

# **PowerScheduler: Prepare to Build**

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## **PowerSchool Student Information System**



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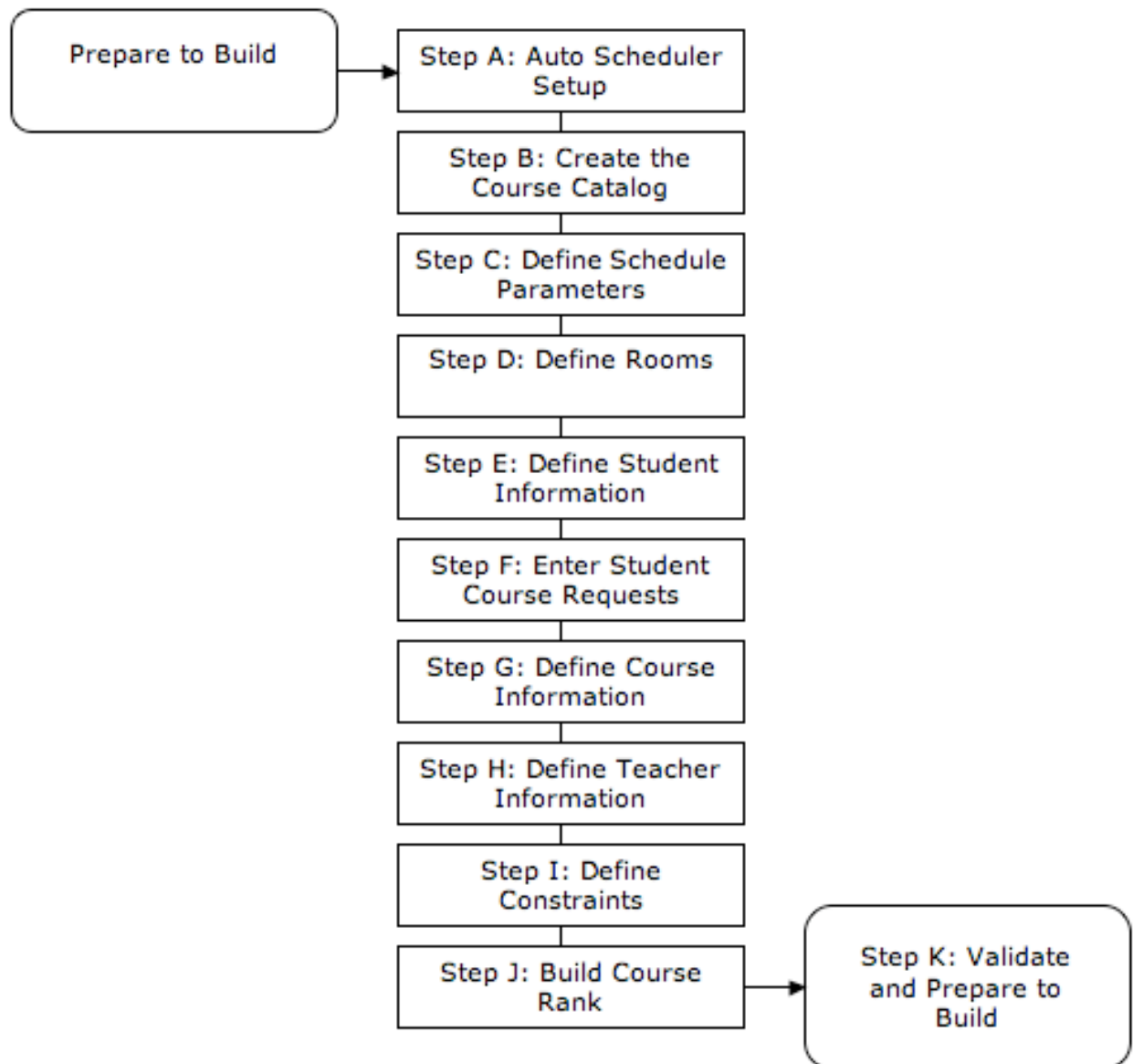
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# Introduction

Utilize these instructions to complete each step in the Prepare to Build process in the PowerSchool Student Information System (SIS). The following diagram outlines the steps of the process, but not all steps are required. Those optional steps will be described later in the course.



While several people may be scheduling students, Pearson recommends only one person should be performing Step A: Auto Scheduler Setup. While completing the scheduling process, the PowerSchool help menu is another great source of information. Keep in mind that the PowerScheduler and the live (or active) side share three items: courses, teachers, and student.

## Step A: Using the Auto Scheduler Setup

The Auto Scheduler function sets up the terms, periods, and days associated with the school schedule. Using the Auto Scheduler is optional, but setting up terms, periods, and days is required. If you previously created years and terms on the scheduling side, performing the Auto Scheduler function overwrites those years and terms, whether created manually or by using the Automatic Schedule Setup. However, the Auto Scheduler does not overwrite the years and terms created on the live side.

1. On the Start Page, click **PowerScheduler**

The image below is a reminder that you need to download the PowerSchool Scheduling Engine before you build your schedule. Not every district needs to perform the next step, but first-time PowerScheduler users will.

Important Notice:

The PowerSchool Scheduling Engine has been updated. Before attempting to build or load a master schedule you must download and install the new engine by choosing the Engine Download option on the left.

Please check the box below and press the Submit button to acknowledge you understand.

☐

2. Select the option and click **Submit**
3. Below Processing, click **Auto Scheduler Setup**

Option	Value
Lowest term level division	Quarters
Number of periods	4
Number of days	2

4. Choose the appropriate lowest level term, number of periods, number of days, and click **Continue**

The "Lowest term level division" menu refers to course offerings and not when you store grades or send out report cards. For example, your school sends out report cards every quarter; however, students don't change courses each quarter, they change each semester. You would choose **Semesters** from the "Lowest term level

division” menu. If your school uses blocks instead of periods, use the period menu to select your number of blocks. Days doesn’t refer to how many days school meets each week, but how many days are in your rotation or day cycle. Basically, how many days occur before the cycle repeats.

☒ Full Year  
☒ Semester Semester  
☐ Trimester Trimester Trimester  
☒ Quarter Quarter Quarter Quarter

Continue

5. Check the appropriate terms to define for your school, and then click **Continue**

The terms apply to scheduling only and not grading terms. Be sure you check **Full Year**, since the Full Year term is required.

Term	Abbreviation	First Day of Term	Last Day of Term
Full Year	FY (MM/DD/YYYY)	6/1/2009	5/31/2010
Semester 1	S1 (MM/DD/YYYY)		
Semester 2	S2 (MM/DD/YYYY)		
Quarter 1	Q1 (MM/DD/YYYY)		
Quarter 2	Q2 (MM/DD/YYYY)		
Quarter 3	Q3 (MM/DD/YYYY)		
Quarter 4	Q4 (MM/DD/YYYY)		

Continue

6. Enter the dates for each of your terms and click **Continue**

Make sure no gaps exist between the term dates. If your school hasn’t finalized the exact dates, don’t worry. You can change the dates until you commit the schedule. Committing the schedule is your last step in PowerScheduler.

**Build Information**

☒ **Build and Load**  
Use this scenario setting to build a master schedule and load students into the built schedule.

☐ **Load Only**  
Use this scenario setting if a master schedule is copied or imported and you need to only load students.

**Build Name**  **Active Build** ☒

**Build Description**

**Terms**

**Periods**

**Days**

**Course Catalog**

7. Select the **Build and Load** option to use the scenario to build a master schedule and load students into the schedule

The Load Only option is used when you will use a previously or manually created master schedule and only load students into the schedule.

8. Enter a build name, enter a description of the build, and check **Active Build** if this is the scenario you are going to use to build the master schedule

The future scheduling year will be the Build Name unless you make a change.

9. The Terms, Periods, and Days fields will contain the information you just set up

If you need to change the terms, periods, or days, do not navigate to the Auto Scheduler Setup again. Instead, select the active scenario and make the necessary changes.

10. The Course Catalog menu will not contain options for first-time PowerScheduler users

When first-time users submit the scenario, PowerScheduler will create a course catalog. If course catalog options are present, Pearson recommends not choosing one. A new course catalog should be created every year.

11. Do not change the default values in the Build Optimizations, Load Optimizations, and Best Schedule Weights fields at this time

Use these fields if you are actively building the schedule and encounter problems with the amount of time it takes to build your schedule.

12. Click **Submit**

13. Click **Scenarios** and select the active scenario name

First-time users will see that a course catalog is chosen even though that step was



not completed. PowerScheduler created the course catalog automatically, based on your existing catalog from the current year.

Build Name: 2009 - 2010 Active Build ☒

Build Description: Automated Schedule Setup

Terms: 4 Associate

Periods: 4

Days: 2

Course Catalog: 2009 - 2010

14. Below Parameters, click **Years & Terms**

You need to edit the years and terms you created through the Auto Scheduler Setup because the name and abbreviation are vague. You can also add years and terms manually by clicking **New**.

New

Year	Abbrev.	1st Day	Last Day	Edit Terms
Full Year	FY	6/1/2009	5/31/2010	<a href="#">Edit Terms</a>

Note: This list of school years applies to Apple Grove High School 2 only.

15. Click **Full Year**

Option	Value
Name of School Year	Full Year (example: 2000-2001)
Abbreviation	FY (example: 00-01)
First Day of School	6/1/2009
Last Day of School	5/31/2010

Delete Submit

16. Enter 2009-2010 in the "Name of School Year" field

The school year, 2009-2010, will be listed in the navigation bar of the PowerScheduler as the scheduling year.

17. Enter 09-10 in the Abbreviation field

18. Click **Submit**

If you need to edit the term dates, navigate to Years & Terms again. Then, click **Edit Terms**. You can edit the term dates as long as you haven't committed the schedule.

## Setting the Schedule Year

You can make course requests for the current year or for future years, but you need to identify which schedule year to use for student course requests that come in via the PowerScheduler, Parent Access, or the Modify Future Requests student page.

You set up the schedule year through the Auto Scheduler Setup and modified the year information for clarity. Now set the scheduling year to 2009-2010, the future year, so that students can enter course requests in Parent Access for the 2009-2010 year. In this case, the request screens you create in the PowerScheduler will also apply to the 2009-2010 school year.

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Set Schedule Year**

3. Choose the future schedule year from the menu

Only the years established on the Years & Terms page are listed.

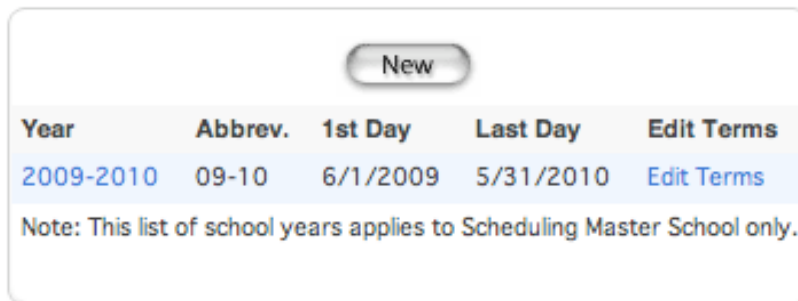
4. Click **Submit**

## Defining Years and Terms Manually

If you use the Auto Scheduler Setup your terms will already be defined, but there may be districts that prefer to define them manually. The following steps describe defining years and term manually.

1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Years & Terms > New**

- Enter the name, abbreviation, and first and last days of the school year and click **Submit**



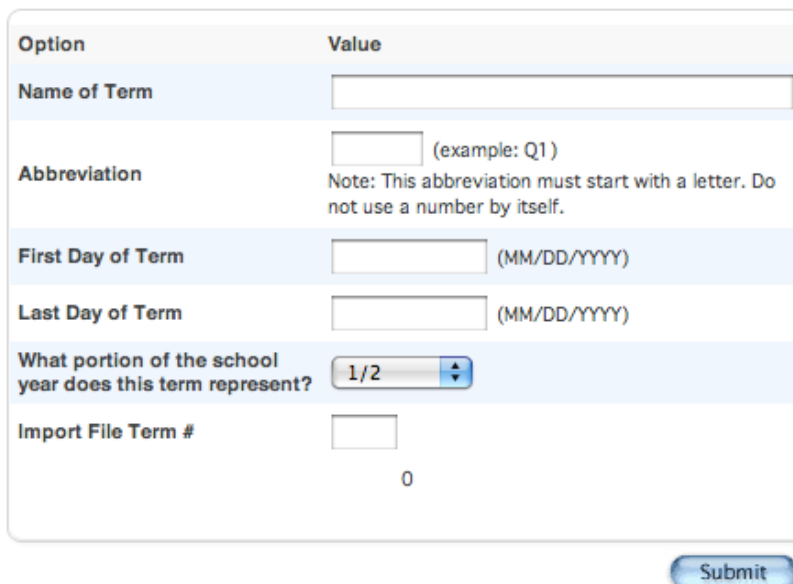
**New**

Year	Abbrev.	1st Day	Last Day	Edit Terms
2009-2010	09-10	6/1/2009	5/31/2010	<a href="#">Edit Terms</a>

Note: This list of school years applies to Scheduling Master School only.

- Click **Edit Terms > New**

You can also click **Edit Terms** to modify existing terms.



Option	Value
Name of Term	<input type="text"/>
Abbreviation	<input type="text"/> (example: Q1) Note: This abbreviation must start with a letter. Do not use a number by itself.
First Day of Term	<input type="text"/> (MM/DD/YYYY)
Last Day of Term	<input type="text"/> (MM/DD/YYYY)
What portion of the school year does this term represent?	<input type="text" value="1/2"/>
Import File Term #	<input type="text" value="0"/>

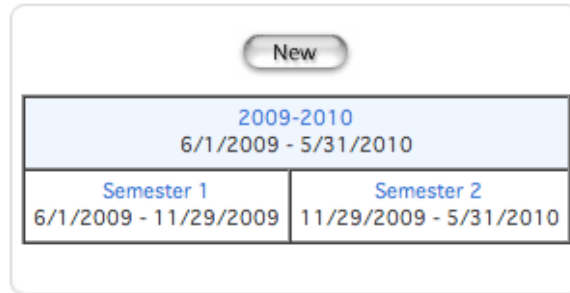
**Submit**

- Define terms sequentially from largest to smallest

For example, create the year, then the all the semesters, then all the quarters. Failure to create the terms in sequential order will result in the internal term ID to be incorrect. Enter the name, abbreviation, and first and last days of the term.

- Define what fraction of the school year the term represents and click **Submit**
- Repeat steps 4-5 to define all of the terms of the schedule year

After you define all terms, the hierarchy will look similar to the image seen below.



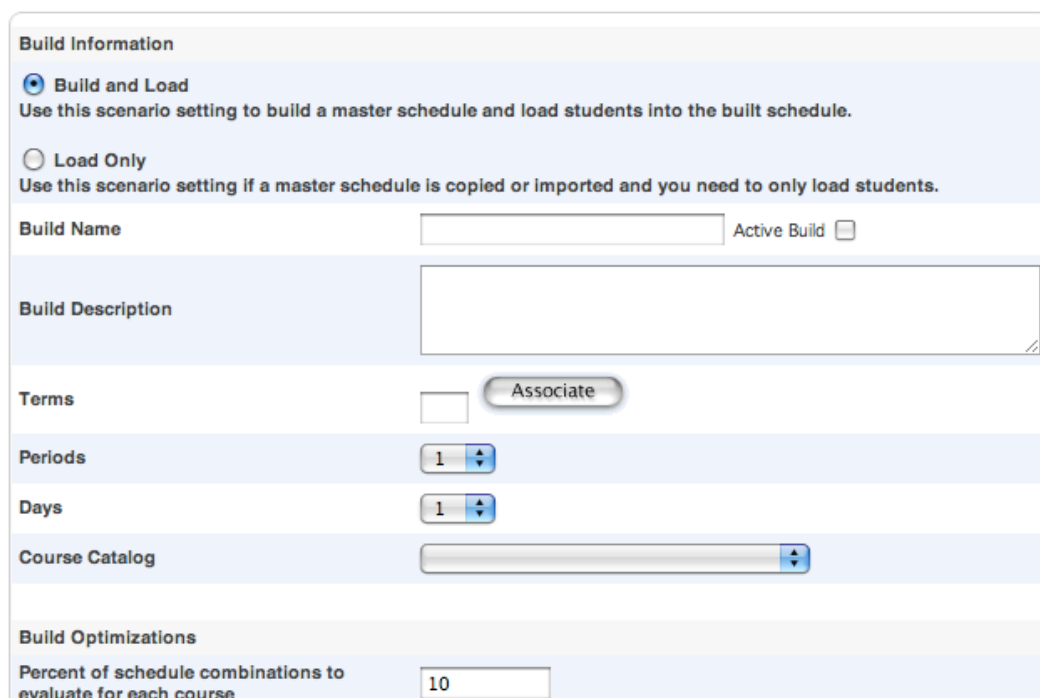
A screenshot of a web interface showing a 'New' button at the top. Below it is a table with the following structure:

2009-2010	
6/1/2009 - 5/31/2010	
Semester 1	Semester 2
6/1/2009 - 11/29/2009	11/29/2009 - 5/31/2010

## Manually Creating a Build Scenario

A build scenario is a schedule you might want to use next year. You can create one or several build scenarios. The system then uses the scenarios and parameters you define to build your master schedule. If you use the Auto Scheduler function, the Edit Build Scenario page will appear automatically in Step A. The scenario on the Edit Build Scenario page will also contain the information you entered during the Auto Scheduler setup. While you can create several scenarios, only one can be active at one time in each school.

1. On the Start Page, click **PowerScheduler**
2. Below Processing, click **Scenarios > New**



A screenshot of the 'Build Information' form. It includes the following sections:

- Build Information**
  - ☒ **Build and Load**  
Use this scenario setting to build a master schedule and load students into the built schedule.
  - ☐ **Load Only**  
Use this scenario setting if a master schedule is copied or imported and you need to only load students.
- Build Name**: A text input field followed by an **Active Build** checkbox.
- Build Description**: A large text area.
- Terms**: A dropdown menu with an **Associate** button.
- Periods**: A dropdown menu set to 1.
- Days**: A dropdown menu set to 1.
- Course Catalog**: A dropdown menu.
- Build Optimizations**
  - Percent of schedule combinations to evaluate for each course**: A text input field set to 10.

3. Select the **Build and Load** option if you will use the scenario to build a master schedule and load students into the schedule
4. Select the **Load Only** option if you will use a previously or manually created master schedule and only load students into the schedule
5. Enter a build name, enter a description of the build, and check **Active Build** if the is the scenario you are going to use to build the master schedule

6. Click **Associate**

<input type="checkbox"/>	2009-2010 6/1/2009 - 5/31/2010	
<input type="checkbox"/>	Semester 1 6/1/2009 - 11/29/2009	Semester 2 11/29/2009 - 5/31/2010

7. Select the terms associated with the build and click **Submit**
8. Choose the number of periods per day in the schedule from the Periods menu
9. Choose the number of days in the days cycle for the master schedule from the Days menu
10. Choose the catalog you want to associate with the master schedule from the Course Catalog menu

The system schedules the courses in the course catalog you choose. Additionally, you can only edit the course catalog associated with the active build scenario.

11. Do not change the default values in the Build Optimizations, Load Optimizations, and Best Schedule Weights fields when you first define a scenario

Use these fields if you are actively building the schedule and encounter problems with the amount of time it takes to build your schedule.

12. Click **Submit**

## Step B: Creating the Course Catalog

The Course Catalog is a grouping of the courses being offered during a specific school year. Create the catalog by first adding any new courses you plan to offer, and associating them with your school. Then, make course selections available for student course requests. Finally, you can modify the catalog, if necessary, and attach it to the build scenario you will use to build your master schedule. The system schedules only the courses in the course catalog that you associate with the active build scenario. When first-time users perform the Auto Scheduler Setup, PowerScheduler will create a course catalog after the scenario is submitted. Pearson recommends creating a new course catalog every year. You can add new courses to PowerSchool and associate them to the PowerScheduler catalog at any time.

### Adding a New Course

Add courses on the live side of PowerSchool not in PowerScheduler. It is also important to avoid adding duplicate courses. Verify that courses aren't already in the Master Course List before adding them.

1. On the Start Page, click **School > Courses > + New Course**

Course Name	<input type="text"/>
Course Number	<input type="text"/>
Alternate Course Number	<input type="text"/>
Credit Hours	<input type="text"/>
CIP Code	<input type="text"/> <input type="checkbox"/> Vocational Class
Credit Type	<input type="text"/> (no spaces)
Default Maximum Enrollment	<input type="text"/>
Course Notes	<input type="text"/>
Grade Scale	Default <input type="button" value="v"/>
GPA Added Value Points	0 (usually zero)
Exclude from GPA?	<input checked="" type="radio"/> Include <input type="radio"/> Exclude
Exclude from Class Rank?	<input checked="" type="radio"/> Include <input type="radio"/> Exclude
Exclude from Honor Roll?	<input checked="" type="radio"/> Include <input type="radio"/> Exclude
Use The Course For Lunch	<input type="checkbox"/>
Exclude On Report Cards/Transcripts	<input type="checkbox"/>

?

2. Enter information in the fields
3. Click **Submit**

## Course Prerequisites

The prerequisite setup is very powerful and refers to requirements that a student must meet before requesting a course. You can do more than associate two courses together. You can specify that a student must earn a particular grade in order to request the next course. You can also require that the student earn a certain number of credits before he or she can request the next course. You can even require that a teacher submits a recommendation before the student can request the course. You have access to the following prerequisite rules:

- Letter Grade
- Percent Grade
- Average Percent Grade
- Credit Hours
- Concurrent Request
- Recommend
- Any of
- None of

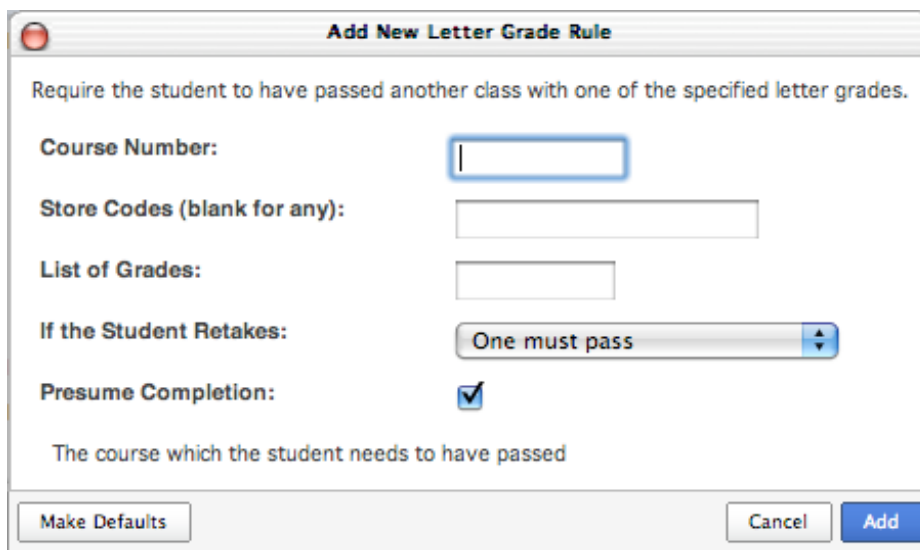
Keep in mind that prerequisites limit the requests students can select on the request pages. Prerequisites do not stop the PowerScheduler engine from loading a course into the student's schedule.

## Adding Course Prerequisites

Since students submit most requests before second semester ends, you could define the rule upon the assumption that the student will complete the course. For example, a set of prerequisite rules may specify that Chemistry I is taken prior to Physics I and that students must earn an A, B, or C letter grade in Chemistry I before requesting Physics I.

These requirements are the results of two prerequisite rules between Chemistry I and Physics I. Add prerequisites on the live side of PowerSchool.

1. On the Start Page, click **School > Courses**
2. Find and select **Physics I**
3. Click the **Prerequisites** tab
4. Enter Completion of Chemistry I in the Prerequisite Note field
5. Click the plus (+) in the Prerequisites rules section
6. Choose **Letter Grade** from the menu



7. Enter the beginning of the course number and a list of matching courses will appear
8. Select the course
9. Enter A,B,C in the List of Grades field
10. Choose **One must pass** from the If the Student Retakes menu
11. Check **Presume Completion** and click **Add**

Use the Presume Completion check box to ignore the prerequisite rule and allow students to request the class without completing the prerequisite. To add flexibility to the Presume Completion, navigate to **School > Final Grade Setup**. As an option, you can enter the number of days to extend the Presume Completion beyond the end of the term. Also, enter a negative number to stop the Presume Completion before the course ends.

12. Click the plus (+) again
13. Choose **Recommend** from the menu

If the student must pass OR receive a recommendation, choose the **Any Of** rule. Then, repeat steps 12 and 13 again. The Any Of rule states the student must meet one of the prerequisites, not all.

14. Enter the department of the teacher, such as sci
15. Click **Add**
16. Finally, click **Save**

## Creating the Course Catalog

If first-time PowerScheduler users complete the Auto Scheduler Setup, they do not need to create a course catalog manually. One reason to create a new catalog is when last year's catalog is being changed completely. A new course catalog also makes it possible for you to keep track of which courses are offered each year. If you always use the same catalog, the catalog will be overwritten each year and you will have no way to track the offerings from year to year.



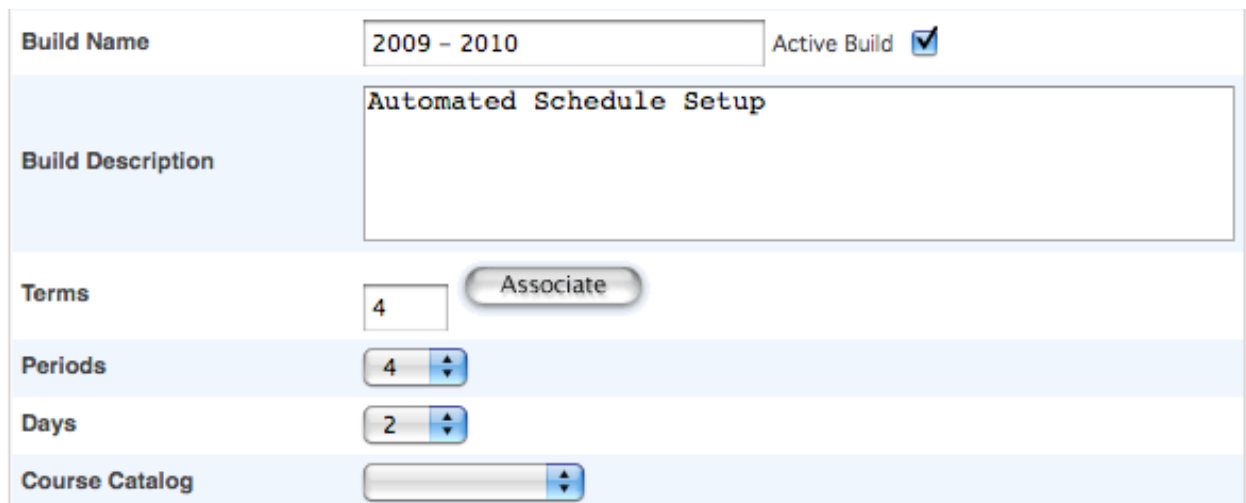
1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Catalogs > New**
3. Enter a name and description for the catalog
4. Click **Submit**

The course catalog you create appears in the list, but the catalog is not active yet. You can only edit the course catalog associated with the active build scenario.



Catalog	Edit Catalog	Status	Courses	Description
2009 - 2010	Not active catalog	Inactive	Edit	

5. Click **Scenarios** and select the active scenario



Build Name	2009 - 2010	Active Build <input checked="" type="checkbox"/>
Build Description	Automated Schedule Setup	
Terms	4	Associate
Periods	4	
Days	2	
Course Catalog		

6. Choose **2009-2010** from the Course Catalog menu
7. Click **Submit**
8. Below Parameters, click **Catalogs**
9. Click **Edit Course Catalog** in the row of the catalog you created

This screen lists all courses that are either associated to this school or that have previously been added to this catalog directly from the master course file. The **bolded courses** identify those courses that have been associated to the school. Courses currently active for this catalog are so indicated by a checkbox. To add a course to the catalog, click the checkbox(s) and then click submit. To remove a course simply uncheck the box and click submit. To view all courses in the district select the [View Master Course List](#) link.

[View Master Course List](#)

Sort list by: <a href="#">Course Name</a> <a href="#">Course Number</a> <a href="#">Active Status</a>	
<input checked="" type="checkbox"/> <b>A+ Certification 14005</b>	<input checked="" type="checkbox"/> <b>Geometry 10004A</b>
<input checked="" type="checkbox"/> <b>Advanced Cabinetry I 19005</b>	<input checked="" type="checkbox"/> <b>Geometry 10004B</b>
<input checked="" type="checkbox"/> <b>Advanced Cabinetry II 19006</b>	<input checked="" type="checkbox"/> <b>Government 13005A</b>
<input checked="" type="checkbox"/> <b>Advanced Ceramics I 22011</b>	<input checked="" type="checkbox"/> <b>Introduction to Woodworking I 19001</b>
<input checked="" type="checkbox"/> <b>Advanced Ceramics II 22012</b>	<input checked="" type="checkbox"/> <b>Introduction to Woodworking II 19002</b>
<input checked="" type="checkbox"/> <b>...</b>	<input checked="" type="checkbox"/> <b>...</b>

10. By default, the system checks all courses

Clear the check box next to each course you want to remove from the course catalog. New courses added in PowerSchool after you created the catalog will appear unchecked. You will need to select the course check box so it is available for scheduling in the future year.

11. Click **Submit**

## Step C: Defining Optional Schedule Parameters

Depending on your schedule and school, you can define departments, facilities, section types, and teacher teams. Each of the sections in Step C outlines adding options to the schedule parameters. Assigning the parameters to rooms, courses, and teachers will be covered in subsequent steps.

### Periods

Complete the following steps to make manual modifications to the default name, abbreviation, and sort order of the periods.

1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Periods**

ID	Name	Abbreviation	Core	Sort
1	<input type="text" value="1"/>	<input type="text" value="1"/>	<input checked="" type="checkbox"/>	<input type="button" value="1"/>
2	<input type="text" value="2"/>	<input type="text" value="2"/>	<input checked="" type="checkbox"/>	<input type="button" value="2"/>
3	<input type="text" value="3"/>	<input type="text" value="3"/>	<input checked="" type="checkbox"/>	<input type="button" value="3"/>
4	<input type="text" value="4"/>	<input type="text" value="4"/>	<input checked="" type="checkbox"/>	<input type="button" value="4"/>

3. You determine the number of period IDs that appear from the Periods field on the Edit Scenario page

You cannot alter the ID. This ID is listed on the Master Schedule report.

4. Enter **Homeroom** in the 4 Name field

Many schools have a homeroom period and change the period name to "Homeroom" for easy identification. However, if the period name differs significantly from the ID, staff can become confused. Pearson recommends changing the last period to Homeroom and using the sort order to list it first.

5. Enter **HR** in the 4 Abbreviation field
6. Choose **1** from the 4 Sort menu, **2** from the 1 Sort menu, **3** from the 2 Sort menu, and **4** from the 3 Sort menu

You are reordering all the periods, so Homeroom will be listed first.

7. Click **Submit**
8. Click **Periods**

Your periods should look similar to the image below. Notice that the IDs match the

majority of the names. When the ID is listed, you know right away which period it correlates to.

ID	Name	Abbreviation	Core	Sort
4	<input type="text" value="Homeroom"/>	<input type="text" value="HR"/>	<input checked="" type="checkbox"/>	<input type="text" value="1"/>
1	<input type="text" value="1"/>	<input type="text" value="1"/>	<input checked="" type="checkbox"/>	<input type="text" value="2"/>
2	<input type="text" value="2"/>	<input type="text" value="2"/>	<input checked="" type="checkbox"/>	<input type="text" value="3"/>
3	<input type="text" value="3"/>	<input type="text" value="3"/>	<input checked="" type="checkbox"/>	<input type="text" value="4"/>

## Days

Complete the following steps to make manual modifications to the default name and abbreviation of the days.

1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Days**

Use the Auto Scheduler Setup or Edit Scenario page to determine the number of day IDs that appear

ID	Name	Abbreviation
A	<input type="text" value="A"/>	<input type="text" value="A"/>
B	<input type="text" value="B"/>	<input type="text" value="B"/>

3. Enter the name and abbreviation for each day

Changing the default name and abbreviation is optional.

4. Click **Submit**

## Departments

Courses, rooms, and teachers can belong to departments. When building a master schedule that uses departments, the system attempts to schedule courses in one of the rooms belonging to that department. Creating departments is optional, but Pearson recommends using departments to ensure accurate scheduling.

Before adding departments in PowerScheduler, navigate to the School Setup in PowerSchool. Then, click **Departments**. If you already have departments created in PowerSchool, create the same departments in PowerScheduler. The departments need to match exactly or errors can occur when building the schedule.

1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Departments**



3. Click **New**
4. Enter a name for the department
5. Click **Submit**

## Facilities

Use “facilities” to force a course into a particular room or rooms. For example, you may have 5 science rooms, but only 2 of those rooms are chemistry labs. Create a facility titled Chemistry Lab and associate the Lab to those two rooms. You also attach the Chemistry Lab facility to the course. When the system schedules Chemistry, the course will be scheduled into those 2 rooms, and not the other 3 science rooms.

1. From the Start Page, click **PowerScheduler**
2. Below Parameters, click **Facilities > New**
3. Enter a name for the facility, such as Computer Lab or Kitchen
4. Click **Submit**

## Section Types

Use Section types to differentiate sections of a course. For example, the freshman PE course needs a section for male students and a section for female students. Other possible section types are Honors and Bilingual. Assign the section type to teacher assignments and student requests. Then, when PowerScheduler loads students into the master schedule, it filters students with the appropriate section type into the appropriate teacher’s section.

1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Section Types > New**
3. Enter a name and code for the section type
4. Click **Submit**

## Teacher Teams

Use the Teams method to group students together. Additionally, some schools utilize them to monitor student progress. Teams fall into two categories: static or dynamic. To create static teams, manually assign each student and teacher to a team. To create dynamic teams, assign teachers to a team and let PowerScheduler decide which students to assign to which teams for the best balance.

1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Teams > New**
3. Enter a name for the team
4. Click **Submit**

If you decided to mass assign students to teams, you will need the ID.



ID	Team
752	Blue
751	Orange

## Houses

Define houses to group students together. For example, half the student body is assigned to House Blue and the other half assigned to House Gold. Associate houses with teachers, students, and rooms. The system then references which house a room is assigned to before scheduling courses in that room and gives scheduling priority to the appropriate house. Check **Use Houses** under the Advanced settings on the Edit Scenario page to use Houses in the build or load.

1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Houses > New**
3. Enter a name for the house
4. Click **Submit**

## Buildings

If your school campus has classes in several buildings, you can define which teachers, students, and rooms are associated to each building. Buildings ensure that the system schedules courses in the appropriate building, taught by the appropriate teacher, and taken by the appropriate students. Check **Use Buildings** under Advanced settings on the Edit Scenario page to use Buildings in the build or load.

1. On the Start Page, click **PowerScheduler**
2. Below Parameters, click **Buildings > New**
3. Enter a name for the building
4. Click **Submit**

## Step D: Defining Rooms

Your school's layout and classrooms are an essential part of the scheduling process. You've created the necessary facilities and departments in your school. Now, create or update your rooms and associate the appropriate facilities and departments with each room. Associating rooms with teachers is optional, and will not apply to all schools.

When defining rooms, you can do any combination of the following:

- Define and update your rooms one at a time
- Auto-generate rooms to create rooms from your existing master schedule
- Auto-create rooms to create rooms with a predefined set of criteria
- Use the Update Selections function to update one field of information for a group of rooms at one time

### Manually Defining Rooms

Depending on the size of the school, create or edit your rooms one at a time.

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Rooms**
3. Click **New** to create a new room or click the room number to edit an existing room

Option	Value
Room Number	<input type="text" value="2"/>
Room Description	<input type="text" value="2"/>
Department	<input type="text" value="ART"/> Associate
Building	<input type="text"/> Associate
House	<input type="text"/> Associate
Use for Scheduling	<input checked="" type="checkbox"/>
Room is Always Free	<input type="checkbox"/>
Department Use Only	<input checked="" type="checkbox"/>
Facility Use Only	<input type="checkbox"/>
Room Facilities	<input type="text"/> Associate
Room Maximum	<input type="text" value="25"/>



4. Enter a Room Number, Room Description, and Room Maximum

The Room Maximum field is essential. Make sure that the course maximum does not exceed the room maximum.

5. Click **Associate** for the Department field and select a department
6. Check **Use for Scheduling**
7. Click **Submit**

## Auto-Creating Rooms

You can create rooms all at once with the "Auto Create Rooms" function. Once the list is created, you can go back to each room and modify names and other information.

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Auto Create Rooms**

Option Name	Value
Start Number	<input type="text" value="100"/>
Increment Number	<input type="text" value="1"/>
Number of Rooms	<input type="text" value="20"/>
Room Prefix	<input type="text"/>

Field Name	Value
Department	<input type="text"/> <input type="button" value="Associate"/>
Building	<input type="text"/> <input type="button" value="Associate"/>
House	<input type="text"/> <input type="button" value="Associate"/>
Use for Scheduling	<input type="button" value="Yes"/>
Room is Always Free	<input type="button" value="No"/>
Department Use Only	<input type="button" value="No"/>
Facility Use Only	<input type="button" value="No"/>
Room Facilities	<input type="text"/> <input type="button" value="Associate"/>
Room Maximum	<input type="text"/>

3. Enter a Start Number, Increment Number, and Number of Rooms
4. Choose **Yes** from the Use for Scheduling menu
5. The remaining fields are optional and may or may not apply depending on the group of rooms you are creating

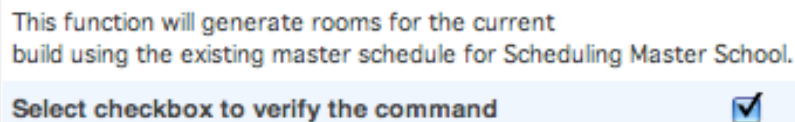
For example, you are creating rooms for a new wing of the school, but the room maximums vary. Leave the Room Maximum field blank or enter the most common maximum and change the exceptions after auto-creating.

6. Click **Submit** so the system will create the rooms with the scheduling information you defined

## Auto-Generating Rooms

To utilize the "Auto Generate Course Information" function, you must first copy your master schedule from the correct source year. Most users copy last year's schedule. Before you can accomplish copying your schedule, you must first create a scenario to copy the schedule into. You can do this manually or by Pearson's recommended method of using Auto Scheduler Setup. Choose the same number of days and periods as the schedule you are copying. You can make modifications later, if necessary.

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Auto Generate Rooms**



This function will generate rooms for the current build using the existing master schedule for Scheduling Master School.

Select checkbox to verify the command ☒

3. Check **Select check box to verify the command** to copy all rooms from the current year's master schedule to the new master schedule you are building
4. Click **Submit**

## Modifying Room Data using Update Selections

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Update Selections**

Current Table: **ScheduleRooms**

Current Records in Selection: 0   List View   Modify Records   Select Records by Hand

Select all 53 records in this school

Search ScheduleRooms

[Dropdown] = [Dropdown] [Text Box]

[Dropdown] = [Dropdown] [Text Box]

Search all 53 records in this school

Search within the current 0 records only

3. Choose **ScheduleRooms** from the Current Table menu
4. Do one of the following:
  - a. Click **Select all [#] records in this school** to select all rooms
  - b. Use the Search ScheduleRooms fields to search for and select rooms that meet specific criteria, such as all rooms in the English department
5. Click **Modify Records**

Current Table: ScheduleRooms

Current number of records in selection: 7

Maximum := 30

Note: This function will permanently modify your database. Use only if you know exactly what you are doing, and then only with extreme caution. Changes are permanent. You may use ^ to reference the existing value of the field.

Modify Selected Records

6. Choose the room field you want to edit from the menu
- For example, all the rooms in the English departments need the same room maximum. Choose **Maximum**.
7. Enter a value for the selected rooms, such as 30
8. Click **Modify Selected Records**

## Step E: Defining Student Information

In PowerScheduler, “student information” doesn’t refer to addresses and phone numbers. Instead, student information refers to scheduling preferences, such as next year grade. Student information must be defined for successful scheduling. For example, the “Next Year Grade” field not only tells PowerSchool what grade level the student will have next year, but also which request form to associate to the student.

### Moving Student Information to PowerScheduler

Before you can start scheduling your students, you need to get your students into PowerScheduler. Begin the process on the PowerSchool side with the Scheduling Setup student page.

1. On Start Page, search for and select a student
2. Click **Scheduling Setup**

As new students are entered into PowerSchool, complete the Scheduling Setup page as part of the data entry process. Then, each year the Scheduling Setup page will update with the End of Year Process. You need to complete several fields, but only one field places a student in the PowerScheduler: the “Next School Indicator.”

Required Settings	
Next Year Grade	11
Priority	0
Schedule This Student	<input type="checkbox"/>
Year of Graduation	2012
Summer School Indicator	None
Note for Summer School Admin	<div></div>
Next School Indicator	

Optional Settings	
Next Year Campus/Building	<div></div> Associate
Next Year House	<div></div> Associate
Next Year Team	

Submit

3. Choose **Apple Grove High School** from the “Next School Indicator” menu

If you don’t have options in the “Next School Indicator” menu, navigate to the Start Page. Click **School** > **Next School** > **New** to add the next school options.

4. Click **Submit**

You don’t have to set this field for every student manually. Use the “Next School Indicator” group function to set this field for an entire grade level. Pearson recommends using the group function on a regular basis to catch any new students who might have this information missing. Remember when running the group function for the highest grade level in your school, those students will be graduating or moving to a different school. The remaining fields on the Scheduling Setup page will be covered in the next section.

## Student Scheduling Preferences

Scheduling preferences need to be entered before your students start submitting requests. If the preferences aren’t entered, students will have access to the wrong request forms or no form at all. You can enter or update student scheduling preferences using any of the following methods:

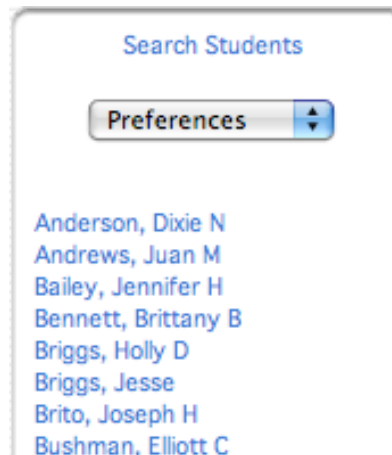
- Manually update or enter scheduling preferences for each student, one at a time
- Auto-fill scheduling preferences for students by year of graduation
- Use the Update Selections function to update specific fields of information for several students at one time

## Manually Updating Student Scheduling Preferences

Depending on the size of the school body, update scheduling preferences one at a time. However, manually updating will take the most time.

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Students**
3. Search for and select a student or group of students

The students you select appear in the students menu.

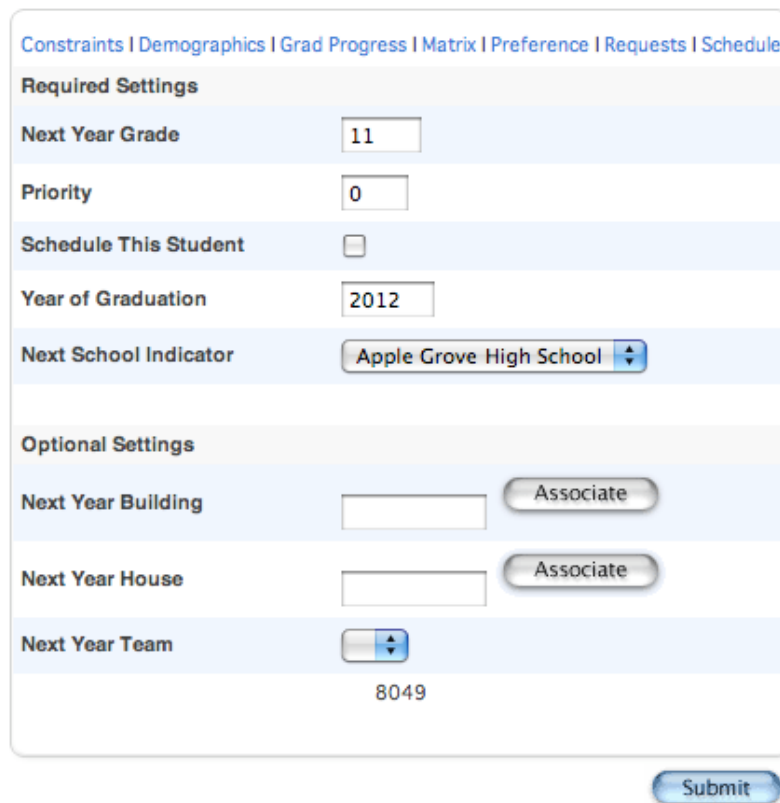


Search Students

Preferences

Anderson, Dixie N  
Andrews, Juan M  
Bailey, Jennifer H  
Bennett, Brittany B  
Briggs, Holly D  
Briggs, Jesse  
Brito, Joseph H  
Bushman, Elliott C

4. Choose **Preferences** from the menu at the top of the student list and click a student's name



Constraints | Demographics | Grad Progress | Matrix | Preference | Requests | Schedule

**Required Settings**

Next Year Grade: 11

Priority: 0

Schedule This Student: ☐

Year of Graduation: 2012

Next School Indicator: Apple Grove High School

**Optional Settings**

Next Year Building:  Associate

Next Year House:  Associate

Next Year Team: 8049

Submit

5. Enter or verify the next year grade is correct

The "Next Year Grade" field indicates the request screen each student will use to submit their course requests for the next school year and which grade level the student will promote to.

6. Enter or verify the number in the Priority field

Use the Priority field to tell PowerScheduler which students to schedule first. For example, upcoming seniors need a higher priority than upcoming freshman. The lower the number, the higher the priority. Pearson recommends using the priorities 10, 20, 30, and 40. If you have one senior that needs a higher priority than the rest of the grade, enter the priority 9. Use the priority gaps for scheduling flexibility.

7. Verify that **Schedule This Student** is checked for every student you want to schedule

The "Schedule This Student" check box includes the student in the Load Process.

8. Enter the student's graduation year in the "Year of Graduation" field
9. Verify the "Next School Indicator" field is completed correctly
10. Complete the Optional Settings if your school uses Buildings, Houses, and Teams

Buildings, Houses, and Teams are described and set up in Step C.

11. Click **Submit**

12. Repeat steps 5-11 to enter scheduling preferences for each of the students you select

## Auto-Filling Student Scheduling Preferences

Use the "Auto Fill Student Information" function to fill student information simultaneously for a group of students. Pearson recommends using the Auto Fill function BEFORE you set your retentions.

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Auto Fill Student Information**

The "Auto Fill Student Information" page is always blank and does not store the information you auto-filled last.

Field Name	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Next Year Grade	<input type="text" value="9"/>	<input type="text" value="10"/>	<input type="text" value="11"/>	<input type="text" value="12"/>	<input type="text" value="99"/>
Priority	<input type="text" value="40"/>	<input type="text" value="30"/>	<input type="text" value="20"/>	<input type="text" value="10"/>	<input type="text"/>
Schedule This Student	<input type="button" value="Yes"/>	<input type="button" value="Yes"/>	<input type="button" value="Yes"/>	<input type="button" value="Yes"/>	<input type="button" value="No"/>
Year of Graduation	<input type="text" value="2013"/>	<input type="text" value="2012"/>	<input type="text" value="2011"/>	<input type="text" value="2010"/>	<input type="text" value="2009"/>

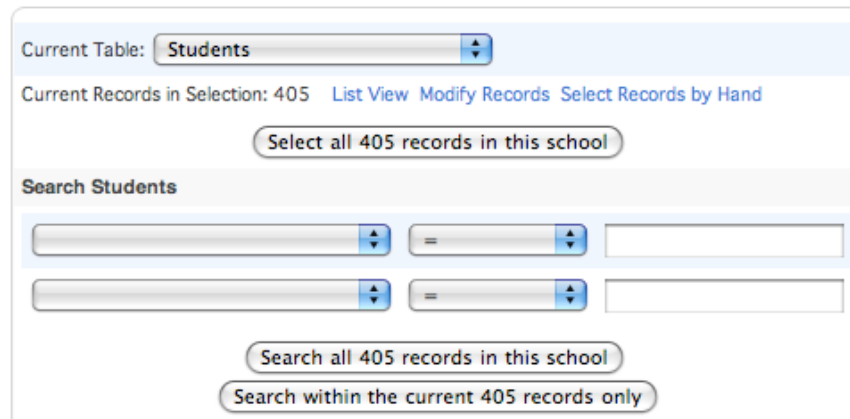
3. Enter values similar to those in the image above

When completing the page, remember that graduating seniors don't need to be scheduled.

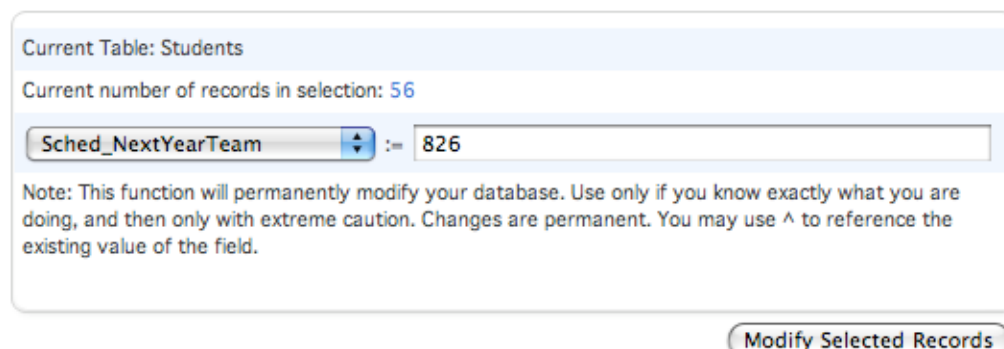
4. Click **Submit**

## Updating Student Scheduling Preferences using Update Selections

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Update Selections**



3. Choose **Students** from the Current Table menu
4. Do one of the following:
  - a. Click **Select all [#] records in this school** to select all students
  - b. Click **Select Records by Hand** to select a specific group of students
  - c. Use the Search Students fields to search for and select students that meet specific criteria, such as all students graduating in 2011
5. Click **Modify Records**



6. Choose the student field you want to edit from the menu

For example, to identify the team the selected students will be schedule with next year, choose the **Sched\_NextYearTeam** field.

7. Enter a value in the blank field, such as the Team ID

You can find this ID number by clicking **Teams** below Parameters.

8. Click **Modify Selected Records**



## Step F: Entering Student Course Requests

It is very important to complete all the previous steps before entering student course requests for next year. This does not mean completing the optional steps, but performing the Auto Scheduler setup, creating Build scenarios, completing the course catalog, and entering student information.

### Defining Grade-Level Requirements

Rather than jumping right in, spend some time researching and gathering course information. Outline the grade-level course requirements to save time and errors throughout the process. First, collect the following information for each grade level:

- Required courses
- Number of credits students must earn
- Possible semester elective courses
- Possible yearlong elective courses
- Possible no-credit courses
- Number of terms for each request
- Before- or after-school courses
- Possible lunch periods

Taking the time to gather requirement information first will make it possible for you to perform all of the following steps quickly. Use requirement information to create course groups and course request pages for each grade level.

### Course Recommendations

Teacher recommendations are another element of the request process. Certain courses will require a teacher's recommendation prior to submitting course requests. Teachers submit their recommendations in PowerTeacher. (You can edit and delete recommendations that teachers have submitted.) Administrative staff submits recommendations in Request Management on the student pages.

1. On the Start Page, search for and select a student
2. Click **Request Management > Manage Recommendations**
3. If the teacher submitted a recommendation for the student, that recommendation will be listed on the Manage Recommendations student page
4. Click the pencil icon to make changes or to delete the recommendation
5. To enter a new recommendation, click **Create New Recommendation**
6. Enter the beginning of the course number in the Course Number field, such as MAT
7. Choose the correct math class
8. Choose **09-10**, your future scheduling year, from the Scheduling Year menu
9. Enter a comment describing the recommendation in the Comments field, such as  
Teacher recommends placement in this class
10. Click **Submit**

## Creating Course Groups

Create course groups to apply to your student request screens. Course groups represent the courses that are available to a student for a specific request. For example, every student must select an English class from the English group. You can create as many course groups as needed.

1. On the Start Page, click **PowerScheduler**
2. Below Requesting, click **Course Groups**
3. Choose the order in which you want courses to be listed on the student course request pages from the menu

Note: You can sort courses by name or number.

4. Click **New** at the top of the course list

Option	Value
Name	Grade 11 English
Type	Scheduling Only
Applies to	<input type="radio"/> all schools <input checked="" type="radio"/> Scheduling Master School
Show Courses: School Master Schedule   Current Catalog	
<input type="checkbox"/> 14005 A+ Certification	<input type="checkbox"/> 10004A Geometry
<input type="checkbox"/> 10008A AP Calculus	<input type="checkbox"/> 10004B Geometry
<input type="checkbox"/> 10008B AP Calculus	<input type="checkbox"/> 13005A Government
<input type="checkbox"/> 11006A AP Chemistry	<input type="checkbox"/> 19001 Introduction to Woodworking I
<input type="checkbox"/> 11006B AP Chemistry	<input type="checkbox"/> 19002 Introduction to Woodworking II
<input checked="" type="checkbox"/> 12009A AP English Lit & Comp	<input type="checkbox"/> 22001 Introduction to Art I
<input checked="" type="checkbox"/> 12009B AP English Lit & Comp	<input type="checkbox"/> 22002 Introduction to Art II
<input type="checkbox"/> 11008A AP Physics	<input type="checkbox"/> 22007 Introduction to Ceramics I
<input type="checkbox"/> 11008B AP Physics	<input type="checkbox"/> 22008 Introduction to Ceramics II
<input type="checkbox"/> 19005 Advanced Cabinetry I	<input type="checkbox"/> 20001 Introduction to Electronics I

5. Click **Current Catalog**

Pearson recommends using the Current Catalog, the catalog from PowerScheduler, and not the School Master Schedule when creating your course groups. Using the Current Catalog will ensure a course group doesn't contain classes that aren't being offered anymore.

6. Enter a name for the course group
7. Choose **Scheduling Only** from the Type menu
8. Select where to apply the course group: all schools or the current school
9. Check the name of each course that belongs to the course group
10. Click **Submit**

## Creating Student Course Request Pages

You must create new request pages every year. Creating the pages requires several steps. Click the name of the course request page for a grade level. Then, add requirements to each page by creating single course, multi-course, and/or core requirements. Finally, preview the page to make sure it works correctly. Remember, course requests are linked to the student's next year grade level.

1. On the Start Page, click **PowerScheduler**
2. Below Requesting, click **Screen Setup**
3. Click the appropriate grade level in the Requests menu

For example, to create a course request page for next year's 9th graders, click **Grade 9**.

☐ This grade may register for classes [Preview Student Registration Screen](#)

Message to display on registration screens for students in this grade:

Number of credit hours each student must submit (excluding alternate requests) Minimum:  Maximum:

Instructions and options presented to students in this grade

[New Single Course Requirement](#) [New Multi-Course Requirement](#) [New Core Requirement](#)

Sort Order	Requirement Name	Type	Course Group
------------	------------------	------	--------------

4. Enter the minimum and maximum number of credit hours each student must request to complete the page

Minimum and maximum credit hours keep students from being overscheduled and underscheduled, but using these fields is optional.

5. Enter the message you want to display on the request screen in the text box
6. Click **Submit**

## Creating Requirements

Requirements make up the body of the request page, informing students which courses they must take and offering them selections from course groups. There are three types of requirements and each will be discussed in more detail.

- Single course requirement
- Multi-course requirement
- Core requirement

## Single Course Requirements

Use a single course requirement when students need to make one selection from a course group. For example, the juniors must choose one English class from a list of possible English classes.

1. On the Start Page, click **PowerScheduler**
2. Below Requesting, click **Screen Setup**
3. Click the appropriate grade level from the Requests menu
4. Click **New Single Course Requirement**

The screenshot shows the 'Single-Course Requirement' form with the following fields and values:

- Name of this requirement:** 11th English
- Description/Instructions:** You must choose one course.
- List of courses to present to the student in the pop-up menu:** Grade 11 English
- Must students select a course from the pop-up, or may they leave it blank?:** Must select one
- Message to display if students are required to select a course, but they leave it blank instead (leave blank for a generic message):** You forgot to select one English course.
- Request type (alternates will be used if an elective cannot be filled):** Required
- Number of requests to generate:** 1
- Item sort order (affects display only):** 2 (a number from 0 to 100)

5. Enter a Requirement Name, Description, Message to display if the requirement isn't completed correctly, and Sort Order
6. Choose a valid course group for the requirement
7. Choose if the student must select a course or if the student can leave the requirement blank

Pearson recommends you complete the page entirely to ensure a successful request form. For example, if each student must select a course from the group, choose **Must select one**.

8. Choose **Elective**, **Alternate**, or **Required** from the Request type menu

Use the Request type field to define a general priority for the request. The system schedules required requests first, elective requests second, and alternate requests third. If an elective course cannot be schedule, an alternate takes the elective's place.

9. Enter a sort order number for the placement of the requirement on the request screen

Pearson recommends that you complete the page entirely to ensure a successful request form. For example, enter the sort order number 0 to place the requirement first.

10. Click **Submit**

## Multi-Course Requirements

Use a multi-course requirement when students need to make a number of selections from a course group. You define the number they must select.

1. On the Start Page, click **PowerScheduler**
2. Below Requesting, click **Screen Setup**
3. Click the appropriate grade level from the Requests menu
4. Click **New Multi-Course Requirement**

The screenshot shows the 'Multi-Course Requirement' form. It contains the following fields and values:

- Name of this requirement:** 9th Grade Semester Electives
- Description/Instructions:** Select up to two courses.
- List of valid courses for this item:** Grade 9 Semester Electives
- Number of courses student must select to meet this requirement:** Min: 0, Max: 2
- Message to display if the number of courses selected is not correct (leave blank for a generic message):** (Empty text area)
- Request type (alternates will be used if an elective cannot be filled):** Elective
- Number of requests to generate:** 1
- Item sort order (affects display only):** 2 (a number from 0 to 100)

5. Enter a Requirement Name, Description, Message to display if the requirement isn't completed correctly, and Sort Order
6. Choose a valid course group for the requirement
7. Enter the minimum and maximum number of courses the student must select

Pearson recommends you complete the page entirely to ensure a successful request form. For example, if the student doesn't have to select a course, enter 0 in the Min field.

8. Enter a sort order number for the placement of the requirement on the request screen
9. Click **Submit**

## Core Requirements

Use a core requirement to display a set of predefined requests, such as core classes for ninth graders. Students cannot make or change selections and the core requests are added when the request page is submitted. For example, if PE9 is a core requirement, then even handicapped students will receive the request upon submitting the request screen. You will need to manually remove the requests for any student who will not be taking the course.

1. On the Start Page, click **PowerScheduler**
2. Below Requesting, click **Screen Setup**
3. Click the appropriate grade level from the Requests menu
4. Click **New Core Requirement**

The screenshot shows a 'Core Requirement' form with the following fields:










- Requirement Name:** A text box containing '9th Grade Requirements'.
- Description/Instructions:** A text area containing 'Every 9th grader must take the following courses.' with a small icon in the bottom right corner.
- List of valid courses for this item:** A dropdown menu showing '9th Required'.
- Number of requests to generate per course:** A spinner box set to '1'.
- Item sort order:** A text box containing '0' with a note '(a number from 0 to 100)'.


5. Enter a Requirement Name and Description
6. Choose a valid course group for the requirement
7. Enter a sort order number for the placement of the requirement on the request screen
8. Click **Submit**

## Previewing the Student Course Request Page

As you create all of the requirements for a grade level, preview the request page to determine if you need to make any changes.

1. On the Start Page, click **PowerScheduler**
2. Below Requesting, click **Screen Setup**
3. Click a grade level from the Requests menu
4. Click **Preview Student Registration Screen**

<b>9TH-GRADE CORE REQUIREMENTS</b> All 9th-grade students must take the following courses.	<b>Health 9</b> HE09 - 0.5 credits	<b>Phys Ed 9</b> PE09 - 0.5 credits	 
	<b>Geography</b> SOC1100 - 1 credits		
<b>9TH-GRADE ENGLISH REQUIREMENT</b> You must choose one English course.	Click the edit button to request a course →  		
<b>9TH-GRADE SEMESTER ELECTIVES</b> Choose up to two semester-long elective courses.	Click the edit button to request a course →  		
<b>ALTERNATES FOR SEMESTER ELECTIVES</b> If you would like to choose an alternate to your elective choices, choose from the list below. DO NOT choose the same courses as your Elective choices.	Click the edit button to request a course →  		
Requires between 5 and 7 credit hours. Requesting 2 credit hours. 			



## 5. Review the Request Form

Use the Pencil icon to edit the course requests for that requirement. The green check mark confirms a selection or signifies a requirement that is optional. The red exclamation mark means that the student has not yet selected a course to satisfy that requirement.

## 6. Navigate back to the Screen Setup to make changes

# Entering Student Course Requests

You have three methods to use when collecting student course requests:

- Manually entering requests for students one at a time
- Mass adding requests for students groups
- Online using the course request form

You will learn each method of entering course requests. Remember, if you have not activated the request form, you need to activate first.

Students, parents, or administrative staff members can enter course requests using the request screens. Students and their parents can enter course requests using Parent Access, and administrative staff members can enter course requests using the Modify Future Requests student page in PowerSchool or the Requests page in PowerScheduler.

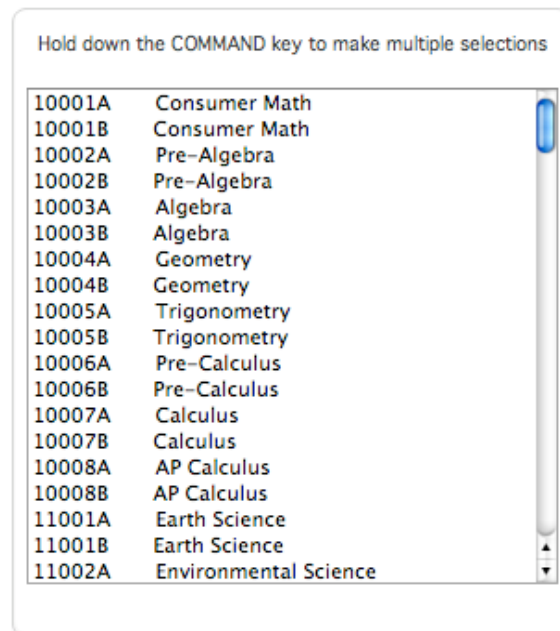
Do **NOT** modify requests by selecting a student from the Start Page and accessing the Modify Current Requests student page.

## Activating the Course Request Forms

1. On the Start Page, click **PowerScheduler**
2. Below Requesting, click **Screen Setup**
3. Click the appropriate grade level from the Requests menu
4. Check **This grade may register for classes**
5. Click **Submit**

## Entering Course Requests in PowerScheduler

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Students**
3. Search for and select your student
4. Click **Requests > New > Associate**



5. To select multiple courses, click the courses while holding the Command key (Mac) or Control key (PC)
6. Click **Submit**



7. The courses cannot be edited in the text box

If you need to make changes, click **Submit** and repeat steps 4-7. Otherwise, click **Submit**.

Number	Course Name	Note	Alt	Code	Priority	Section Type	Alternate 1	Delete
11007A	Physics		<input type="checkbox"/>		0		Associate	<input type="checkbox"/>
11007B	Physics		<input type="checkbox"/>		0		Associate	<input type="checkbox"/>
19002	Introduction to Woodworking II		<input type="checkbox"/>	E	0		Associate	<input type="checkbox"/>
CS1002	Computer Applications		<input checked="" type="checkbox"/>	E	0		Associate	<input type="checkbox"/>
ENG1100	Journalism		<input type="checkbox"/>		0	Honors	Associate	<input type="checkbox"/>

8. Click the Note icon to view prerequisite information

9. Check **Alt** to make the course request an alternate for any course that can't be scheduled
10. Enter **E** in the Code field for elective courses

Identifying elective courses is optional, but elective course requests are scheduled after required courses.

11. Define alternate requests further by using the priority field

Priority identifies an alternate course that needs to be scheduled before another alternate course. The higher the number, the lower the priority.

12. Choose an option from the Section Type menu if the course uses section types

For example, Journalism has an Honors section and a regular section. Choose **Honors** so the student won't be scheduled in the regular section of the course.

13. Click **Associate** to select an alternate for a course

If the course can't be scheduled, PowerScheduler will attempt to schedule the alternate. Selecting an alternate with this method ensures the alternate course will only replace one specific course.

14. Click **Submit**

## Entering a Course Request for Several Students

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Students**
3. Search for and select the students for whom you want to enter the course request, such as the entire 9<sup>th</sup> grade
4. Click **Functions** > **Mass Add Requests**

Option	Value
Course Number	<input type="text" value="12001A"/> <input type="button" value="Associate"/>
Section Type	<input type="button" value="v"/>
Request Type	<input type="button" value="Required v"/>
Priority	<input type="text"/>

5. Click **Associate** to select the course, then enter information in the fields
6. Click **Submit**

After mass adding requests or manually adding requests, make sure you perform the Invalid Requests group function. Invalid Requests collects all the requests a selection of students have made for the specified school year, and re-evaluates each request against the course prerequisites and recommends. When you mass add requests or manually add requests, course prerequisites and recommends are not taken into account. Therefore, it is important to perform Invalid Requests and remove any requests that don't meet the course requirements.

## Entering Course Requests in Parent Access

1. Enter your school's URL for Parent Access in the Address field of your web browser
2. Enter your username and password and click **Enter**
3. Click **Class Registration**
4. Select your course requests
5. Click **Submit**

## Entering Course Requests in PowerSchool

1. On the Start Page, search for and select a student
2. Click **Request Management > Modify Future Requests**
3. Select the student's course requests
4. Click **Submit**

## Course Prerequisites

You build a request form for the general student body, but there are times when individual students need to meet certain course requirements. Course requirements, if not met, can stop a student from requesting a course. Course requirements include a student who hasn't taken, or hasn't passed a prerequisite course, a course that needs a teacher recommendation, or a combination of these requirements. Define course requirements in the Course information found in School Setup or District Setup.

When students select a course group on the request screen, they then check the class they want to take. However, classes cannot be checked if the student hasn't met the prerequisites. For example, a 10th-grade student wants to take Chemistry 2; however, he can't check the course because he hasn't met the two requirements: completion of Chemistry 1 with a C or better, and a recommendation from a science teacher. The image shown below lists the Chemistry 2 class with no check box.

**Science Classes**

Choose one science class.

<input checked="" type="checkbox"/>	Course Name	Number	Credits	Prerequisite Note	Alerts
<input type="checkbox"/>	Biology	SCI1000	1		
<input type="checkbox"/>	Chemistry 1	SCI2000	1		
<input type="checkbox"/>	Physics	SCI2200	1		
	Chemistry 2	SCI2100	1	Students enrolling in Chemistry 2 must have successfully completed Chemistry 1 and Chemistry 1 Lab with a grade of C or better. A teacher recommendation from a teacher in the Science department is acceptable in lieu of completion of Chemistry 1. Students must also be concurrently enrolled in Chemistry 2 Lab.	Prerequisites have not been met

<< first < prev 1 next > last >>

! You may select 1 course. You have selected 0 courses.

Cancel Okay

You have some flexibility when using the prerequisites. You can define the prerequisite based on the assumption that the student will complete the course. If the student doesn't complete the course, and the request has already been made, the request will become invalid. Additionally, you can override any prerequisite by navigating to the student pages and clicking **Request Management > Override Prerequisites**. The request pages or PowerScheduler don't contain overridden information or notes.

## Course Request Tools

Once you or the students have entered all requests, use the following request tools to analyze and confirm the success of the request process.

- Course Request Tally Report
- Requests by Course Report
- Requests by Student Report
- Invalid Requests

## Step G: Defining Course Information

You've created new courses you're going to offer next year and associated them with the appropriate school. However, there is more course information to define than just adding a course to the catalog. You also need to define course parameters for scheduling, such as build types, periods per meeting, and course maximums. Defining course information is the most complex set of preferences for any item in PowerScheduler. The preferences page is very long and contains many fields, but you probably won't need to complete every field.

To define the parameters, you can perform any of the following:

- Enter parameters for each course individually
- Use the "Auto Fill Course Information" function to enter parameters for selected courses at the same time
- If you have first copied a master schedule, use the "Auto Generate Course Information" function to copy specific preferences for all your courses in that master schedule into your active catalog in PowerScheduler

## Manually Defining Course Preferences

Depending on the size of the school, enter course preferences one at a time. Notice that there are static fields on the Preferences page that cannot be changed. The static fields are copied from the Master Course List on the active side, and can only be changed on the active side.

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Courses**
3. Click a course name
4. Preferences is the default tab on the Course Information page because it very important and should be done first

The following steps focus on course preferences, but there are five other course tabs. The Assignments tab mirrors the Teacher Assignments tab and lists how many sections of the course the teacher will instruct. The Constraints tab lists any constraints entered for the course. The Relationships tab is where you enter any relationships between the course and other courses. The Requests tab lists all requests submitted for the course. The Sections tab lists the available sections of the course, but at this point in the Build process, the Sections tab will be empty. You won't see sections until after the Build. Therefore, don't work from the Sections tab; use the Assignments tab instead.

[Assignments](#) | [Constraints](#) | [Preferences](#) | [Relationships](#) | [Requests](#) | [Sections](#)

### General Information

Course Number	22011	Course Name	Advanced Ceramics I
Credit Hours	<input type="text" value="0.5"/>	Credit Type	FA
Alternate Course Number		Grade Scale	
CIP Code		Vocational Class	No

### Scheduling Preferences

Schedule This Course	<input checked="" type="checkbox"/>
Use The Course For Lunch	<input type="checkbox"/>
Exclude On Report Cards/Transcripts	<input type="checkbox"/>

**Department**

**Build Type**

**Full Catalog Description**

**Maximum Enrollment**

### Sections Defined

Sections Offered	<input style="width: 80px;" type="text" value="1"/>
Periods Per Cycle	1
Periods Per Meeting	<input style="width: 40px;" type="text" value="1"/>
Frequency	<input style="width: 40px;" type="text" value="1"/>
Terms per year	1 of 2
Allow Student Repeats in the Same Term	<input type="checkbox"/>
Allow Student Repeats in Different Terms	<input type="checkbox"/>
Balance Terms	<input type="checkbox"/>

**Valid Start Periods**

☐ Period 1

☐ Period 2

☐ Period 3

☐ Period 4

☐ Period 5

☐ Period 6

☐ Period 7

☐ Period 8

**Valid Terms**

S1

**Valid Day Combinations**

Example: (A,B)(B,D)

<b>Labs Defined</b>	
Is This Course A Lab	<input type="checkbox"/>
Lab Frequency	<input type="text" value="0"/>
Lab Periods Per Meeting	<input type="text" value="0"/>
Valid Lab Day Combinations	<input type="text"/> Example: (A,B)(B,D)
<b>Room Requirements</b>	
Facilities	<input type="text"/> <input type="button" value="Associate"/>
<b>Load Options</b>	
Load Priority	<input type="text" value="0"/>
Load Type	<input type="button" value="Academic"/>
Balance Priority	<input type="button" value="Section"/>
Use Pre Established Teams	<input type="checkbox"/>
Close Section After Max	<input type="checkbox"/>
Use Section Types	<input type="checkbox"/>
<b>Substitute Information</b>	
Don't Allow Student Substitutions	<input type="checkbox"/>
Global Substitution 1	<input type="text"/> <input type="button" value="Associate"/>
Global Substitution 2	<input type="text"/> <input type="button" value="Associate"/>
Global Substitution 3	<input type="text"/> <input type="button" value="Associate"/>

5. The Preferences page is divided into seven sections: General Information, Scheduling Preferences, Sections Defined, Labs Defined, Room Requirements, Load Options, and Substitute Information

You will enter a variety of preferences for each course, so there is no “one right way” when completing the page. Typically, however, you will fill out Scheduling Preferences and Sections Defined.

6. Check **Schedule This Course** if the course will be offered next year

PowerScheduler will ignore any courses that don't have “Schedule This Course” checked.

7. Check **Use The Course For Lunch** if the course is a lunch course

8. Check **Exclude On Report Cards/Transcripts** if you want to exclude the course on students' report cards and transcripts
9. Click **Associate** next to the Department field
10. In the Choices Dialog window, select a department and click **Submit**

Pearson recommends associating a department to the course. If the course is already associated to a department on the PowerSchool side, it will copy over to PowerScheduler when you create the course catalog. Notice that the word "Department" is blue. Click **Department** and a window will appear giving you access to edit and create department codes.

11. Choose **Standard** from the Build Type menu

The majority of courses are Standard. However, you have two other Build Type options: Lab and LabFloat. If the course has a lab that meets one extra period following the class on a specific day in your cycle, choose Lab. If the course has a lab that meets one extra period but isn't attached to the course, choose LabFloat. If the lab is to have a separate grade or appear on a report card, it probably should be defined as a separate course. Then, create an assignment to associate the same teacher to the Lab course.

12. If you wish to add a detailed description of the course, enter the description in the "Full Catalog Description" field
13. Enter the maximum number of students who can be enrolled in each section of the course in the Maximum Enrollment field
14. You should not manually alter the Sections Offered

The Sections Offered field pulls information from the Assignments tab. As you enter teacher assignments, the total number of sections populates the Sections Offered field. If the Sections Offered number does not match the total assignments number, you will receive an error in the validation.

15. The "Periods Per Cycle" field is static, and it populates based on the "Periods Per Meeting" and Frequency field values
16. Enter the number of periods the course meets in the "Periods Per Meeting" field
17. Enter the number of times during the cycle the course meets in the Frequency field

For example, if you have a 2-day cycle and the course meets one of the two days, enter 1. If you have a 2-day cycle and the course meets every day, enter 2. If you have a 1-day cycle, then every course's frequency will be 1.

18. The "Terms per year" field is static, and it populates based on the valid terms selected
19. Check **Allow Student Repeats in the Same Term** if students can take the course multiple times in the same term

Certain elective courses can be repeated in the same term, such as Study Hall.

20. Check **Allow Student Repeats in Different Terms** if students can repeat the course in another term

Certain semester courses can often be repeated in different terms, such as Choir.



21. Leave the Balance Terms check box clear

The Balance Terms check box balances the number of sections across the valid terms for courses with multiple sections. Pearson recommends letting the engine place the sections in the appropriate terms.

22. Leave the "Valid Start Periods" check boxes clear for maximum flexibility

If you don't select any periods, the engine can place the course in any period. The "Valid Start Periods" check boxes are very restrictive and specify when a course must be scheduled. For example, if Band needs to be scheduled 1st period, select the **Period 1** check box. The engine will only schedule Band 1st period.

23. Click **Associate** next to the Valid Terms field

24. In the Choices Dialog window, select **2010-2011** and click **Submit**

When choosing valid terms, select matching term lengths, such as S1 and S2, not S1 and the full year.

25. Enter the days the course is available for scheduling in the "Valid Day Combinations" field if your school has multiple days in its cycle

For example, if your school has an A and B day, you could enter A to limit the course from being schedule on the B day.

26. Check **Is This Course A Lab** if the course has a lab

If you chose the Lab or LabFloat Build Type for the course, you must check "Is This Course A Lab." If the course includes a lab within the course, then you don't need to define the Labs Defined section.

27. Enter how many labs are in the cycle in the Lab Frequency field

28. Enter how many periods each lab will meet in the "Lab Periods Per Meeting" field

29. Enter the days the lab will meet if your school has multiple days in the cycle in the "Valid Lab Day Combinations" field

30. Click **Associate** next to the Facilities field

31. In the Choices Dialog window, select a facility and click **Submit**

For example, associating the Chemistry Lab facility ensures that Chemistry will be taught in that room, as long there is a room with that same facility. If a room doesn't have that same facility, you will get an error in the validation. If the course does not have a facility associated with it, leave the Facilities field blank.

32. Enter a load priority for every course in the Load Priority field

Use the Load Priority to load students into higher priority courses first. For example, AP Chemistry is an advanced class with one section. AP Chemistry needs a higher priority. You can enter the following load priority values: 1, 3, 7, 15, 31, and 63. The lower the number, the higher the priority. Electives traditionally have a higher number so that the engine will schedule the required courses first and electives last.

33. Choose **Academic** from the Load Type menu

You have two additional Load Type options: Elective and Alternate. The system uses

the load type to keep the types of course balanced across terms. This way, students won't have all their academic courses first semester and elective courses second semester.

34. Choose one of the following options from the Balance Priority field:

- a. Choose **Section** to keep the number of students balanced across sections
- b. Choose **Gender** to keep the number of males and females balanced in each section
- c. Choose **Grade** to keep the grade levels balanced in each section
- d. Choose **EthnicCode** to keep the ethnicities balanced in each section
- e. Choose **House** to keep the members of each house balanced in each section

Balance priority is the secondary priority field to keep sections balanced. Section is the default value.

35. Check **Use Pre Established Teams** if the course uses teams

36. Check **Close Section After Max**

If the check box isn't selected, the section's "Close section at max" check box won't be selected either. Then, a section could be overfilled.

37. Check **Use Section Types** if the course uses section types

38. Check **Don't Allow Student Substitutions** if the course cannot be substituted with another course

Leave the "Don't Allow Student Substitutions" check box clear if you want to allow substitutions. If you check "Don't Allow Student Substitutions," you don't need to complete the remaining field.

39. If this course has a global substitution, click **Associate** next to the "Global Substitutions 1" field

40. In the Choices Dialog window, select the substitute course and click **Submit**

41. Use the Global Substitution 2 and 3 fields to define subsequent substitutes

42. Click **Submit**

## Auto-Filling Course Information

The "Auto Fill Course Information" function enters course information simultaneously for all courses or selected courses. Pearson recommends using the "Auto Fill Course" function, but be careful. After completing the Auto Fill function, use the Course List report to view the information you auto-filled, as well as information that may be missing. If you want to auto-fill all courses, skip steps 2-5 in the following instructions.

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Update Selections**
3. Choose **ScheduleCourseCatalogs** from the Current Table menu
4. Click **Select all [x] records in this school**

5. Do one of the following:
  - a. Click **Select Records by Hand**, select the courses you want to auto-fill with the course information, and click **Submit**
  - b. Use the Search ScheduleCourseCatalogs fields to search for and select courses that meet specific criteria, such as all courses in the English department
6. Below Tools, click **Functions > Auto Fill Course Information**
7. Select to apply the changes to all courses or those you just selected
8. Complete all the fields that need to be auto-filled for the courses you selected

The information you enter will vary depending on the courses.

9. Click **Submit**

## Auto-Generating Course Information

To utilize the "Auto Generate Course Information" function, you must first copy your master schedule from last year. Auto Generate will overwrite any course changes you have already defined for the new scenario.

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Auto Generate Course Information**
3. Check **Select check box to verify the command** to verify that you want to copy scheduling parameters from the courses in the current year's master schedule to the courses for next year's master schedule
4. Click **Submit**

## Defining Course Relationships

After you enter course information, you could define relationships between courses. For example, if a teacher instructs several different foreign language courses at the same time and in the same room, relate the courses so that the system knows it is possible to schedule the courses together. Relationships alert the system that it must consider other courses when determining the best place for a course in the master schedule or student schedule. Use relationships to ensure student schedules are loaded correctly and ensure the master schedule is built correctly. If you define a relationship for a course with another course, you do not need to define the relationship for both courses.

You can create several types of course relationships in PowerScheduler. Relationships either apply to the build or load. One type, Block for Building With, requires that the relationship be defined further with a Relationship Code. Use any of the following course relationships:

- Is Blocked for Building With – course that must be related to one another in the schedule, for example pottery and ceramics
- May Be Built Concurrent With – courses that can meet at the same time, in the same place, and taught by the same teacher
- Has a Load Coreq of – courses that are scheduled during the same term

- Has a Load Postreq of – courses that must be scheduled after the related course
- Has a Load Prereq of – course that must be scheduled before the related course
- Must Not Load Coreq With – courses that cannot be scheduled during the same term
- Must Load Distinct (no term overlap) With – courses cannot be loaded into overlapping terms
- Must Load the Term After – courses that must be loaded after in sequential terms
- Must Load the Term Before – courses that must be loaded before in sequential terms

The Coreq, Postreq, and Prereq relationships only relate to the current scheduling year. PowerScheduler does not check historical data for previous courses. The following steps outline how to create a relationship, but do not cover each relationship individually.

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Courses**
3. Choose **Relationships** from the menu at the top of the course list
4. Click the name of the course for which you want to define a relationship and click **New**

Option	Value
Course Number	<input type="text"/> Associate
Relationship Type	<div>Is Blocked for Building With ✓ May Be Built Concurrent With Has a Load Coreq of Has a Load Postreq of Has a Load Prereq of Must Not Load Coreq With Must Load Distinct (no term overlap) With Must Load the Term After Must Load the Term Before</div>
Relationship Code	<input type="text"/>

5. Click **Associate** to select the course you are relating to the course
6. Choose a type from the Relationship Type menu

The available types can be seen in the image above. Keep in mind, the Prereq relationship type is separate from the prerequisites rules and notes entered earlier.

7. If you choose **Is Blocked for Building With**, choose a code from the Relationship Code menu

Block relationships build sections of courses and links between sections. For example, the section link ensures that the same students scheduled into the History section will be scheduled into the Science section. The Block relationship is used for the build and the section link is used for the load. You have access to the following codes:

- Simultaneous - the blocked course must be scheduled at the same time as the current course, but the number of sections and teachers can differ
- Before or After - the blocked course must be scheduled either before or after the current course in reference to the periods in your day (creates a section link)
- Before - the current course must be scheduled before the blocked course in reference to the periods in your day (creates a section link)
- After - the current course must be scheduled after the blocked course in reference to the periods in your day (creates a section link)
- Different Terms - the blocked course must be scheduled on the same day and period as the current course, but in a different term (creates a section link)
- Combine Into - the blocked course must be scheduled at the same time as the current course and all parameters must match
- Opposite Days - the blocked course must be scheduled on an opposite day from the current course (creates a section link)
- Section - the blocked course must have the same students in each section as the current course (creates a section link)

8. Click **Submit**

## Step H: Defining Teacher Information

Define teacher scheduling information for every teacher who instructs at least one course at your school. You can also assign teachers to the courses they will teach. Remember, in order to schedule a teacher he or she must be made active. You can either manually enter teacher information and assignments, or auto-fill information and auto-generate assignments.

Before you can start entering teacher assignments, you need to get your teachers into PowerScheduler. Begin on the PowerSchool side.

1. On Start Page, click **Staff**
2. Search for and select the staff member
3. Click **Schedule Setup**

Required Settings	
Department	<input type="text"/> Associate
Preferred Room	<input type="text"/> Associate
Maximum Consecutive Periods	<input type="text" value="1"/>
Maximum Periods Free	<input type="text" value="1"/>
Schedule This Teacher	<input type="checkbox"/>
Is Always Free?	<input type="checkbox"/>
Optional Settings	
Building Code	<input type="text"/> Associate
House Code	<input type="text"/> Associate
Team Code	<input type="text"/>
Maximum Student Load	<input type="text" value="0"/>

Submit

4. Check **Schedule This Teacher**

If a teacher won't be returning next year, clear the "Schedule This Teacher" check box.

5. Click **Submit**

You don't have to complete this field for every teacher manually. Use the "Set Staff Field Value" group function to set this field for all teachers. The remaining fields on the Schedule Setup page will be covered in the next section.

## Manually Entering Teacher Information

The majority of information for teacher scheduling preferences is unique to each teacher. Manually entering scheduling preferences one at a time is practical.

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Teachers**
3. Choose **Preferences** from the menu at the top of the teacher list and click a teacher's name

The screenshot shows the 'Preferences' tab for a teacher in the PowerScheduler interface. At the top, there are navigation links: 'Assignments | Constraints | Matrix | Preferences | Schedule', with 'Preferences' being the active tab. The form is divided into two main sections: 'Required Settings' and 'Optional Settings'. In the 'Required Settings' section, there are fields for 'Department' (containing 'ART'), 'Preferred Room' (containing '2'), and 'Maximum Consecutive Periods' (a dropdown menu set to '5'). There are also checkboxes for 'Schedule This Teacher' (checked), 'Is Always Free?' (unchecked), and 'Schedule For Lunch' (unchecked). Each of the first three fields has an 'Associate' button next to it. The 'Optional Settings' section includes fields for 'Building Code', 'House Code', 'Team Code' (a dropdown menu), and 'Maximum Student Load' (containing '0'). Each of these fields also has an 'Associate' button next to it.

4. Click **Associate** next to the Department field to associate the teacher with a specific department
5. Click **Associate** next to the Room field to associate the teacher with a specific room, but remember this is a preference only
6. Choose a value from the Maximum Consecutive Periods menu, as mandated by the administration

The "Maximum Consecutive Periods" menu defaults to 1. Pearson recommends not using the default value.

7. Verify the "Schedule This Teacher" check box is selected

If a teacher won't be returning next year, clear the "Schedule This Teacher" check box.

8. Complete the remaining fields, but the information you enter will vary depending on the teacher
9. Click **Submit**

## Auto-Filling Teacher Information

Use the "Auto Fill Teacher Information" function to fill in teacher information simultaneously for all teachers or selected teachers. If you want to auto-fill all teachers, skip steps 2-4 in the following instructions.

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Update Selections**
3. Choose **Teachers** from the Current Table menu
4. Do one of the following:
  - a. Click **Select Records by Hand**, select the teachers you want to auto-fill with teacher information, and click **Submit**
  - b. Use the Search Teachers fields to search for and select teachers who meet specific criteria, such as all teachers in the English department
5. Below Tools, click **Functions > Auto Fill Teacher Information**

Field Name	Value
Department	ENG <span>Associate</span>
Preferred Room	<span>Associate</span>
Maximum Consecutive Periods	No Change
Schedule for Lunch	No Change
Schedule This Teacher	No Change
Is Always Free?	No Change

Submit

6. Select to apply the changes to all teachers or those you just selected
7. Complete the fields you want to auto-fill for the selected teachers

For example, click **Associate** next to the Department field to assign the eight teachers to the English department.

8. Click **Submit**



## Manually Entering Teacher Assignments

Entering teacher assignments is a very important part of the scheduling process. Teacher assignments define which courses and how many sections of each course a teacher will instruct. You can also add teacher assignments at the Course level in PowerScheduler using the link for Assignments. If you enter or edit an assignment for a teacher or course, PowerScheduler automatically updates the information in both places. Run the Course Request Tally report often to help you decide on the number of assignments for each teacher.

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Teachers**
3. Choose **Assignments** from the menu at the top of the teacher list
4. Click a teacher's name and click **New**

Option	Value
Course Number	<input type="text" value="SCI3000"/> <input type="button" value="Associate"/>
Section Type	<input type="text"/>
Number of Sections	<input type="text" value="2"/>
Schedule Term Code	<input type="text"/>

5. Click **Associate** next to the Course number field to select the course you want to assign to the teacher
6. Choose a Section Type

The Section Type menu is optional.

7. Enter the number of sections for the teacher

The "Number of Sections" field is required.

8. Choose the Term Code from the menu

The "Schedule Term Code" menu is optional. If a term isn't chosen, the assignment defaults to the Valid Terms selected for the course. For example, if the course has Valid Terms of S1 and S2, and you leave term blank, the engine will choose either S1 or S2. If you want to specify a specific term, choose one from the menu.

9. Click **Submit**

## Auto-Generating Teacher Assignments

To utilize the “Auto Generate Teacher Assignments” function you must copy over a master schedule from last year. Auto Generate will overwrite any changes to the teachers’ assignments you have defined.

1. On the Start Page, click **PowerScheduler**
2. Below Tools, click **Functions > Auto Generate Teacher Assignments**
3. Check **Select check box to verify the command**
4. Click **Submit**

## Step I: Defining Build Constraints

Restrict the way the system builds the master schedule. Use build constraints to tell the system exactly how you want to build your schedule. There are eleven types of build constraints you can define. Below is list of the available Build constraints.

- Course Optimize – overrides the global sampling parameters
- Course Restrict – restricts sections to a specific period or day
- Course Room – assigns courses to a specific room
- Course Team – blocks teachers and courses together
- Pre-Schedule – schedules sections ahead of time
- Room Free – keeps a room from being scheduled
- Schedule Break – adds flexibility to a teacher's maximum classes in a row count
- Teacher Dovetail – schedules partial course together to take up less room
- Teacher Free – keeps a teacher from being schedule a specific period(s)
- Teacher Part-time – defines available periods for part-time teachers
- Teacher Team – permits teachers to teach sections outside their team

The more constraints you define, the less flexibility you have to build your schedule and the less optimal the resulting schedule will be. Use the fewest number of constraints required to accomplish your scheduling goals.

1. On the Start Page, click **PowerScheduler**
2. Below Resources, click **Constraints**
3. Click the build constraint you want to define, such as **Pre-Schedule**
4. Click **New**

5. Enter information as required by the fields on the constraint page
6. Click **Submit**

Listed below the Build constraints are Load constraints. However, these apply to the Load process and should not be defined until after you build your master schedule. If you created any Block relationships that create section links, those section links will be listed automatically with the Load constraints.

## Step J: Building Course Rank

The course rank defines the order in which the system schedules courses into the master schedule. The rank is a value that the system assigns to a course according to how difficult it is to schedule. As the system fills the master schedule with courses during the build, it becomes more difficult to schedule each successive course. Therefore, the order in which the system schedules courses is important and is based on the following characteristics:

- Number of sections per term
- Demand for the course
- Constraints

First, the system builds the course rank based on course definitions and constraints. The system assigns each course a sequential number in increments of ten (such as 10, 20, 30). Then, you can change the rank of some courses manually, based on your experience, or on special circumstances not otherwise reflected in course definitions or constraints.

### Building the Initial Course Rank

When you initially build the course rank, the system displays the courses in the order of the system has determined, based on the course definitions and constraints.

1. On the Start Page, click **PowerScheduler**
2. Below Processing, click **Course Rank**

The screenshot shows a web interface for managing course ranks. At the top, there are two buttons: "Build Rank" and "Update Rank". Below these is a table with the following columns: "Delete", "Sys Rank", "Rank", "Crs Num", "Crs Name", "Sections", "PPC", "Demand", "Crs Conflicts", "Stu Conflicts", "Constraints", and "Comments". The table is currently empty. At the bottom right of the interface is a "Submit" button.

3. Click **Build Rank**

Even though no current course rank appears on the page, the confirm message will always appear when you click Build Rank.

Please confirm you want to delete the current course rank and build a new course rank by pressing the submit button. The operation will take several minutes to complete.

Submit

4. Click **Submit**

## Changing the Course Rank

After the system builds the course rank, you can make manual adjustments. Manual adjustments are rare, though. However, you cannot change the rank of a course to be higher than a prescheduled course. Prescheduled courses are always the first courses scheduled.

1. On the Start Page, click **PowerScheduler**
2. Below Processing, click **Course Rank**

The following image is a portion of the Course Rank page.

<div>Build Rank</div> <div>Update Rank</div>											
Delete	Sys Rank	Rank	Crs Num	Crs Name	Sections	PPC	Demand	Crs Conflicts	Stu Conflicts	Constraints	Comments
<input type="checkbox"/>	10	10	18001	Band	1	5	77	67	1061	Yes	
<input type="checkbox"/>	20	20	18002	Chorus	1	5	80	53	975		
<input type="checkbox"/>	30	30	22004	Art II	1	1	61	35	1159		
<input type="checkbox"/>	40	40	22020	Advanced Sculpting II	1	1	69	40	1107		
<input type="checkbox"/>	50	50	19004	Cabinetry II	1	1	67	43	1081		
<input type="checkbox"/>	60	60	22010	Ceramics II	1	1	61	44	1012		
<input type="checkbox"/>	70	70	22018	Sculpting II	1	1	61	44	977		

3. Locate the course for which you want to change the system-assigned rank and change the value in the Rank column

If Advanced Sculpting II needs to be ranked above Art II, then change the ranking for the two courses. The Sys Rank column continues to display the rank value the system originally assigned to the course.

<div>Build Rank</div> <div>Update Rank</div>											
Delete	Sys Rank	Rank	Crs Num	Crs Name	Sections	PPC	Demand	Crs Conflicts	Stu Conflicts	Constraints	Comments
<input type="checkbox"/>	10	10	18001	Band	1	5	77	67	1061	Yes	
<input type="checkbox"/>	20	20	18002	Chorus	1	5	80	53	975		
<input type="checkbox"/>	30	40	22004	Art II	1	1	61	35	1159		
<input type="checkbox"/>	40	30	22020	Advanced Sculpting II	1	1	69	40	1107		
<input type="checkbox"/>	50	50	19004	Cabinetry II	1	1	67	43	1081		

4. Click **Submit**

## Updating the Course Rank

If you edit the number of sections of a course, significantly change the number of student course requests, or add or delete constraints, you must update the course rank. The system saves any manual changes you made to course rank values, and updates those you have not changed.

1. On the Start Page, click **PowerScheduler**
2. Below Processing, click **Course Rank > Update Rank**
3. Click **Submit**

## Rebuilding the Course Rank

If you make several changes, including adding or deleting a course, you need to rebuild the course rank from scratch. Rebuilding the course rank will cause the system to overwrite all manual changes you previously made to the course rank.

1. On the Start Page, click **PowerScheduler**
2. Below Processing, click **Course Rank > Build Rank**
3. Click **Submit**

## Step K: Validating and Preparing to Build

After you complete the Prepare to Build steps and download the PowerSchool Scheduling Engine, you need to validate the data you entered during these steps. All the following information is checked during a validation:

- All courses selected as scheduled must be in the rank
- All courses assigned to teachers must be in the rank
- Each course has a room that will handle its capacity
- Student course requests have been dropped if a course is not scheduled

When you validate the data, PowerScheduler also lists any problems with the data you entered during the prepare process. For example, the system alerts you if you assigned too many course sections to a teacher, or if a student who is to be scheduled does not have any course requests.

### Downloading the Engine

Download and install the PowerScheduler Engine on the local machine you plan to conduct the build with, prior to validation. Below Tools, click **Engine Download** and select the link to download and install the engine to your computer. Once the engine is downloaded, you are ready to validate.

1. On the Start Page, click **PowerScheduler**
2. Below Processing, click **Build**

The screenshot shows a web interface for the PowerScheduler. It has three main sections: 'Validate', 'Build', and 'Optimize'. The 'Validate' section has a 'Validate only' option with a checked checkbox and a description '(Performs only a validation of the scheduling data)'. The 'Build' section has a 'Build master schedule' option with a selected radio button and a description '(Creates schedule from scratch overwriting any existing schedule from the scenario)', and a 'Use locked master records' checkbox which is unchecked. The 'Optimize' section has an 'Optimize master schedule' option with an unselected radio button and a description '(Creates a previously built schedule by attempting to reschedule individual courses to reduce conflicts to improve balance)'. Below this, there are input fields for 'Time allowed for optimizations' (with 'hour(s)' and 'minute(s)' labels) and 'Skip courses with ranks above'.

3. Check **Validate only**
4. Click **Execute**



## The Results

The Build Results Log will not only contain any messages or errors concerning the Build, but also basic scheduling engine information. The scheduling engine information is always listed first and will look similar to the following information:

Info Engine version: 3.0.2.0.0201

Info Engine platform: OS X / Intel

Info Started schedule: Tue, Sep 25 at 11:59:47.

Info: You have 87 validation errors.

Info Total run time: 0.22 seconds.

Info Finished schedule: Tue, Sep 25 at 11:59:47.

## Correcting the Errors

Errors are PowerScheduler's way of saying: "I can't work with this." Maybe you have given PowerScheduler contradictory information. Maybe you told PowerScheduler something that it doesn't understand. Whatever the case, you can't attempt to build a master schedule until you clear all validation errors.

There are three types of messages:

- Info – these messages are informational and about what version of the engine and platform you are operating when you ran the validation. For example, how many errors and how long it took to run the validation is Info.
- Warning – these are "red flag" messages from the engine stating that these could be potential issues for you to fix or cleanup later. Basically your information is not 100% accurate.
- Error – these messages are validation errors and the scheduling engine will not move forward with a build until all Error messages are fixed or removed. Removing an error refers to not scheduling the course when you can't fix the error.

To correct the errors, click **(Q)** next to Build below Processing. You will find errors in the Results log. Many errors are related to one another and if you correct one error or make the value valid, the other errors will be corrected as well. Pearson recommends running the validation often while fixing errors. Validation will remove the corrected errors and present a real list of errors. Continue to run the validation until the results are error-free.

## Common Errors

There are no limits to the types of validation errors that might occur, but the following errors are very common.

**Error:** The teacher Assignment file contains an invalid teacher for Course 13003A.

**Error:** Invalid section count found in the Course file. The course is 13003A [World History I], the section count is 4, and the assignment section count is 0.

**Error:** Invalid Department Code Found in the Teacher file. The teacher name is Fielding, Margaret B, the invalid code is Social Studies.

- Some errors are related to one another. Therefore, if you correct one error or make a value valid, the other errors are removed. For example, there are three errors listed above, but focus on the teacher file error. Social Studies is an invalid code because department codes have a maximum of 10 characters. Change the Social Studies code to SOC, then change the department code associated to the teacher and the course. Once the department codes are valid, so are the assignments associated to the teacher.

**Error:** The teacher is oversubscribed: The teacher has been assigned too many courses/sections. The teacher's name is Martin, Gabriel U.

- A teacher with more assignments than periods in the day is oversubscribed. Verify what assignments you gave the teacher. Sometimes during a build, assignments are switched, but not everything is deleted.
- If the assignments look accurate, then most likely the teacher is teaching courses that are related. Verify the courses and their relationships are set up correctly with the accurate relationship Type and Code.
- Finally, make sure the course is defined correctly in the Course Preferences.

**Error:** The previous error message, 90, has occurred 25 times. This error message will not be printed again.

- When you look at the validation error results and see that the same type of error is listed 25 times, check all the courses for the same potential error. If you only fix the 25 errors listed, the next time the validation report is run the next 25 will appear. So if you see this error on the first validation report, be aware there could be more than the 25 listed.

**Error:** Invalid section count found in the Course file. The course is 20006 [Robotics II], the section count is 2, and the assignment section count is 1.

- This error occurs when one assignment and one section count are entered, but after running a build you decide that this course needs two sections. You changed the sections offered on the Course Preferences page, but you forgot to change the assignments.

**Error:** There's no room to host the course due to the course max, facilities, or department. The course is 15005 [French I].

- This is a specific error, but it is often the most difficult to fix. The error actually tells you the three fields of information to check. "Max" is the max enrollment of the course. "Facilities" are the facilities associated to the course. Verify you have associated the correct department code to the course. If all three fields are correct, there is only other place to look for the error, the room. You schedule sections of French I into rooms and use departments and facilities to filter the sections into specific rooms. Compare the course information to the room information.

**Error:** The Student requests multiple times of the same course, but the course does not allow repeating requests. The student name is Danger, Rudy, and the course is 14009.

- There are three ways to remove this error. First, if the student(s) are to only have one request for that course number, navigate to the PowerScheduler and click **Courses**. Click the course name, and then click **Requests**. All the students who have requested the course are listed. For any student listed twice, check **Delete** for one of the requests. Finally, click **Drop Requests**.

- If the students are allowed to have only one request, run the Course Request Tally report. Click the total number of requests, and use the “Mass Delete Requests” function to delete the first occurrence of the requests.
- If the students are allowed to request the course more than once, then navigate to the Course Preferences page. Check **Allow Student Repeats in the Same Term**, or check **Allow Student Repeats in Different Terms**.

**Error:** The Teacher Assignment file contains a term that is not possible for this course. The teacher is New PE, First Aid, the course is 16002 and the invalid term is S2.

- The teacher assignment is not valid according to the Course Preferences page. During a build, decisions are made to make the build easier, and this requires changes. Although the teacher assignments were changed, the course assignments were not.

**Warning:** The teacher's preferred room is not suitable for the course the teacher is teaching. The teacher name is Norberg, Shel K, the preferred room is 502, the course is 15005.

- Often a teacher instructs multiple subjects. However, you associated a specific department code to this teacher, and this teacher is teaching course(s) that are not associated to that department. You could also have a problem with the course maximum versus the room maximum. This warning does not mean the courses won't get scheduled.

**Warning:** Student has too many requests. The student is Ackerman, Bob. Out of 80 time slots available to schedule, requests fill 84.

- Students can be associated with as many or as few requests as a school allows. In this case, if a majority of the students have this warning, then the load percent will be very low. However, the percent is false because the majority of the students will be fully scheduled. The slots are terms times days times periods. So if you have a master schedule with semesters (2 terms), 1 day, 8 periods, this would say 16 time slots.

## What Comes Next?

After you fix the errors the validation presents, you are ready for the next step. Pearson strongly recommends that you sign up for and attend a Build Workshop. Give yourself enough time between completing the Prepare to Build course and the Build Workshop to complete all steps up to the validation. Ideally, running a validation and looking at the validation errors before the workshop will give you a greater chance for successfully completing a good master schedule by the end of the workshop.

For more information on validating data, see The PowerScheduler User Guide and Scheduling Build and Load Process documents available on PowerSource. Also, investigate the other PowerScheduler trainings and knowledgebase articles available on PowerSource.

