Scheduling 2.0

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FUJITSU

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1.0	2020-11-27	Initial draft	Daniel Bond

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1.0 Scheduling 2022 – Special Considerations

The purpose of this guide is to assist Districts and Schools with steps, they may consider, as they prepare for an unknown situation for the 2022 School Year given COVID-19.

Standard processes of scheduling schools (decide on course offerings, collecting requests, building terms, days, periods, scheduling sections, loading student's) could very well look different this year.

A provincial committee has been pulled together over the past few months to advise and share considerations and input to this guide.

This guide is divided into 3 sections Courses, Building (Terms, Days, Periods, Scheduling Sections) and Loading Students. It should be used in conjunction with the Scheduling Modules available on the MyEducation.info site (https://www.myeducationbc.info/resources/school-schedulers/) for detailed information on all steps involved in scheduling. Specific topics within this guide will reference those modules for more detailed information.

A few key concepts:

1. *Schools can create multiple scenarios with different structures (Terms, Days and Periods), schedule students into each of those scenarios and then choose which scenario they would like to commit (i.e. make Active) in August for the 2022 School Year.*

2. *Student Course Requests are GLOBAL to ALL scenarios.*

3. *Functionality around Optional student requests has been detailed in this guide.*

1.1 Courses

1.1.1 Flavours

Flavours of courses can be created, making them unique, which may assist in creating *cohorts of students.* Decisions should be made within the District and Schools if this is an option you would like to pursue.

Key concepts:

1. **In order for Schools to make flavours of courses, there must first be a flavour of the course created at the district level.**

2. **Districts must set the Preference > Schedule > Number to school, in order for schools to create flavours. See Scheduling Module 2 for detailed information on this topic.**

Example of how some districts/schools are going to approach this is to make flavours of groups of courses that students will choose during their online course selection process.

These schools are going to have flavoured courses and make two groupings:

Year	CrsCode	Flavour	GrdLvl	Description
2022	MADM-08Gr1	Gr1	8	ADST - Metalwork
2022	MADR-08Gr1	Gr1	8	ADST - Robotics
2022	MADW-08Gr1	Gr1	8	ADST - Woodwork
2022	MADMA08Gr2	Gr2	8	ADST - Media Arts
2022	MADPT08Gr2	Gr2	8	ADST - Power Technology
2022	MADR-08Gr2	Gr2	8	ADST - Robotics

In the above example there are going to be two versions of Robotics. This will allow students to choose Robotics, and also other courses they would like to take, and still maintain a cohort grouping. One student can take the option of Metalwork, Woodwork and Robotics and if there are other students whom want Robotics but would rather take Media Arts and Power Technology they can do so.

Some districts are taking this concept even further and considering making flavours of core (Math, Eng., Sci., SS.,) courses to keep students together. They would make flavours of these core courses and students would be cohorted right from the beginning of the process i.e. based on course requests.

1.1.2 Optional student course requests

Another consideration is the use of Optional student request functionality.

Optional requests are a means of giving a student a Primary Request and then choosing to Load that request into a Scenario or not.
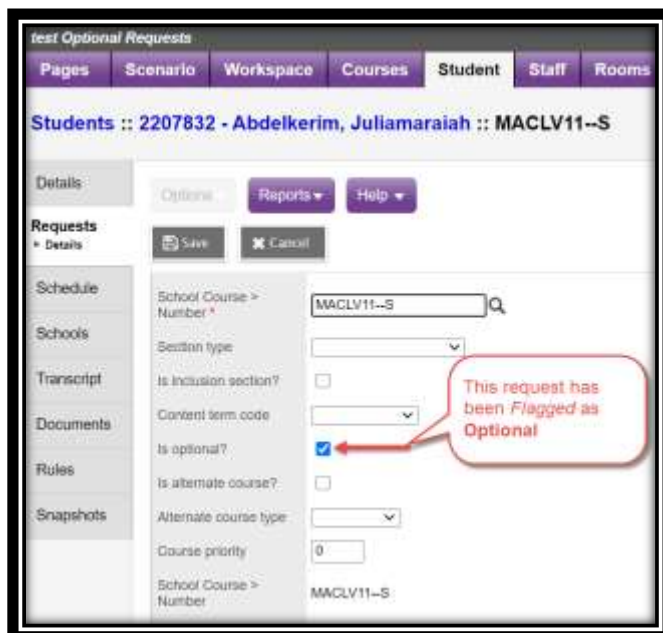
This functionality is setup and used in the Build view, but should be considered when course setup is being planned and decided on at the beginning of the process.

Setup is a two step process:

1. Turn ON using Optional Requests in the Build view Scenario Preference
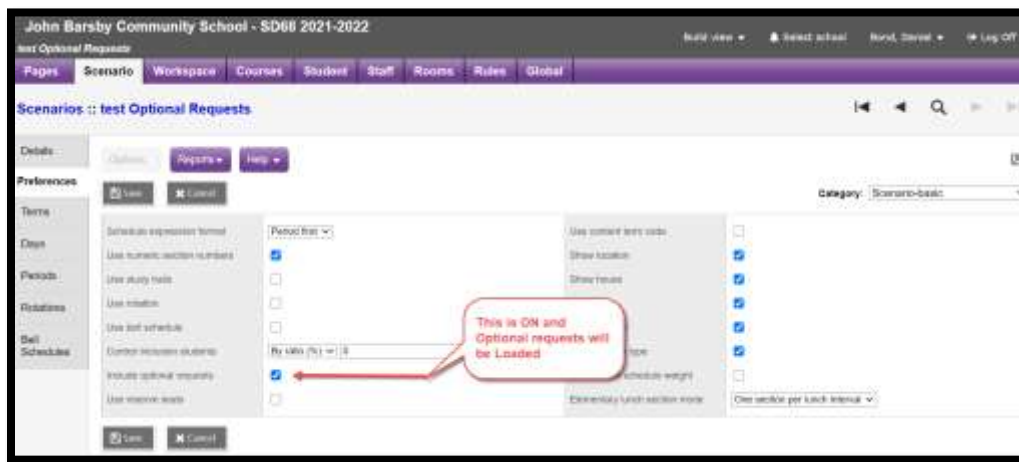
2. Flag the Student Request as Optional

The implications of using this setup and the out comes are listed below:

Scenario Preference - Include Optional request.	Request is flagged as Optional	How MyED (Aspen) handles the request
Checked	Checked	Request treated (all areas of the app) as if it is a primary request
Unchecked	Checked	Request is IGNORED and student is not scheduled into a section.
Checked	Unchecked	No impact, request is just another primary request.

One districts example of how they are going to use Optional requests is to:

1. Schedule as the schools operated this past year with a Covid schedule (1day, 2 blocks/periods per day, and 4 quarters)
2. Giving students limited options of courses to choose from.
3. Then also giving students a separate selection choice of *Optional request*.

This will allow the schools to use these *Optional requests* if they go back to a regular schedule.

1.1.3 District and School Course Setup

Information on managing district courses is covered in Scheduling Module 2 – COURSE CATALOGUES, STUDENT AND STAFF SETUP.

Please have a look at this document for complete details on managing the District and School Course Catalogue.

1.1.4 Student Course Requests

One of the most important tasks in preparing to build your master schedule is collecting, entering and validating student course requests.

Requests are 'fuel' for the scheduling engines. The engines attempts to build the schedule that is best for students, and loads the students into those sections.

Student course requests are Global to ALL scenarios, meaning you cannot have requests for specific scenarios. Though this may pose a bit of an issue when building out two unique scenarios, with differing structures, the use of Optional Request as discussed in this document can assist with these challenges.

Regardless of the way requests are entered, online, individually by staff or bulk entry through one of the means, the ability to flag/check requests as Optional can updated individually, on mass via Mass Update or List edit.

The easiest area to manage these is from the Build view > Global tt > Requests st. The column

Is Optional? can be added to a Field Set, through Manage Field sets and will then display as:

1.2   Building – Scheduling Sections

This section covers the creation of Scenarios, Preferences within each, Structure (Terms, Days, and Periods), Patterns, Pattern Sets, Courses and Scheduling Course Sections.

Schools can create multiple scenarios with different structures (Terms, Days and Periods), schedule students into each of those scenarios and then choose which scenario they would like to commit (i.e. make Active) in August for the 2022 School Year.

The first step in this process is to determine if the school is going to:

A) Use the Build engine to schedule course sections. Using the Build engine requires a greater amount of setup, as it requires multiple pieces completed in order to function correctly.

B) Manually schedule course sections. This refers to scheduling sections into a Term, Schedule (Day & Period), Room, with a Teacher, outside of MyEd and then entering that information into the Workspace area of the Build view.

The next step is to determine if the school is going too:

A) Build out multiple *tracks* of scenarios (Regular and COVID/Copernican) each with different structures.

Regular Track	COVID/Copernican Track
Terms – FY, Semesters, Quarters (or 3^{rds}, 5^{ths}, 6^{ths}, etc.)	Terms – Quarters (10wks) or Eighths (5wk)
Days – Multiples (2, 4, 5, 10, etc.)	Days – Single day
Periods – 4 per day	Periods – 1 or 2 per day
Calendars – One	Calendars - Multiples

OR

B) Build one and then change it later if required.

1.2.1 Creating Scenarios

When a scenario is created in the Build view, either by copying the Active schedule or adding a New one, the previous years structure (Terms, Days/Periods) are going to come into that scenario.

1.2.1.1 Using this years (COVID) Schedule

Scheduling with this years Active schedule will require the least amount of change. Schools can go into the Build view and bring the schedule forward

Scenario tt > Options > Copy Active Schedule…

This will bring the Structure and all course sections, scheduled into the build view. i.e. the entire Active schedule will be present in the Workspace and same changes can be made'

1.2.1.2 Completely new Schedule

If schools would like to go back to a regular schedule a New scenario can be added.

Scenario tt > Options > Add

This will create a scenario without the Workspace populated, as is the case in the screen capture above.

The Terms, Days and Periods though from the current year will come in. Therefore adjustments will have to be made as desired. The most typical schedules used during this current year include quarterly or eighth terms, 1 or 2 days and 1 or 2 periods.

Schools whom would like to schedule with FY, Sem, etc. 4 periods in a day will have to pay particular attention to these structures and make required adjustments.

Please refer to Scheduling Module 3 SCENARIOS, PREFERENCES AND TIME STRUCTURE, for details on how to make these adjustments.

1.2.1.3 Using previous years (Pre-COVID) Schedule

Scenarios from previous years can be brought into a scenario and used for the 2022 school year.

NOTE: This will be very new for many schools and careful considerations will have to be followed.

The first step in this process is to *Review Previous Years build scenarios.* This can be done from Scenario tt > Filter

Steps:

1. Review all scenarios using the filter All Records from Scenario tt > Filter > All Records, as in the screen capture below:
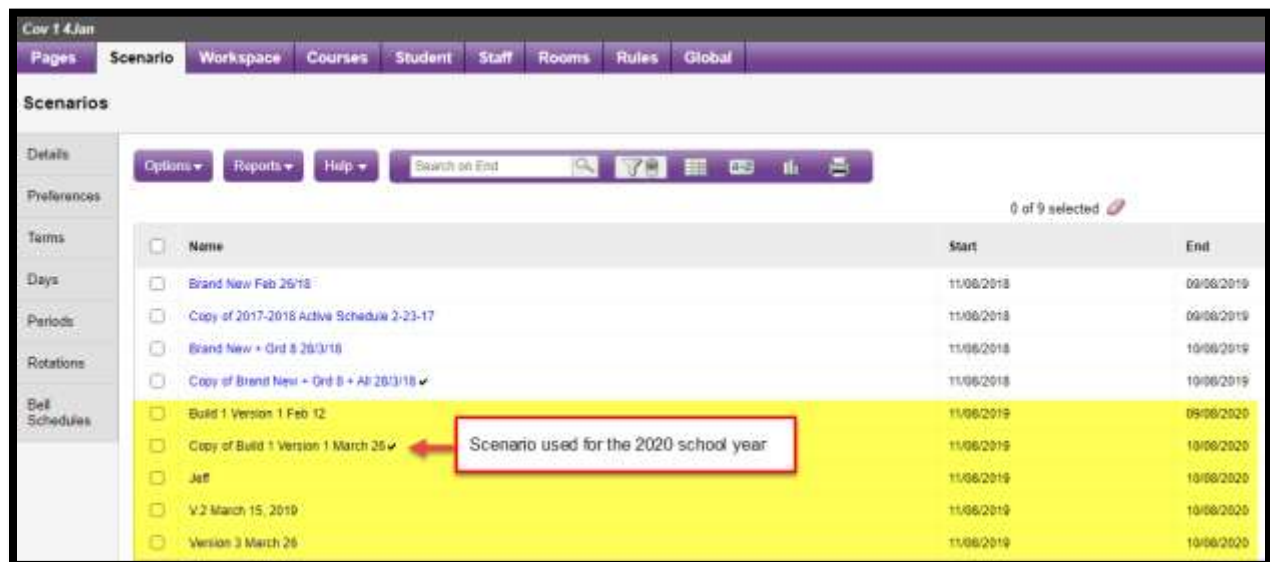
2. The scenario with the small black check mark is what was used in for the 2020 school year. It will have a very different structure from the current year.

3. Click into the Details of this scenario to allow you to look at the specific structure elements (Terms, Days and Periods)
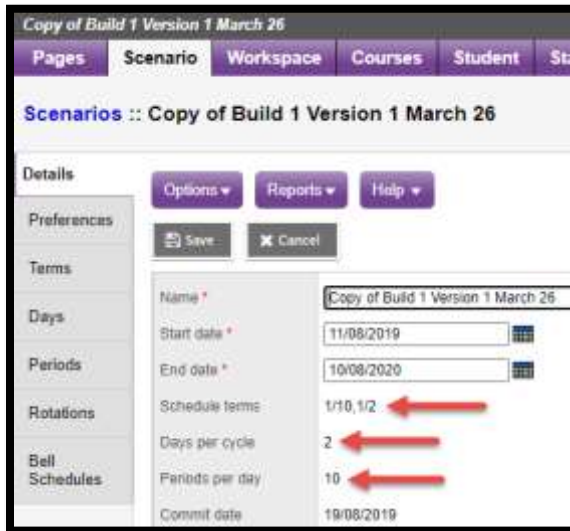
4. If this is the scenario you would like to go with for the 2022 school year, it can be copied by clicking on Options > Copy Scenario.

   NOTE: This will populate the Workspace with sections scheduled as they were 2 years ago. Given that many courses that were offered in 2020 may not be in your 2022 Course Catalogue your Workspace may be missing Course codes, as in the example below:
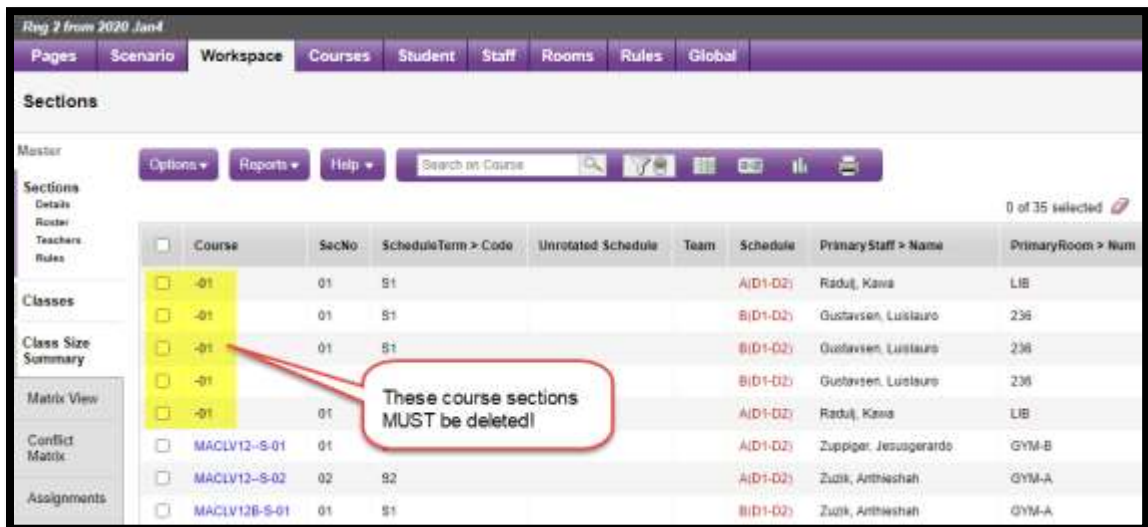
These sections MUST be deleted to proceed with 2022 scheduling work!

1.2.2 Preferences

These control a variety of information about how this scenario, and others will work together.

Of particular importance are the Sharing Attributes and Optional Requests (if this has been chosen to use)

1.2.2.1 Shared Attributes

Course, Student, Staff,Room and Structure attributes can be shared across multiple scenarios, so that when a change is made to one of these 4 areas it will be reflected in the other scenarios that are also sharing attributes.

Preference st > Category = Scenario-Advanced
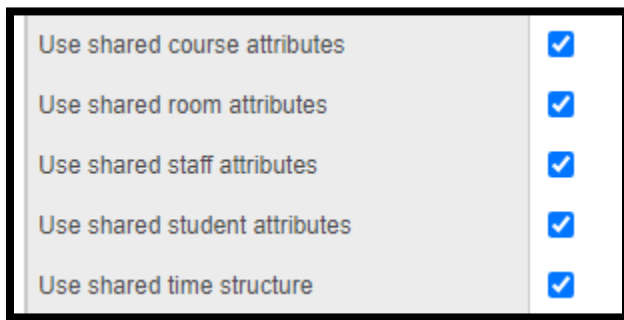
See table below for how these check boxes with behave given multiple scenarios:

Scenario Name	Shared Attributes	Implications
Cov 1 4Jan	Unchecked	Everything will be independent to this scenario
Old 1 from 2020 Jan4	Unchecked	Everything will be independent to this scenario
Reg 1 4Jan	Checked	Attributes will be shared between this and scenario Reg 2 8Jan
Reg 2 8Jan	Checked	Attributes will be shared between this and scenario Reg 1 4Jan

1.2.2.2 Include optional requests

This preference is used in conjunction with student course requests that have been checked/flagged as *Is Options*

Preferences > Category = Scenario-basic

Include optional requests	☑
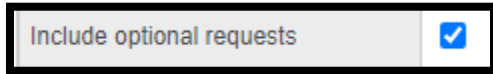
Is preference allows students to have a Primary request but also the ability to chose to load it or not.

Examples of how some districts are looking to do this is to give students specialized requests that will that will only be loaded in a Regular scenario. In this guide, section .1.1.1, identified creating specialized flavoured courses for a Covid schedule. These are grouping of courses that students would choose to ensure they are in cohorts. In addition to these courses some districts are also going to give students an open option to choose ANY course they want, but these course requests are going to be flagged/checked as Optional. Therefore they will NOT schedule the flavoured courses instead schedule the regular courses and check this preference to Include optional requests.

1.2.3 Terms

These define length of time a student will take a course section.

Scenarios can have different Terms in each. If your schools will be building different scenarios, with different terms, ensure the Preference > Category=Scenario Advanced > Use shared time structure is UNCHECKED.

For complete information on Terms please see Scheduling MODULE 3 – SCENARIOS, PREFERENCES AND TIME STRUCTURE

1.2.4 Multiple Calendars and Bell Schedules

It is possible to have one group of students attend, for example, 4 periods in a day AND another group of students attend only 2 periods.

This was done around the province last year in schools that wanted their Grade 8's & 9's to attend regular classes with 4 periods in a day (each 72mins) and their 10's,11's & 12's only attend 2 periods (morning and afternoon).

In order for this to work each group of students gets a unique Calendar with unique Bell Schedules associated to it.

Additionally extra Periods needed to be setup. For example, Grade 10's,11's & 12's course sections were scheduled into Period Numbers 1-8 and Grade 8's & 9's into Period Numbers 16-23:

Period Number	Period ID	Period Name	Term	Grade Level
1	Sr A	Sr A	Q1	10's,11's & 12's
2	Sr B	Sr B	Q1	10's,11's & 12's
3	Sr C	Sr C	Q2	10's,11's & 12's
4	Sr D	Sr D	Q2	10's,11's & 12's
5	Sr E	Sr E	Q3	10's,11's & 12's
6	Sr F	Sr F	Q3	10's,11's & 12's
7	Sr G	Sr G	Q4	10's,11's & 12's
8	Sr H	Sr H	Q4	10's,11's & 12's
16	Jr A	Jr A	FY, S1, S2 (i.e. a Regular Schedule)	8's & 9's
17	Jr B	Jr B	FY, S1, S2 (i.e. a Regular Schedule)	8's & 9's
18	Jr C	Jr C	FY, S1, S2 (i.e. a Regular Schedule)	8's & 9's
19	Jr D	Jr D	FY, S1, S2 (i.e. a Regular Schedule)	8's & 9's
20	Jr E	Jr E	FY, S1, S2 (i.e. a Regular Schedule)	8's & 9's
21	Jr F	Jr F	FY, S1, S2 (i.e. a Regular Schedule)	8's & 9's
22	Jr G	Jr G	FY, S1, S2 (i.e. a Regular Schedule)	8's & 9's
23	Jr H	Jr H	FY, S1, S2 (i.e. a Regular Schedule)	8's & 9's

1.2.5 Days

Scenarios can have different a different number of Days in each. If your schools will be building different scenarios, with different days, ensure the Preference > Category=Scenario Advanced > Use shared time structure is UNCHECKED.

For complete information on Days please see Scheduling MODULE 3 – SCENARIOS, PREFERENCES AND TIME STRUCTURE

1.2.6 Periods

Scenarios can have different a different number of Periods in each. If your schools will be building different scenarios, with different Periods, ensure the Preference > Category=Scenario Advanced > Use shared time structure is UNCHECKED.

For complete information on Periods please see Scheduling MODULE 3 – SCENARIOS, PREFERENCES AND TIME STRUCTURE

1.2.7 Patterns – Required for Build Engine only

Pattern are only required if you are going to have the application schedule sections of courses into Terms, Schedule (Days/Periods)and Rooms.

If your school is going to figure our the Master Schedule on a board (paper, excel, etc.) this section does not apply.

Patterns are global to all scenarios, meaning you do not build patterns for each scenario you have.

Patterns are periods and combinations of periods, where you are going to allow the Build engine to schedule sections.   These are based on the number of Days and Periods defined. Therefore is you have multiple scenarios with differing numbers of Days and Periods you will have to create Patterns based on those different structural elements.

Below is view of these elements:

1.2.8 Pattern Sets – Required for Build Engine only

Pattern Sets are only required if you are going to have the application schedule sections of courses into Terms, Schedule (Days/Periods)and Rooms.

If your school is going to figure our the Master Schedule on a board (paper, excel, etc.) this section does not apply.

Pattern Sets are global to all scenarios, meaning you do not build patterns for each scenario you have.

Pattern Sets are grouping of Patterns, that you assign to courses to tell the Build engine in which periods (patterns) it can schedule sections of courses.

For example for FY (linear) courses, it is standard to have sections meet every other day for the entire year. So a Pattern Set with Patterns that are only in 1 period would be grouped into a Set, and that Set would be applied to all courses that are going to have sections running all year.

1.2.9 Courses

Courses are unique to each scenario; therefore, you can have the same course in two different scenarios each setup differently.

Again, you must ensure the Preference of *Use shared course attributes* is NOT checked, if each scenario has different course setup.

For complete information on Course setup, please see Scheduling MODULE 6B – SCHEDULING ATTRIBUTES.

1.3   Grouping Students – Platoons, Teams and Houses

There are three ways to group students; they all work in conjunction with individual students and course sections. The visibility of these attributes on the Student Details screen, is controlled by the Scenario > Preference > Category > Scenario-basic > Show team/Show house/Show Platoon.

There are Reference tables for each (Global > Reference > House Codes or Team Codes or Platoon Codes) that need to be created and setup.
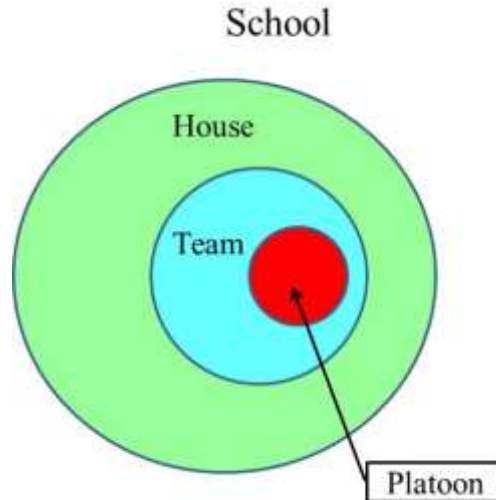

There are is no hierarchical grouping to House or Team. Platoons can be thought of as ways to have the same roster or cohort of students between multiple sections.

When working with Teams or Houses, there are two ways students can be assigned, either by Static (i.e. you know the list of students in a class) or Dynamic (i.e. the Load engine will create rosters) grouping:

1.3.1 Static grouping

If you indicate the student is on a specific Platoon, Team or House and the section has been assigned to a Platoon, Team or House, the Static box will be checked on save.

Example: Amanda has been assigned to the Red Team. Section 01 of MEN--10, has been associated to the Red Team. This means that Amanda will only be loaded into sections of courses that are part of the Red Team:

Amanda is on the Red Team and has a request for MEN--10
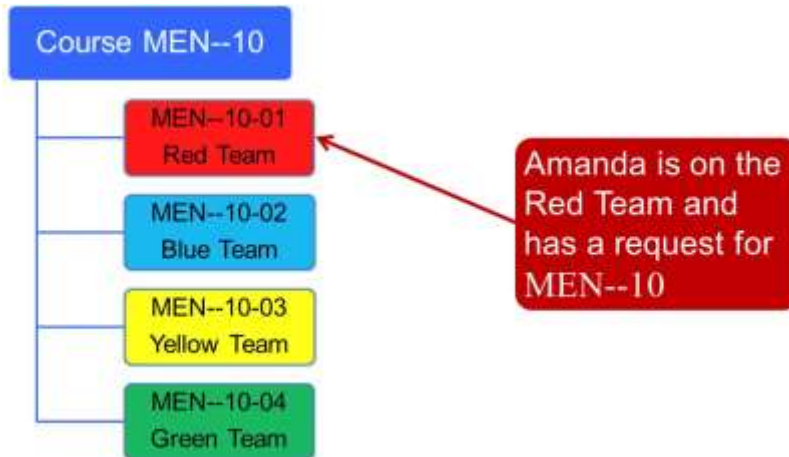
1.3.2 Dynamic grouping

You can assign sections to a Platoon, Team or House **but not** the student. In this scenario you are letting the Load engine figure out the members of the Platoon, Team or House.

Example: Michael has no Platoon, Team or House assignment.

Section 02 of MEN--10, has been associated to the Blue Team. When Michael is loaded, the first section of a course with a Team association will be the Team that Michael is then part of

Michael has NOT been placed on a Team

Michael has a request for MEN—10

Michael was Loaded into section 02, which was associated with the Blue Team

Michael is now part of the Blue Team