify the subject requirements, they also must each approve the course description (syllabus). Students are not allowed to meet the subject requirements with any curriculum, they must meet the requirements with curriculum that has been submitted and approved to the organizations. The student's transcript must then show that the class & curriculum has been approved by the various regulatory organizations. So compliance is a property of the Moodle Course. The Moodle Course list in PEMS is called the curriculum table. There is one record in the curriculum table for each course available in Moodle. PEMS lets the administrator tag certain curriculum records with a compliance tag. If a student takes a class, English 9A, and is enrolled in a specific curriculum, or Moodle Course, the compliance tag from the associated Moodle course will appear on the transcript. Compliance tags are deliberately short to fit on the transcript pages.

Data Relationships



The diagram above shows the relationships for just one plan. A plan will have multiple subject requirements, the number of classes that must be taken in a subject area.

Templates contain information needed for auto-enrollment

The user creates a Plan record, then adds template records to the plan. The template records contains all the information needed to auto-enroll the student in the correct Moodle Course at the right time while ensuring the student's transcript reflects the correct classes. Each template record is also related to one term label record. This information is used to know in which term of the academic year the student should be enrolled in the Moodle Course, and in which term the corresponding class appears on the student's transcript.

- A template record relates the class that appears on the transcript, "English 9A" to the Curriculum list (Moodle Course), "American Literature".
- The class record contains the number of units required for that class, and so the transcript record 'knows' how many units the class has.
- The class is related to one subject, so the template 'knows' the subject of the class.
- The template record is related to one term label record, so the template knows in which term the student should take the class.

Templates contain information needed to determine compliance with the plan

Each template is related to one just class, which is related to just one subject. The template is related to one subject requirement record. The units associated with the set of template records all with the same subject requirement tell us how many of the required units are in the plan. PEMS determines if there are enough classes to meet the requirements of the plan.

Template records create a 'model enrollment' profile for a student according to a specific plan. The student chooses the plan, the model enrollment records (templates) are used to create the student's actual enrollment records.

Programs Table

Programs Table

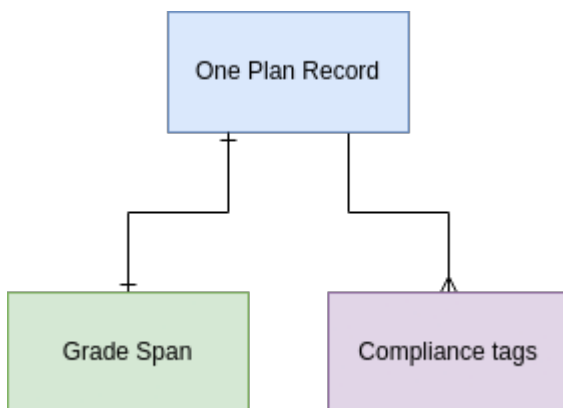
The Program of Study Table contains the plan records. There can be any number of plans created in PEMS, however none of the plans allow any selection of classes. For example, to enter University of California, students need to follow the "a-g" plan, with a specific list of classes that must be taken. The University does not care if the foreign language requirement is met with a course of Spanish or French. Two plans must be create, one that enrolls the student in the Spanish option,, and one that enrolls the student in the French option, with all other classes the same.

Plans can not be associated with any specific academic year or term. So the plan specified what grade year / grade level the student begins the plan, for example, the plan begins in 9th grade and is completed in the 12th grade. Each plan must be linked to only one grade span, and the plan can not exceed the grade span.

When defining the grade spans, schools must consider the maximum duration of a plan. For high school, many plans are 4-year plans as the student has all 4 years to meet the requirements. So the grade span for high school must be 4 years.

Plans are tagged with the same compliance tags as the individual curriculum records. If all approved courses are taken the plan should meet all compliance requirements.

Data Relationships



Fields

Build status shows whether the administrator has completed building and quality controlling the plan. The administrator will want to ensure all courses are approved and completed in the LMS before marking the plan published. The plan should not be available for selection or assignment is not published.

Start and end grade - numeric values of the grade levels where the plan begins and ends. For example a high school plan begins at grade 9 and ends at grade 12.

Total Terms - the total terms under the plan, which would default to the total number of required school terms. The administrator can edit the total terms to include optional summer terms. Once summer terms are added to the plan, they are no longer optional for the student in order to be compliant with the plan.

Max Classes - the total number of classes as student may take in this plan. Some schools limit workload. If too many classes are assigned to the plan, the user interface is meant to reflect the maximum has been reached.

The **Units Planned** is the total sum of units so far added to the plan via template records (units are in the class associated with the template record).

The **Units Required** is the units the plan requires. Plans may exceed the number of units required by the various regulatory agencies, but the units planned is less than the units required, the user interfaces should alert the administrator.

Action Items JAN 2024

3-MVP | INTAKE | No logic to filter for only published plans has been specified in any of the user interfaces.

NV | PLAN UI | Max classes is not operational in any user interface.

NV | PLAN UI | Units planned and units required is not operational .

Subject and Subject Requirements Tables

[Subjects](#) | [Subject Requirements](#)

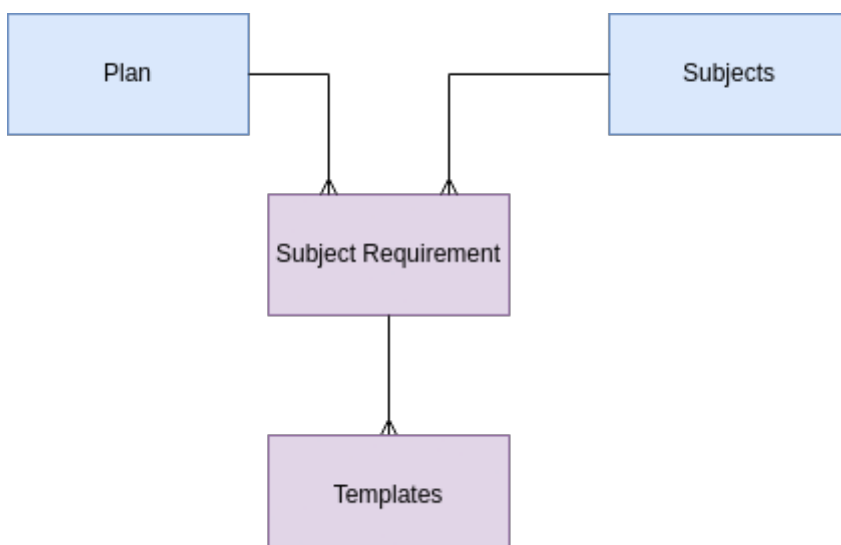
Relevant Definitions

Subjects are families of classes. For example, Algebra I, Geometry, and Algebra II are all in the subject of Math. Schools can define any subjects they need, and identify any class as belonging to that subject area. Subjects are mainly used to assist the administration in checking the student is meeting requirements when creating a plan .

Subject requirements are the number of units in total required in a subject area by a regulatory organization. For example, the NCAA may require 4 years of English and 3 years of math. The University of California may require 4 years of English and 4 years of math. The NCAA subject requirement for math is 3 years, the University of California subject requirement for math is 4 years. For University of California, the subject requirement is 4 years, the subject is math. *Note: sometimes requirements are described in 'years' of study, sometimes in credits, and sometimes in units.*

Templates are records that specify the sequence of classes to be taken under the plan. One plan will have multiple templates associated to that plan, each representing a class that must be taken to meet the plan's requirements. A template is a model of a student enrollment record. A template record specifies the class name, the corresponding curriculum, and the term the course should be taken in. PEMS copies all the template records associated with the student's plan to create the enrollment records for that plan. Enrollment records are copies of the template records that are associated with a specific student term (who and when).

Data Relationships



Note that subjects are not associated directly with plans. The subject requirement is the table that links the various subject to the plan and also specifies the number of units in that subject the plan requires.

The template records are linked to the subject requirements when the subject requirement is selected in the template record. The number of units in the template's associated class record contributes to the total required in the subject requirement record. It will take multiple templates to complete a subject requirement.

Subjects Table

The subjects table has only the name field. The administrator can enter unlimited subjects. However, a class record may only be linked to one subject record. Curriculum records are not linked to subject records. A curriculum may be used to fulfill different subjects depending on the plan.

Use Case | Environmental Science - one class may fulfill two different subject requirements

For example, Environmental Science may be frequently used to meet the Biological Science requirement or the Physical Science requirement, but not both. There would be two class records. One called Environmental Science that is linked to the subject of biology and another that is linked to the subject of physical science. However there is just one Moodle course, so there is just one curriculum record. The curriculum therefore does not specify a subject, and is not related to subject records.

Subject Requirements Table

The subjects requirement table specifies how many units must be completed under the plan in a particular subject area. Subject requirements are related to only one plan. A Template record fulfills a subject requirement, so it may be related to only one plan.

Note: The use case where a template was able to fulfill multiple subject requirements has been deprecated as it is marginal and there are other ways to address this situation.

See [Templates Table](#):

A student may take an elective course to satisfy both science requirements and elective total units. For example, programming is not required, this course may be used to satisfy science requirements, but also be used to fulfill general electives. In this case the template for Programming would fulfill 5 units of science AND 5 units of general elective. The alternative is to simply reduce the number of electives required under the plan.

Units required - the number of units required for the associated subject under the associated plan.

Name - concatenation of subject, plan, and unit information.

Units Planned - the number of units in the plan that meet this subject requirement.

Transcript name - the subject requirements are listed in the transcript to create the block of information discussed in the [Programs of Study Function](#). The transcript name is how the subject requirement should appear on the document, as the concatenation name is not convenient for printing.

Action Items JAN 2024

1-MVP | TRANSCRIPT| Victoria to manually update transcript names in all data. (Add automation that upon new record, auto-enter data for transcript names from subject name, allow user to manually update - low priority).

1-MVP | TRANSCRIPT | REDUNDANT | The Subject Requirement CURRENTLY allows multi-select from the template table. ONLY ONE template should be linked to ONLY ONE subject requirement. REMOVE multi-select and allow only one record to be selected.

1-MVP | TRANSCRIPT| After updating the data relationship to single select, for each subject requirement record, find all related template records. Sum the Units field from the related class record in the template records and enter into the subject requirement Units planned field. (Note, this will not directly affect the transcript since the transcript uses only the units required field from the subject requirement, but this includes as part of the module.)

MEANS TEMPLATE UNIT = SUBJECT REQ. UNIT PLAN? DONE, WHEN SUBJECT REQ IS SELECT IT WILL FETCH THAT UNIT TO UNIT PLAN(if not null) OF TEMPLATE.

Classes Table

[Class List](#)

Relevant Definitions

Subjects are families of classes. For example, Algebra I, Geometry, and Algebra II are all in the subject of Math. Schools can define any subjects they need, and identify any class as belonging to that subject area. Subjects are mainly used to assist the administration in checking the student is meeting requirements when creating a plan .

A **grade span** covers multiple years of school and can be defined by the administrator. A plan can not exceed a grade span. The purpose of defining grade spans is to help set academic goals and gates.

Enrollment is the process of signing up for a class. An enrollment record in the PEMS is the class as student takes in a specific term, and stores the student's final grade. The set of completed enrollments is the information displayed on the student's transcript.

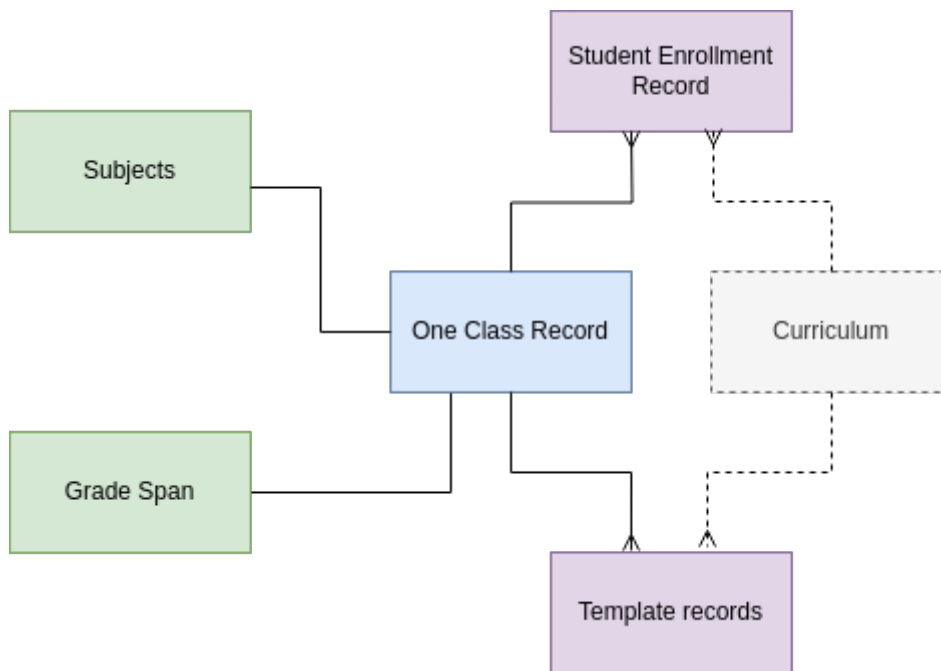
Curriculum generally refers to the books and exercises used by the teacher to further the student's knowledge. In Moodle, the curriculum is a Moodle Course. Any class may be taught with multiple curriculum, or different text books, and so there are multiple Moodle courses that may be used to teach a Class.

Classes. The name of the Class appears on the student's transcript. Classes are sometimes called *courses*. However, PEMS does not use the term 'course' in any of its modules. In general, the word 'course' can refer to a specific class, like Algebra 1, or it may also refer to the set of classes that lead to a degree or certificate. For example, "I followed a course at the University in wine making" could mean a series of classes. The word "class" also has a secondary meaning. A student can be in the "second grade class" which would mean all students in a particular classroom. PEMS uses the word class to mean the subject of study for which units are earned, commonly called a course, such as "Algebra I". **A class that is a subject of study for units can have different curriculum that fulfill it.**

The Class List

The class list is a set of records that represent all the 'transcript' classes a student will take at the school. The names of the classes are the exact names that appear on the student's transcript.

Data Relationships



Classes are linked to multiple enrollment records.

As many students will take the same class, many student enrollment records are associated to the same class record. A list of all students who ever took that class may be reported on.

Classes are linked to multiple template records.

1) there may be multiple curriculum (Moodle Courses) that will have all the same name on the transcript, such as two different Algebra I courses using different curriculum, but essential both just Algebra.

2) There will be multiple plans that all required the same class. For example the University preparation will require English 9, but so with the basic diploma.

Each class may only have one assigned subject. Some classes can be dual purpose, this use case is is described in [Subject and Subject Requirements Tables](#).

For example, Environmental Science may be frequently used to meet the Biological Science requirement or the Physical Science requirement, but not both. There would be two class records. One called Environmental Science that is linked to the subject of biology and another that is linked to the subject of physical science. However there is just one Moodle course, so there is just one curriculum record. The curriculum therefore does not specify a subject, and is not related to subject records.

A class record may be associated to only one subject record.

Per above, should a class fulfill multiple subject requirements, separate class records must be created.

Classes are not associated to Curriculum

In the use case above, we see why the classes are not directly associated with the curriculum. Either the template or the enrollment record contains the additional information needed to determine which requirements the combination of class and curriculum fulfill.

A class record may be associate to one grade span.

This feature may be used to filter and down select the relationships when creating the records. Additional logic may be added to prevent students from being enrolled in classes outside their grade span, but this feature has not yet been determined necessary.

Fields

The **class name** is the name of the course exactly as it is to appear on transcripts.

The **units** the school gives for the class is only stored in the class record. There are no units associated with the various curriculum (Moodle Courses).

NCES, State, and Local code - these are various Class coding systems used by various regulatory organizations. The local code is used for all school business, the NCES and State codes are informational.

NCES rigor is a specific requirement for the NCES organization in the US. It specifies the difficulty level of the class.

Syllabus - a field is provided so that the administrator can link an official syllabus to the class.

This **Pre-requisite** field reserved to add logic to prevent enrollments to be created where courses are out of sync. This is not needed when plans are enabled since the planning processes specifies the order.

Carnegie units - this is an alternate unit system used in the US based on the number of hours of the course.

Exclude GPA - this field is a flag to exempt the class from various GPA calculations. The administrator may choose to exempt the Class from the standard GPA calculation, an alternate GPS calculation, both, or neither. The use case for this is that the State of California's student financial aid organization does not consider Physical Education when calculating the student's GPA for the purpose of student loans.

Action Items JAN 2024

1-MVP | TRANSCRIPT | Victoria to tag all correct classes with the exclude GPA field so that this function may be included in the GPA calculations. DONE

Curriculum Table

Curriculum

Relevant Definitions

The term **Course** is not used in any technical sense in PEMS. Courses are created on the LMS (Moodle) platform for students to take online, but PEMS refers to courses as curriculum. For example, two different English teachers could be teaching English 9, but they assign different books to read. The class is the same as far as the school is concerned, the the material and activities the students turn in are slightly different, the classes use a different curriculum. If the teachers were making their own online courses, the activities would not be the same. Classes may use different Moodle courses to fulfill learning requirements, as they may use different curriculum.

Curriculum generally refers to the books and exercises used by the teacher to further the student's knowledge. In Moodle, the curriculum is a Moodle Course. Any class may be taught with multiple curriculum, or different text books, and so there are multiple Moodle courses that may be used to teach a Class.

The **Syllabus** is the outline of what a student will learn in the class our Moodle course. Usually this is handed out the first day of class and informs the students of the learning objectives. In the US, the course syllabus must be submitted to various regulatory organizations to gain approval. In PEMS, the class may have one syllabus, and the Moodle course may have a tailored syllabus for the specific curriculum. The administrator may use both or select one approach.

Moodle Terminology

Moodle Course ID is a unique value assigned to each course developed in Moodle. Any actions triggered between the SIS and Moodle require matching on the Moodle Course ID. In PEMS the Moodle Course ID is stored in the Curriculum table "Code" field.

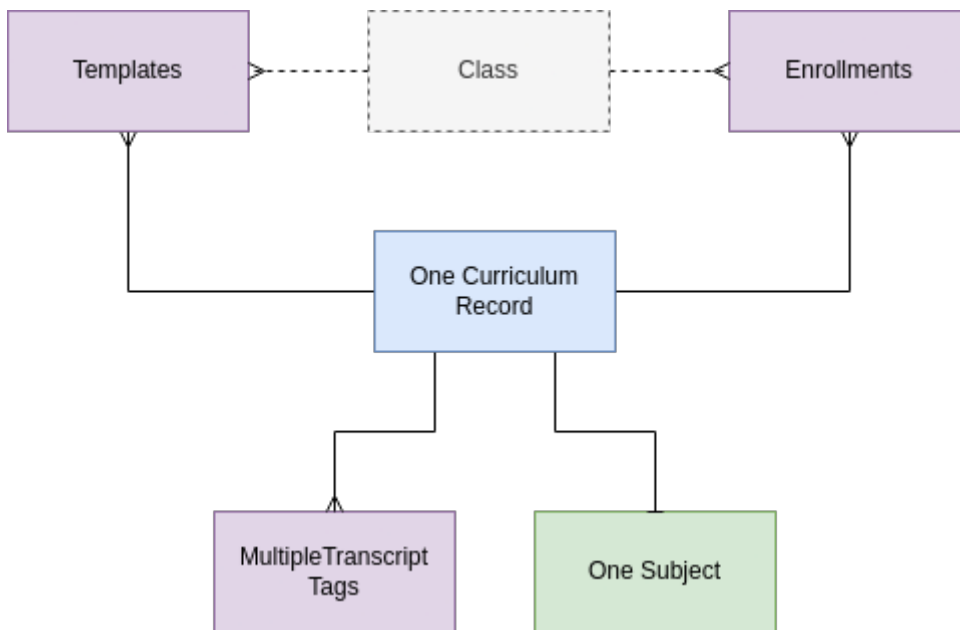
Courses are organized into **categories** in Moodle. Moodle can perform various batch functions on all courses within a category.

Curriculum Table

The curriculum table is a list of courses that are created and available in Moodle. The integration between this table and Moodle is based on the "**code**" field, which must be an exact match with the Moodle's Course ID value. In PEMS, when ever the curriculum record is selected, this is noted the specific Moodle course.

It is important to note that the curriculum is what is approved by the various regulatory agencies. While multiple Moodle courses may satisfy a class requirement, maybe only one of those courses has been approved for a specific plan.

Data Relationships



The curriculum record is allowed to be linked to one subject record. This function is added only to allow planners to more quickly identify curriculum that satisfies the class requirements. This field may be used as a filter on drop-down menus for example.

It is important to point out that the 'official' subject for the student's program of study is determined by the class record alone. So if an enrollment record is linked to a class with subject of math, and then linked to a curriculum record with subject English, the student will get math credit for the course.

Transcript tags are the same as compliance tags, and the administrator may select the compliance tags the should be associated to the curriculum. The transcript shows enrollment records, which are associated to the curriculum record, and so will show all associated transcript tags.

Enrollment records are linked to the Moodle Course and provide additional information about when the student should start the course (which term and which grade level), the enrollment record triggers auto-enrollment in the Moodle course from PEMS.

Curriculum records are linked to template record in the program of study planning process. One curriculum record may be used in many different templates depending on the program of study.

It is important to note that Curriculum is not directly associated with the Class. This association, and the nature of the association is accomplished only through template and enrollment records.

Fields

Course - the name of the Moodle class as it appears in Moodle. No logic is based on the name.

Code - the key to integration with Moodle, the code must exactly match the Moodle Course ID value.

Top Category - the category the course is filed under in Moodle, not used for any logical purpose at this time. Moodle has specific functions that may be triggered based on the Course Category, these fields are included in the event these activities will be triggered from the SIS.

Sub category 1 - the sub category the course is filed under in Moodle, not used for any logical purpose at this time.

Sub category 2 - the second sub category the course is filed under in Moodle, not used for any logical purpose at this time.

Course Link - the link to the Moodle course

Syllabus - a link to a Syllabus document, and external link.

Fields to Deprecate JAN 2024

2-MVP | HOMEROOM | Deprecate Fill percent threshold 1 and 2, and automate sections (low priority clean up)

Note: These fields intended to manage over-enrollment in courses. This information was meant to trigger [Moodle Groups](#) creation. However, an alternate method is being developed that groups students by locations, which will be Moodle cohorts, The cohorts will drive the creation of groups.

Action Items JAN 2024

1-MVP | TRANSCRIPT | Transcript tags - fFeld allows multi-select but tags must be next to each other in the list, we need to select multiple list values independently.

Transcript Tag Table

Transcript Tag Also Called Compliance Tag Table

Relevant Definitions

Weighted GPA. students take more advanced courses, the grade points may be increased. For example, if a student earns a A in an advanced English class of 5 units, the student earns a 5 instead of a 4 for grade points for weighted GPA. The total points for that class is 5 (units) x 5 (points) = 25 points (total). Then divide this by totals (5) for a GPA of 5.0. The higher number of points are used to calculate the student's weighted GPA. Lower number of points (4 instead of 5 points) is used for unweighted GPA.

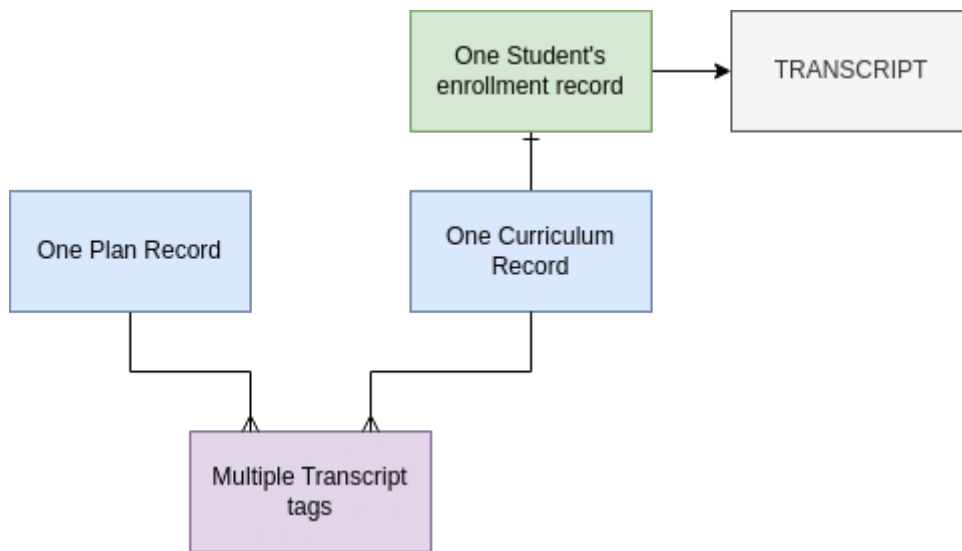
Grade Points. Because the US uses letter for marks, there needs to be a numerical system in order to determine how the student is doing over all. Grade points are awarded based on the letter grade. For example, 4 points are awarded for an A, 3 for a B, and so on.

Compliance tags are used to help manage the different requirements of the various regulatory organizations. Not only do the regulatory organizations specify the subject requirements, they also must each approve the course description (syllabus). Students are not allowed to meet the subject requirements with any curriculum, they must meet the requirements with curriculum that has been submitted and approved to the organizations. The student's transcript must then show that the class & curriculum has been approved by the various regulatory organizations. So compliance is a property of the Moodle Course. The Moodle Course list in PEMS is called the curriculum table. There is one record in the curriculum table for each course available in Moodle. PEMS lets the administrator tag certain curriculum records with a compliance tag. If a student takes a class, English 9A, and is enrolled in a specific curriculum, or Moodle Course, the compliance tag from the associated Moodle course will appear on the transcript. Compliance tags are deliberately short to fit on the transcript pages.

Compliance /Transcript tag

Throughout PEMS transcript tag and compliance tag are the same table. Curriculum or Moodle Courses are 'tagged' with these notes which appear on the student's transcript. These notes demonstrate to colleges and organizations the the courses taken were approved by the various organizations. Because a course must be approved before getting this 'tag', they are called compliance tags. Because they appear on the transcript, in various places they are called 'transcript' tags.

Data Relationships



Curriculum may be tagged with multiple compliance tags. When the curriculum is tagged, this information flows to the student's Transcript through the related enrollment record.

In the context of plans, transcript tags are called compliance tags. If a plan meets all curriculum and sequence requirements, then the entire plan may be compliance and 'earn the tag'

Fields

Description - an brief summary of the compliance organization.

The **name** used to make associations in PEMS

Transcript tag - a very short maximum three-letter code that will appear on the transcript.

Weight GPA - based on the agency that has approved the curriculum, higher than normal GPA points may be awarded to the student. If the tag confers the option to increase the GPA of the grade, then this field is selected to be yes. AP stands for Advanced Placement, and courses with this note must have been fully approved by tan organization called "college board." For example, if the course is and AP course, then the transcript says 'AP' and instead of 4.0 point for an A, the student receives a 5.0.

Enrollments which are linked to curriculum which has at least one tag with weight GPA tag = yes field will be awarded weighting points in the GPA calculation.

Next Version

NV | CLEANUP | Align the names Transcript Tag and Compliance Tag, we should not be using two different names for same idea

Templates Table

Templates Table

Relevant Topics

Topics for this page include a review of [PEMS Programs Module Overview](#)

Templates Overview

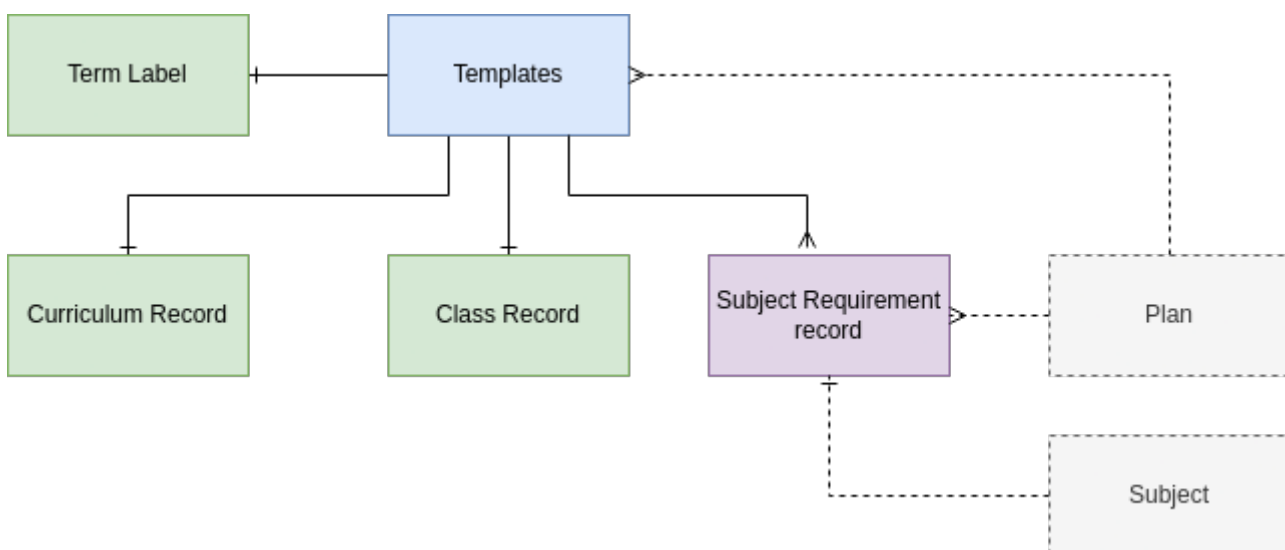
Templates are records that specify the sequence of classes to be taken in the plan. They link a class record to a grade level and term label. This information creates a template for the enrollment records for the student. The enrollment records are create to match the template in the plan.

To create a plan, the administrator makes a Plan record, then adds templates as child records to the plan. The template links a class from the class list to a grade level and term label. For example, a template contains the information that the student will take *Algebra 1A* in the *first term of ninth grade*.

When the Student is enrolled in the plan, the PEMS reads the templates associated with the plan and creates a *set* of enrollment records linked to the appropriate student term. An enrollment record links the student term, the class from the class list, and also contains the student's final grade in the class. The completed enrollment records are displayed on the student's transcript. The status of an enrollment reflects if the course is planned, completed or in progress.

"Template" is short for "Enrollment Template" because these records are essentially copied to create the enrollment records for each student.

Data Relationships



Each template brings together the curriculum, the class, and the subject requirement that that template enrollment should fulfill. Each plan has multiple templates.

The subject requirement record brings together the subject, the plan, and the plan's requirement for units per subject. Subject requirement records are unique to each plan, and so if multiple plans require 20 units of English, then multiple subject requirement record for 20 units of English are need.

The template may be linked to multiple subject requirements, as described in the use case below:

The template is not linked directly to the subject, instead the user selects the subject requirement record. A filter can be used to decrease the options to only those subject requirements that are associated with the plan, and eventually business logic added to prevent any subject requirement record being associated to the template that is not already associated to the same plan as the template.

The term label relations specifies in which academic term the course should be taken. For example, English 9A will be taken in the Fall and English 9B in the Spring term.

Fields

At Grade - the grade level of the student when the template enrollment beings. For example, the honors high school diploma program begins in 9th grade. The **At Grade** field and the **term label** pinpoint in which student term to enroll the student in the associated Moodle course.

Fields to Deprecate JAN 2024

4-MVP | ADVANCEMENT| Deprecate Set, Options, Curriculum Option - these fields were going to be used to allow the student to select between options. Instead, the administrator will create multiple plans to fit every scenario. The number of options are in fact a very limited use case. (low priority clean up).

4-MVP | ADVANCEMENT | Deprecate Subject, total units in this subject - by linking instead to the subject requirement, there is no need to store the subject in the template record.

Action Items JAN 2024

Per [Subject and Subject Requirements Tables](#) Action Item: 1-MVP | TRANSCRIPT | REDUNDANT | The Subject Requirement CURRENTLY allows multi-select from the template table. ONLY ONE template should be linked to ONLY ONE subject requirement. REMOVE multi-select and allow only one record to be selected.

1-MVP | TRANSCRIPT | The subject requirements field is currently multi-select, change this to single select so there is only one subject requirement record linked to any template. There is a minor use case that would require one class to fulfill multiple subject requirements under a plan. This use case will be eliminated as there may be a work around with how the plans are crafted.

Use Case | Multi-select subject requirements - Deprecate

A student may take an elective course to satisfy both science requirements and elective total units. For example, programming is not required, this course may be used to satisfy science requirements, but also be used to fulfill general electives. In this case the template for Programming would fulfill 5 units of science AND 5 units of general elective. The alternative is to simply reduce the number of electives required under the plan.

Program Planner View

Program Planner

The program planner view allows the administrator to add subject requirement records in a nested table to the plan. The subject requirements are regulatory driven and represent industry knowledge. The next step should be to add the template records under the subject requirements.

This step may only be implemented only **AFTER** the relationship between template and subject requirements has been updated to one subject requirement to many templates, removing the many to many relationship. Per the following action item:

1-MVP | TRANSCRIPT | The subject requirements field is currently multi-select, change this to single select so there is only one subject requirement record linked to any template. There is a minor use case that would require one class to fulfill multiple subject requirements under a plan. This use case will be eliminated as there may be a work around with how the plans are crafted.

A student may take an elective course to satisfy both science requirements and elective total units. For example, programming is not required, this course may be used to satisfy science requirements, but also be used to fulfill general electives. In this case the template for Programming would fulfill 5 units of science AND 5 units of general elective. The alternative is to simply reduce the number of electives required under the plan.

Action Items JAN 2024 Program Planner View

4-MVP | ADVANCEMENT | The planner view is currently a two-level nested table. This view should be adapted to a three-level nested view where the templates are being added to the subject requirement records. If necessary, reduce how much data is loaded by having the user select the 'school' for a shorter list or the plan itself.

Action Items JAN 2024 Subject Requirements Records

4-MVP | ADVANCEMENT | REDUNDANT | Sum the associated units in the template (from the associated class) that are linked to a subject requirement in the Units Planned Record.

4-MVP | ADVANCEMENT | Show units planned field on the Program planner view

4-MVP | ADVANCEMENT | Selecting the curriculum and course work requires sifting through long lists. Filter the classes and curriculum by the subject field of the subject requirement parent record.

Action Items JAN 2024 Plan Record

4-MVP | ADVANCEMENT | Look up and enter school into the plan record based on associated grade span.

4-MVP | ADVANCEMENT | Sum the units required in all the associated subject requirements to the plan level.

4-MVP | ADVANCEMENT | Calculation the Units Planned in the Plan record by Summing the units from the associated template records, the units are determined by the class record associated to the template.

Next Version

Develop a graphical user interface to drag and drop classes on the list, allowing users to set filters on displayed records.