PowerScheduler
User Guide

PowerSchool
Student Information System

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This edition applies to Release 10 of the PowerSchool software and to all subsequent releases and modifications until otherwise indicated in new editions or updates.

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Preface

Use this guide to assist you while navigating PowerSchool. This guide is based on the PowerSchool online help, which you can also use to learn the PowerSchool Student Information System (SIS) and to serve as a reference.

The PowerSchool online help is updated as PowerSchool is updated. Not all versions of the PowerSchool online help are available in a printable guide. For the most up-to-date information, click Help on any page in PowerSchool.

Referenced Sections

This guide is based on the PowerSchool online help, and may include references to sections that are not contained within the guide. See the PowerSchool online help for the referenced section.

Security Permissions

Depending on your security permissions, only certain procedures may be available to you.

Navigation

This guide uses the > symbol to move down a menu path. If instructed to "Click **File > New > Window**," begin by clicking **File** on the menu bar. Then, click **New** and **Window**. The option noted after the > symbol will always be on the menu that results from your previous selection.

Notes

It is easy to identify notes because they are prefaced by the text "**Note:**."

Master Schedule Overview

Without the proper tools, building a school's master schedule can be a difficult and time-consuming process. When you build a schedule, you must not only consider periods and classes, but also student course requests, teacher schedules, teacher course requests, and dozens of other factors that make it a difficult process.

PowerSchool considers all schedule factors and determines the best possible schedule from hundreds of thousands of possibilities. The resulting master schedule satisfies the most requirements and minimizes the most conflicts.

Building a school's master schedule is done in four phases:

- *Prepare to Build the Master Schedule*
- *Build Master Schedule Introduction*
- *Load Students*
- *Commit the Master Schedule*

Much of the work necessary to create a master schedule must be completed before building the schedule. To prepare to build a master schedule, you must define scheduling parameters, such as courses and classrooms, and enter student course requests, teacher assignments, course information, and schedule constraints. The system weighs all of the parameters that you define and generates the best possible master schedule.

Because there are many ways to arrange a master schedule, you can create test scenarios using your data and different variables to determine the best possible results for your school. For example, you might create several different scenarios containing more or fewer constraints to determine how the system arranges your courses. You can save and modify these scenarios as you work toward the best possible master schedule.

Complete all of the steps in the section *Prepare to Build the Master Schedule* before you can proceed to the section *Build Master Schedule Introduction*. After building, load student requests into the master schedule and commit the master schedule to PowerSchool.

Generally, schools follow the build, load, then commit process when creating their master schedules. Though this suggested series of steps applies to most situations, there are exceptions. For example, you can build a master schedule without loading student schedules; instead, you could import student schedules. However, doing so will not take into consideration section size maximums or load constraints. You can also load schedules without first building a master schedule if you copy or import schedules or if you manually built a master schedule.

During both the preparing and building phases of this process, you will likely want to run certain reports. See *Master Schedule Reports* for descriptions of scheduling reports that you

may use. There are several checklists to help you throughout the process. For more information, see *Checklists*.

When you click **PowerScheduler** on the start page, the Scheduling page displays for each scenario the name, date of the last master schedule build, last load of the student schedules into the master schedule, number of students with requests and satisfied requests after the last load, and percentage of students without scheduling conflicts.

Note: The Students With Requests and Students Without Conflicts statistics only update after the build or the load finish completely.

The status of each scenario appears. Only one scenario can be active at any given time; the others are considered inactive. Also, the Scheduling page displays for each scenario the percent of students scheduled, the percent of core requests scheduled, and the percent of satisfied student course requests.

The PowerScheduler menu displays the main scheduling functions, which are designed and sequenced to help you build your master schedule. The main scheduling functions list is divided into the following functional areas:

Requesting

- **Course Groups:** Create course groups in preparation for creating request forms.
- **Screen Setup:** Create the request forms that will be used for entering student course requests.

Scheduling Setup

- **Scenarios:** Maintain your schedule scenarios. You can select a scenario or create a new one.
- **Auto. Scheduler Setup:** Set up certain defaults for build scenarios. This is the starting point when building a master schedule, since you must begin by setting up the Scheduling Years and Terms, Days, and Periods before you can proceed with building your master schedule.
- **Course Catalogs:** Create or edit a course catalog.
- **Years & Terms:** Define the schedule years and terms.
- **Periods:** Define the schedule layout for periods.
- **Days:** Define the schedule layout for days.
- **Buildings:** Define the names of buildings.
- **Constraints:** Define constraints for the schedule, such as days that teachers are free, prescheduled courses, and breaks.
- **Departments:** Define the names of departments.

- **Facilities:** Define the names of facilities.
- **Houses:** Define the names of houses.
- **Section Types:** Define the section types of courses, such as special education.
- **Teams:** Define teams.

Resources

- **Courses:** Define schedule information for each course in your course catalog, such as assignments, constraints, and relationships.
- **Rooms:** Define classroom information, such as physical size and location.
- **Students:** Define student information, such as constraints, requests, and preferences.
- **Teachers:** Define teacher information, such as assignments, teams, and homerooms.

Processing

- **Course Rank:** View the system-generated course rank or change the order of the course rank.
- **Build (Q):** Build the master schedule.
- **Load (Q):** Load student information, such as requests, into the master schedule.
- **Automated Study Hall:** For students that have gaps in their schedules, enroll those students into study hall periods.
- **Commit:** Commit the built master schedule to PowerSchool.

Schedule

- **Master Schedule:** Make changes to your master schedule once it is built but before it is committed. Change sections, teachers, student course requests, and schedules.
- **Visual Scheduler:** Use to create your master schedule using drag-and-drop capabilities.
- **Sections:** Create a new course section or edit information about an existing one.

Tools

- **Checklist:** Use this checklist to keep track of all the tasks needed to prepare to build a master schedule.
- **Engine Download:** Download a current version of the scheduling engine. This link will be updated as the engine is updated.

- **Functions:** Perform functions such as calculate sections and update selections.
- **Reports:** Run all schedule-related reports.

To return to the PowerScheduler menu when the main menu changes, click **PowerScheduler** in the navigation path.

Checklists

Refer to several checklists to help you as you prepare to build and load the master schedule. Access the checklists from either PowerSchool or PowerSchool Help:

- Scheduling Checklist: This checklist guides you through each process when building a master schedule. It is especially helpful when multiple people are building the master schedule, since you can set the status of each step from "No Status" to "In Progress" to "Complete." Enter comments for each step or for the overall process to share information. This checklist displays items for both building a master schedule and loading students' schedules, or just for loading students' schedules. The appropriate checklist appears depending on whether the current scenario is "build and load" or "load only." To access this checklist, choose **Checklist** under the Tools heading from the PowerScheduler main menu.
- Master Schedule Checklist: Use this checklist to ensure that the master schedule is ready to optimize, load, or print. See *Master Schedule Checklist*.
- Checklist to Know Your Student Schedules are Complete: Use this checklist to determine that the entire process of building the master schedule is complete. See *Checklist to Know Your Student Schedules are Complete*.

Schedule Search and Select

Before you can do any type of schedule-related work on a student's record or on a group's records, select the individual or group. By performing a search, you make such a selection.

When you select a student, his or her name appears in the main menu. Either click the student's name to work with that student or go to the PowerScheduler menu to perform functions for that student.

If you select a group of students, the selected students' names appear in the students menu. Then, go to the PowerScheduler menu to perform functions for the group of students.

How to Select Students for Scheduling

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students**. The Scheduling page appears.
3. Note the following information in the left navigation menu:

Field	Description
Search Students	Using the pop-up menu, you can choose the student page you want to work with: • **Constraints** • **Demographics** • **Grad Planner** • **Grad Progress** • **Matrix** • **Preference** • **Requests** • **Schedule** **Note:** These options also appear as tabs on the student pages.
Functions	Click **Functions**. The *Student Scheduling Functions* page appears for the selected students.

4. Select the student you want to work with using any of the following methods:

Field	Description
[Search Students]	Enter search criteria in the search field. If Smart Search is enabled, as you begin entering your search criteria, PowerSchool automatically provides a drop-down list of suggestions that you may choose from.
[Search Icon]	Click to initiate the search.

View Field List	Click to view the PowerSchool Field List pop-up, which displays a list of all fields that can be used to perform a student search. **Note:** Database extension fields can be selected from the pop-up, but any associated one-to-many tables are not searchable at this time. For more information, see *Database Extensions* in the *System Administrator User Guide* available on PowerSource.
[Alphabet]	Click a letter of the alphabet to display a list of students whose last names begin with the selected letter. For example, if you click **B**, the system displays the students at your school whose last names begin with a "B".
Next Year Grade Level	Click a number to display a list of students in the next year grade level. If you click **9**, the system displays a list of ninth graders at your school for next year.
Current Year Grade Level	Click a number to display a list of students in the current year grade level. If you click **9**, the system displays a list of ninth graders at your school for this year.
[Gender]	Click **M** to display a list of all the male students at your school. Click **F** to display a list of all the female students at your school.
All	Click to display a list of all active students at your school.
Current Selection	Click to quickly return to the last group of selected students without repeating a search function.

Note: For more information, see *Student Search*.

5. If only one student's name appears or if you want to select all of the students, continue to Step 5. If you want to select one or more but not all of the students, click **Select Students By Hand**. Press and hold COMMAND (Mac) or CONTROL (Windows) as you click each of the students' names.

   Note: If the students are listed consecutively, click the first name on the list. Press SHIFT as you click the last name on the list. This selects the first and last names you click and every name in between.

6. Do one of the following:
    - Click **Functions**. The *Student Scheduling Functions* page appears for the selected students.
    - Click **Select these students**. The students' names appear in the students menu.

Student Scheduling Functions Page

Use the Student Scheduling Functions page to execute processes for the selected group of students. To select a group of students, see *Schedule Search and Select*.

The student Scheduling Functions page includes the following functions:

- *Export Using Template*
- *List Students*
- *Mass Add Requests*
- *Mass Delete Requests*
- *Next School Indicator*
- *Print Reports*
- *Print Mailing Labels*
- *Quick Export*
- *Reports Menu*
- *Schedule Mass Enroll*
- *Schedule Reports Menu*
- *Work with these students*

Scheduling Functions Page

Use the Scheduling Functions page to run processes related to the master schedule.

The Scheduling Functions page includes the following functions:

- *Auto Create Rooms*
- *Auto Fill Student Information*
- *Auto Fill Course Information*
- *Auto Fill Teacher Information*
- *Auto Generate Course Information*
- *Auto Generate Rooms*
- *Auto Generate Teacher Assignments*
- *Calculate Percent Schedules*
- *Calculate Target Number of Sections to Offer*
- *Copy Master Schedule*

- *Delete Master Schedule*
- *Duplicate Scenarios*
- *Move Previous Year Data*
- *Regenerate Bitmaps*
- *Reset Section Meetings*
- *Reset Class Counts*
- *Reset Teacher Assignments*
- *Resolve Invalid Requests*
- *Set Schedule Year*
- *Split Year-Long Classes*
- Update Selections, including the processes *Unlock Previously Scheduled Courses*, *How to Set the Next Year Grade Field for an Entire Grade Level*, *How to Schedule All of Next Year's Students*, and *How to Assign a Group of Students to a Building*.

Prepare to Build the Master Schedule

Preparing to build the master schedule is the first of several phases in creating a master schedule. The process of preparing to build the master schedule consists of the following 11 steps:

- *Schedule Security*
- *Scheduling Setup*
- *Build Scenarios Overview*
- *Courses*
- *Rooms Overview*
- *Student Information*
- *Student Course Requests*
- *Course Information*
- *Teacher Scheduling Information*
- *Build Constraints Overview*
- *Course Rank*

Most steps can be performed in any order, within reason. For example, you cannot enter teacher assignments if you have not entered all of your teachers on the teacher list. You also must define your schedule constraints before you calculate course rank.

To assign specific sections to several individuals, each person can perform a step at the same or different times. If you are the only person preparing to build your school's schedule, you should follow the steps in the above sequence.

Schedule Security

Once you know which groups at your school will be in charge of scheduling, you need to give members access to the Scheduling area. See *Schedule Security Setup*. For more information about general system security, see *Security*.

Schedule Security Setup

Give groups of users access to the scheduling functions in PowerSchool.

How to Give Groups Access to the Schedule Area

1. On the start page, choose **System** under Setup in the main menu. The System Administrator page appears.
2. Under Security, click **Security**. The Security page appears.

3. Click **Groups**. The Groups page appears.
4. Click the name of the group that contains your staff members, such as **Counselors**. The Edit Group page appears.
5. Select the **PowerScheduler Access** checkbox.
6. Click **Submit**. The Groups page appears.

Scheduling Setup

To build the master schedule to your school's specifications, you need to define pieces of information for the system to use to schedule courses at your school. These are called scheduling setup. Depending on your school's setup, not all scheduling setup need to be defined.

Define the following scheduling setup before building a master schedule:

- *Scenarios*
- *Auto. Scheduler Setup*
- *Course Catalogs*
- *Years and Terms*
- *Periods*
- *Days*
- *Buildings*
- *Departments*
- *Facilities*
- *Houses*
- *Section Types*
- *Teams*
- *Program Balancing*

Buildings

If your school campus contains several buildings, you can define each of them. Then, you can associate these buildings with students, teachers, and rooms. This way, the system knows to schedule courses in the appropriate building, taught by the appropriate teacher, and taken by the appropriate students.

How to Define a Building

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.

2. Under Scheduling Setup, choose **Buildings** from the PowerScheduler menu. The Buildings page appears.
3. Click **New**. The Add/Edit Building page appears.
4. Enter a name for the building in the Building field.
5. Click **Submit**. The Buildings page appears.

How to Edit a Building

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Buildings** from the PowerScheduler menu. The Buildings page appears.
3. Click the name of the building you want to edit. The Add/Edit Building page appears.
4. Edit the name of the building in the Building field.
5. Click **Submit**. The Buildings page appears.

How to Delete a Building

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Buildings** from the PowerScheduler menu. The Buildings page appears.
3. Click the name of the building you want to delete. The Add/Edit Building page appears.
4. Click **Delete**. The Buildings page appears.

Days

A day (or "cycle") is the number of repeating days that make up a schedule. The days are originally set up when you enter the number of days while creating the scenario or performing the Auto Scheduler Setup function.

To build a master schedule, PowerScheduler requires that days are defined. Prior to the start of the scheduling process, determine the numbers of days you will need in your schedule.

Note: A schedule day or cycle is NOT the same as a calendar day.

How to Define Days

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Days** from the PowerScheduler menu. The Edit Days page appears.
3. Use the following table to enter information in the fields:

Field	Description
Name	Enter the name of the day.
Abbreviation	Enter an abbreviation for the day name.

4. Click **Submit**. The Changes Recorded page appears.

Departments

Courses, rooms, and teachers belong to departments. When building the master schedule, the system attempts to schedule courses in one of the rooms belonging to the appropriate department.

Use this function to set up departments. If you previously used PowerScheduler with departments, the departments also appear for this year.

Note: Be very careful to avoid typographical errors when defining departments. For example, if there is an existing SCIENCE department and you define a misspelled "SCEIENCE" department in PowerScheduler, the erroneously-named department will also exist when the schedule is committed since its name did not match the name of any existing department. It is a cumbersome task to clean up the data, as departments are associated to a number of tables, such as Teacher, Room, and Course.

How to Define a Department

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Departments** from the PowerScheduler menu. The Departments page displays the list of departments.
3. Click **New**. The Add/Edit Department page appears.
4. Enter a name for the department in the Department field.

5. Click **Submit**. The Departments page appears.

How to Edit a Department

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Departments** from the PowerScheduler menu. The Departments page appears.
3. Click the name of the department you want to edit. The Add/Edit Department page appears.
4. Edit the name of the department in the Department field.
5. Click **Submit**. The Departments page appears.

How to Delete a Department

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Departments** from the PowerScheduler menu. The Departments page appears.
3. Click the name of the department you want to delete. The Add/Edit Department page appears.
4. Click **Delete**. The Departments page appears.

Facilities

Some courses require special equipment or facilities. For example, a chemistry course requires special laboratory equipment, and a film course requires audio and video equipment. Also, a chemistry course is taught in a laboratory and a physical education class is taught in a gymnasium. To associate courses that need special equipment or types of rooms, the system uses facilities.

Note: You can assign multiple facilities to courses and rooms.

How to Define a Facility

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Facilities** from the PowerScheduler menu. The Facilities page appears.
3. Click **New**. The Add/Edit Facility page appears.

4. Enter a name for the facility in the Facility field.
5. Click **Submit**. The Facilities page appears.

How to Edit a Facility

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Facilities** from the PowerScheduler menu. The Facilities page appears.
3. Click the name of the facility you want to edit. The Add/Edit Facility page appears.
4. Edit the name of the facility in the Facility field.
5. Click **Submit**. The Facilities page appears.

How to Delete a Facility

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Facilities** from the PowerScheduler menu. The Facilities page appears.
3. Click the name of the facility you want to delete. The Add/Edit Facility page appears.
4. Click **Delete**. The Facilities page appears.

Houses

Some schools separate students into houses. For example, a school can have a House A (Grades 9 and 10) and a House B (Grades 11 and 12). Determine which rooms, teachers, and students belong to each house. If the "Use houses" checkbox is selected on the Edit Advanced Build Scenario page (see *How to Edit Advanced Optimizations*), the system references which house a room is assigned to before scheduling courses in that room and gives scheduling priority to the appropriate house.

Also, sections will be scheduled for houses based on the house assignment of the teachers scheduled for those sections. Students assigned to a house will be assigned to a section either without a house or with the same house, whereas students not assigned a house can be assigned to any section.

How to Define a House

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.

2. Under Scheduling Setup, choose **Houses** from the PowerScheduler menu. The Houses page appears.
3. Click **New**. The Add/Edit House page appears.
4. Enter a name for the house in the House field.
5. Click **Submit**. The Houses page appears.

How to Edit a House

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Houses** from the PowerScheduler menu. The Houses page appears.
3. Click the name of the house you want to edit. The Add/Edit House page appears.
4. Edit the name of the house in the House field.
5. Click **Submit**. The Houses page appears.

How to Delete a House

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Houses** from the PowerScheduler menu. The Houses page appears.
3. Click the name of the house you want to delete. The Add/Edit House page appears.
4. Click **Delete**. The Houses page appears.

Scheduling Periods

To build a master schedule, the system requires periods, which are generated when you create a scenario using the Auto Scheduler Setup process. Use this page to name and abbreviate those periods.

If you are working with a copy of a previous year's master schedule, the periods will be the same as they were in that schedule.

How to Define Periods

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Periods** from the PowerScheduler menu. The Edit Periods page appears.

3. Use the following table to enter information in the fields:

Field	Description
Name	Enter a name for this period.
Abbreviation	Enter an abbreviation for this period name.
Core	Select the checkboxes to specify the periods that are “core” periods in which you expect students to be scheduled. When PowerScheduler calculates the core percent scheduled figure, a calculation of successfully scheduled should consider core periods. By default, the checkbox is selected. Many schools define certain periods that are for other purposes than scheduling, such as a 0 period that may be used for daily attendance or night school periods. By identifying which periods are core periods, the system can base its decision of how successful a student’s schedule is according to how many of the core periods have been scheduled.
Sort	Select a sort order for displaying this period.

4. Click **Submit**. The Changes Recorded page appears.

Section Types

Section types are special sections of a course. For example, your school might offer separate sections of courses for bilingual students. In this case, one section of the course will be identified as bilingual. The teacher who instructs this section will have a bilingual section type assignment. The students' requests will also reflect the bilingual section type.

How to Define a Section Type

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Section Types** from the PowerScheduler menu. The Section Types page appears.

3. Click **New**. The Add/Edit Section Types page appears.
4. Use the following table to enter information in the fields:

Field	Description
Section Type	Enter a name for the section type. Enter a maximum of 20 characters.
Section Type Code	Enter a section type code. Enter a maximum of 2 characters.

5. Click **Submit**. The Section Types page appears.

How to Edit a Section Type

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Section Types** from the PowerScheduler menu. The Section Types page appears.
3. Click the name of the section type you want to edit. The Add/Edit Section Types page appears.
4. Use the following table to edit information in the fields:

Field	Description
Section Type	Enter a name for the section type.
Section Type Code	Enter a section type code.

5. Click **Submit**. The Section Types page appears.

How to Delete a Section Type

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Section Types** from the PowerScheduler menu. The Section Types page appears.

3. Click the name of the section type you want to delete. The Add/Edit Section Types page appears.
4. Click **Delete**. The Section Types page appears.

Teams

Some schools, most often middle or junior high schools, assign students and teachers to teams to provide the best support and monitoring system.

Teams are either static or dynamic. If you define static teams, you manually assign each student to a particular team. For more information, see *Student Information*. If you create dynamic teams, you define the team names and assign teachers to the teams, but allow the system to decide which students to assign to which teams for the best possible balance.

Note: For information about how to assign teachers to teams, see *Teacher Scheduling Information*.

The Teams page displays the team name and number. Use the team number to change the team for a group of students. For more information about updating a selection of students, see *Update Selections*.

How to Define a Team

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Teams** from the PowerScheduler menu. The Teams page appears.
3. Click **New**. The Edit Team page appears.
4. Enter a name for the team.
5. Click **Submit**. The Teams page appears.

How to Edit a Team

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Teams** from the PowerScheduler menu. The Teams page appears.
3. Click the name of the team you want to edit. The Edit Team page appears.
4. Edit the name of the team.
5. Click **Submit**. The Teams page appears.

How to Delete a Team

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Teams** from the PowerScheduler menu. The Teams page appears.
3. Click the name of the team you want to delete. The Edit Team page appears.
4. Click **Delete**. The Teams page appears.

Schedule Years and Terms

For scheduling purposes, you need to define the upcoming school year and its associated term, which are generated when you create a scenario using the Auto Scheduler Setup process.

Note: If you are working with a copy of a previous year's master schedule, the terms will remain the same as they are in that schedule.

It is important to enter the terms from largest to smallest. For example, create the school year first and then semesters 1 and 2, any trimesters, and any quarters.

How to Define a Schedule Year and Terms

Note: When creating a year, the corresponding registration records from the previous year are copied to the new year. If registration records already exist for the school and year, then the registration records are not copied. For more information about registration records, see *Student Course Request Pages*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Years & Terms** from the PowerScheduler menu. The Schedule Years & Terms page appears.
3. Click **New**. The Create New Schedule School Year page appears.
4. Use the following table to enter information in the fields:

Field	Description
Name of School Year	Enter the name of the school year, such as 2008-2009.

Abbreviation	Enter an abbreviation for the school year, such as 08-09.
First Day of School	Enter the first day of school for this academic year in MM/DD/YYYY format, such as 09/02/2009.
Last Day of School	Enter the last day of school for this academic year in MM/DD/YYYY format, such as 6/5/2010.

5. Click **Submit**. The Schedule Years & Terms page displays the schedule year.
6. Click **Edit Terms** in the row of the appropriate schedule year.
7. On the Term Setup page, click **New**. The Edit Schedule Term page appears.

   Note: Enter the terms sequentially. That is, if your school has terms of two semesters and four quarters, enter them in this order: Year, Semester 1, Semester 2, and then Quarter 1, Quarter 2, Quarter 3, and Quarter 4.

8. Use the following table to enter information in the fields:

Field	**Description**
Name of Term	Enter the name of this term, such as Semester 1.
Abbreviation	Enter an abbreviation for this term, starting with a letter, such as S1.
First Day of Term	Enter the first day of this term in MM/DD/YYYY format.
Last Day of Term	Enter the last day of this term in MM/DD/YYYY format.
What portion of the school year does this term represent?	Use the pop-up menu to choose the fraction that this term represents within the school year. If your school year consists of four terms, choose **1/2**. If this term represents the whole school year, choose **Full year**.
Import File Term #	Enter an import file term number so that the system can align terms when it imports the master schedule. For example, if your

	school uses semester and quarter classes, you might state in the import file that all sections of S1 are identified by the number S10203. Enter the same number in this field to map the date.

9. Click **Submit**. The Term Setup page appears.

How to Edit a Schedule Year

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Years & Terms** from the PowerScheduler menu. The Schedule Years & Terms page appears.
3. Click the name of the schedule year you want to edit, such as **Full Year** or **2008-2009 School Year**. The Edit Schedule School Year page appears.
4. Use the following table to edit information in the fields:

Field	Description
Name of School Year	Enter the name of the school year, such as 2008-2009.
Abbreviation	Enter an abbreviation for the school year, such as 08-09.
First Day of School	Enter the first day of school for this academic year in MM/DD/YYYY format, such as 09/02/2008.
Last Day of School	Enter the last day of school for this academic year in MM/DD/YYYY format, such as 6/5/2009.

5. Click **Submit**. The Schedule Years & Terms page appears.

How to Edit a Schedule Term

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.

2. Under Scheduling Setup, choose **Years & Terms** from the PowerScheduler menu. The Schedule Years & Terms page appears.
3. Click **Edit Terms** in the row of the appropriate schedule year. The Term Setup page appears.
4. Click the name of the term you want to edit. The Edit Schedule Term page appears.
5. Use the following table to edit information in the fields:

Field	Description
Name of Term	Enter the name of this term.
Abbreviation	Enter an abbreviation for this term, starting with a letter, such as S1. Enter no more than six characters.
First Day of Term	Enter the first day of this term.
Last Day of Term	Enter the last day of this term.
What portion of the school year does this term represent?	Use the pop-up menu to choose the fraction that this term represents within the school year. If this term represents the whole school year, choose **Full year**.
Import File Term #	Enter an import file term number so that the system can align terms when it imports the master schedule. For example, if your school uses semester and quarter classes, you might state in the import file that all sections of S1 are identified by the number S10203. Enter the same number in this field to map the date.

6. Click **Submit**. The Term Setup page appears.

How to Delete a Schedule Term

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Years & Terms** from the PowerScheduler menu. The Schedule Years & Terms page appears.

3. Click **Edit Terms** in the row of the appropriate schedule year. The Term Setup page appears.
4. Click the name of the schedule term you want to delete. The Edit Schedule Term page appears.
5. Click **Delete**. The Term Setup page appears.

How to Delete a Schedule Year

Note: When deleting a year, the corresponding registration records are also deleted. For more information about registration records, see *Student Course Request Pages*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Years & Terms** from the PowerScheduler menu. The Schedule Years & Terms page appears.
3. Click **Edit Terms** in the row of the appropriate schedule year. The Term Setup page appears.
4. Click the name of the schedule year you want to delete. The Edit Schedule Term page appears.
5. Click **Delete**. The Schedule Years & Terms page appears.

Program Balancing

If enabled, Program Balancing allows PowerScheduler to evenly balance students in programs across sections during PowerScheduler loads and Automated Walk-In Scheduling. Program Balancing uses the new server-side engine loader, which removes the need to run the client scheduling engine on client machines, provides program balancing, and optimizes processing for faster and better results. To enable, see *How to Define Scheduling Preferences*. Once enabled, you will need to define which programs you want to include in balancing.

How to Define Program Balancing

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Program Balancing** from the PowerScheduler menu. The Program Balancing page appears.
3. Use the following table to enter information in the fields:

Field	Description
Balance These Programs	Select the checkbox next to each program you want included in balancing.
Evaluate Programs as of This Date	Enter the date from which you want the Scheduling Engine to evaluate special programs or click the **Calendar** icon to select a date.

4. Click **Submit**. A confirmation message appears.

Build Scenarios Overview

A build scenario includes the parameters that PowerScheduler references to create a master schedule for the upcoming school year. Use scenarios to work with different combinations of criteria before committing a master schedule. After completing a successful build for a scenario, you can duplicate it and try various modifications to the original scenario.

Though you can create multiple build scenarios, it is suggested that you start with just one. Multiple scenarios may be useful when, for example, your school wants to hire an additional computer science teacher to meet student course request demands. In this case, create two build scenarios: one that includes the additional computer science teacher and one that does not. Present both scenarios to the school committee to make a final decision on which situation would work best.

Some information used to create a master schedule is shared amongst all scenarios, whereas other information is defined per scenario. The following data is exclusive to a particular build scenario:

- Master schedule
- Student schedules
- Constraints
- Course rank
- Teacher assignments
- Course relationships

For example, if you define the constraint that Mrs. Smith must be free first period for the Schedule 1 scenario, the Schedule 2 scenario does not adhere to that constraint.

The following information is shared by all build scenarios that you create for a given build year:

- Students
- Student course requests
- Student course request pages
- Teachers
- Rooms
- All parameters (such as terms)
- Course groups

For example, if you enter a student course request, the system tries to schedule that request in all scenarios.

For more information about build scenarios, including how to create a build scenario, see *Build Scenarios*.

Build Scenarios

Before creating build scenarios, define the basic build information, such as the number of terms, days, and periods in your master schedule. Then, define optimization parameters, which determine how long the system spends scheduling each course, section, and student.

When building the master schedule, PowerSchool evaluates every possible schedule combination before it adds a course to that schedule. Depending on your school's courses, constraints, and other schedule parameters, there could be millions of ways to schedule one multi-section course. Evaluating all of these schedule combinations would take many hours. You might not want to wait for such a thorough evaluation. If this is the case, define build and load optimizations to determine how many combinations the system should review when building your schedule.

When you enter optimization parameters, you define the minimum and maximum number of possibilities the system should evaluate while doing the following:

- Building the master schedule
- Loading student schedules with courses

You can also define best schedule weights to determine how the system handles conflicts when building your master schedule. For example, if you give more weight to section balance than to student conflicts, the system tries to create similar-size course sections before it tries to accommodate student course requests. Based on the last load for each

scenario, the percent of students scheduled, core courses scheduled, and satisfied student requests appear on the Scenarios page.

How to Create a Build Scenario

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Scenarios** from the PowerScheduler menu. The Scenarios page appears.
3. Click **New**. The Edit Build Scenario page appears.
4. Use the following table to enter information in the Build Information fields:

Field	Description
[Scenario type]	Select the **Build and Load** option to build a schedule and then load students into that schedule. **Note:** If creating a **Load Only** scenario, see *Load Process: Schedule Setup*.
Build Name	Enter a name for this build scenario. If you are creating several scenarios, use descriptive names so that you can easily distinguish among them.
Active Build	If you are creating only one build scenario, select the checkbox. If you are creating more than one build scenario, select the checkbox for the one you want the system to use to build your master schedule. **Note:** You will only be able to edit the course catalog that is associated with the build marked as active.
Build Description	Enter a description of this scenario.
Terms	Click **Associate** to select the number of schedule terms you want this scenario to include. The Schedule Term Setup page appears. 1. Select the checkboxes in the rows that represent the number of schedule terms you want this scenario to

	include. For example, if you plan to build a two-semester master schedule, select the checkbox next to the row that includes Semester 1 and Semester 2. 2. Click **Submit**.
Periods	From the pop-up menu, choose the number of periods per day for this build scenario. For example, if you are building a block schedule, you might choose 4. If you are building a regular schedule, you might choose 7.
Days	Choose from the pop-up menu the number of days for this build scenario.
Course Catalog	Use the pop-up menu to choose the course catalog you want the system to use to build this schedule. If this is your first time creating a master schedule, do not select a catalog. The system will automatically generate a course catalog, which you can modify. For more information, see *Course Catalogs*.

5. Use the following table to enter information in the Build Optimizations and Load Optimizations fields:

Field	**Description**
Percent of schedule combinations to evaluate for each course	Change this value only if you encounter problems with the amount of time the system is using to build the master schedule. The default value of this field is 10. For example, if you enter **25**, the system evaluates one-quarter of the possible schedule combinations for each course. If you enter **75**, the system evaluates three-quarters of the possible schedule combinations for each course.
Minimum number of schedule combinations to	Change this value only if you encounter problems with the amount of time the system is using to build the master schedule. The default value of this field is 10,000.

evaluate for each course	For courses with few possible combinations to begin with, use a higher number to prevent the system from attempting too few schedule combinations and not being able to fit the course into the schedule.
Percent of schedule combinations to evaluate for each student	Change this value only if you encounter problems with the amount of time the system is using to load the master schedule. The default value of this field is 10. For example, if you enter **25**, the system evaluates one-quarter of the possible schedule combinations for each student. If you enter **75**, the system evaluates three-quarters of the possible schedule combinations for each student.
Minimum number of schedule combinations to evaluate before skipping	Change this value only if you encounter problems with the amount of time the system is using to load the master schedule. The default value of this field is 10,000. Enter a high number to force the system to sample a minimum number of student schedule course possibilities.

Note: You can also set build optimizations for a particular course by adding a Course Optimize constraint. This type of constraint takes precedence over the build optimizations you set here. For more information, see *Build Constraints*.

6. Use the following table to enter information in the Best Schedule Weights fields:

Field	Description
Student conflicts	To have the system give more weight to student conflicts than section balance when confronted with a conflict while building the master schedule, enter a larger number in this field than in the Section balance field. The default value of this field is 50. **Note:** The numbers in both of these fields must add up to 100.
Section balance	To have the system give more weight to section balance than student conflicts when confronted with a conflict while building the master schedule, enter a larger number in this field than in the Student conflicts field. The default value of this field is 50.

	Note: The numbers in both of these fields must add up to 100.
Total	The total of the weighting values appears. This number must be 100.

7. Click **Submit**. The Scenarios page appears.

How to Edit Advanced Optimizations

In addition to the build and load optimization fields on the Edit Build Scenario page, there are a number of more advanced optimizations. Edit these fields only if you encounter problems while building your master schedule or loading student schedules.

Note: If you are able to run a successful build and load students into schedules satisfactorily, do not edit the Advanced Optimization fields.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Scenarios** from the PowerScheduler menu. The Scenarios page appears.
3. Click **Edit** in the Advanced column of the appropriate build scenario. The Edit Advanced Build Scenario page appears.
4. Use the following table to enter information in the fields:

Field	Description
Use dynamic student load on all combinations until (n) sections	The default value of this field is 4, meaning that if a course has up to four sections, the system will score those sections precisely when loading students. If you enter a **5** or greater in this field, the system will score courses with five or more sections less precisely but faster.
Random number seed value	Change this value only to make sure the randomization function is working. The default value of this field is 123.
Use buildings	Select the checkbox if this scenario uses buildings.

Use houses	Select the checkbox if this scenario uses houses.
Swap rooms after building each course	Sometimes it is not possible to schedule a teacher in his or her preferred room. Select the checkbox so that the system will try to swap rooms as soon as a conflict arises. The checkbox is selected by default. If you deselect the checkbox, the system will not try to swap rooms during the scheduling process. After the schedule has been built, you can manually make adjustments.
Use swap rooms on prebuilt sections and preschedule constraints	Select the checkbox to allow room exchanges. For example, assume you reviewed the master schedule that is being built and made some room changes. Then, if you restarted the build, you would not want to allow the system to swap rooms, possibly eliminating these changes. In this case, do not select the checkbox. The checkbox is deselected by default.
Calculate future assignments for better combinations	Select the checkbox to ensure that the system will take the time to make sure course assignment decisions made now are smart ones. The checkbox is selected by default. **Note:** Because this process can be extremely time-consuming, you have the option of adjusting the amount of time the system spends on future assignments.
Percent of future assignments to calculate after teacher is scheduled	Use this field to fine-tune the amount of time the system spends scheduling each teacher. Enter a number that represents what percent of time a teacher will already be scheduled before the system starts calculating future assignments for him or her. **Note:** The higher the number you enter, the faster the system will calculate and the greater the chance that this teacher will encounter scheduling difficulties.
Maximum time to spend on future assignments	If you find in the log that the computer runs out of time when calculating future assignments, you may need to increase this value. The default value of this field is .1 second.

Maximum memory allowed for teacher assignment optimization	If your computer has a great deal of memory, you could increase this value, which might make the system run faster. The default value of this field is 2 MB.
Maximum time to spend on teacher assignments sort optimization	The order in which the system selects teachers to schedule is very useful; however, leaving the default value ensures that the system is never going to spend an excessive amount of time determining this order. The default value of this field is .25 seconds.
Maximum repeat count for validation error messages	This setting minimizes the number of repeated error messages from the system. For example, if you forget to enable an entire grade of students for scheduling, this setting limits the number of invalid request messages that are returned. The default value of this field is 25.
Section type handling	Choose **Strict** from the pop-up menu to not allow the system to schedule a student into a section of a course if he or she had not requested that section type.

5. Click **Submit**. The Changes Recorded page appears.

How to Delete a Build Scenario

Deleting a build scenario also deletes the following items associated with this build: master schedule, student schedules, teacher assignments, constraints, and course relationships.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Scenarios** from the PowerScheduler menu. The Scenarios page appears.
3. Click the name of the build scenario you want to delete. The Edit Build Scenario page appears.
4. Click **Delete**. The Delete Scenario page appears.
5. Select the checkbox if you are sure you want to delete this build scenario.
6. Click **Submit**. The Scenarios page appears.

Auto Scheduler Setup

The Auto Scheduler Setup function is intended to give you a head-start when creating scenarios. After you enter basic information related to days, periods, and terms on the Auto Scheduler Setup page, PowerScheduler populates those fields for a scenario. That way, you do not need to set up days, periods, and terms on their respective setup pages; instead, those field defaults can be set using Auto Scheduler Setup.

You will be guided through several pages when using the Auto Scheduler Setup function. As you navigate through the setup screens, it is important to note that no information is saved to PowerScheduler until you submit the Build Scenario.

How to Run the Auto Scheduler Setup Function

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Auto Scheduler Setup** from the PowerScheduler menu. The Auto Scheduler Setup page appears.
3. Use the following table to enter information in the fields:

Field	Description
Lowest term level division	Use the pop-up menu to choose the smallest fraction of terms that the school uses. For example, if the school uses quarters and semesters, select **Quarters** from the pop-up menu.
Number of periods	Use the pop-up menu to choose the number of periods that the school uses. For example, if the school currently uses or would like to create a seven period schedule, select **7**.
Number of days	Use the pop-up menu to choose the number of days that the school uses. For example, if the school currently uses or would like to create a schedule using A and B days, select **2**.

4. Click **Continue**. The Automatic Schedule Setup - Schedule Term Selection page appears.
5. Select the checkbox next to the full year term and the term levels that will be used for scheduling. For example, if you offer semester courses, select the checkboxes next to **Full Year** and **Semester - Semester**.

Note: You must select the **Full Year** checkbox.

6. Click **Continue**. The Automatic Schedule Setup - Define Term Dates page appears.
7. Enter the first and last days of each term, using the format mm/dd/yyyy or mm-dd-yyyy.
8. Click **Continue**. The Edit Build Scenario page appears.
9. Click **Submit**. The Scenarios page appears.

Note: For more information about creating or editing a build scenario, see *Build Scenarios*.

Auto Create and Fill Scheduling Information

When preparing to build a master schedule, you need to enter information related to rooms, students, courses, and teachers. Though each of these records can be created individually, PowerScheduler can automatically create this information to improve efficiency.

How to Auto Create Rooms

Though you can still build rooms individually, you may also create them all at once. For example, enter for each department the room start number, increment number, number of rooms, department, facilities, and room maximum. The system generates the list of rooms.

Note: The Auto Generate Rooms function creates rooms from an existing master schedule.

Once the list is created, you can go back to each room and modify names and other information.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions**. The Scheduling Functions page appears.
3. Click **Auto Create Rooms**. The Auto-Create Rooms page appears.
4. Use the following table to enter information in the fields:

Field	Description
Start Number	Enter the starting number for the room numbers.

Increment Number	Enter the value by which the room numbers increase from the starting number.
Number of Rooms	Enter the number of rooms that should be created.
Room Prefix	Enter a prefix for the room numbers (optional). This value can be alpha or numeric and will concatenate with room start number. For example, entering the prefix MA creates the room number MA23 for the math room 23.
Department	Click **Associate** to select the department for these rooms. Associating a room to a department does not limit the room to that department. To do this, see the field Department Use Only.
Building	Click **Associate** to select the building for these rooms (optional).
House	Click **Associate** to select the house for these rooms (optional).
Use for Scheduling	Select either **Yes** or **No** from the pop-up menu to indicate if these rooms should be used for scheduling purposes.
Room is Always Free	Select either **Yes** or **No** from the pop-up menu to indicate if these rooms are always free.
Department Use Only	Select either **Yes** or **No** from the pop-up menu to indicate if these rooms are to be used only by the associated department.
Facility Use Only	Select either **Yes** or **No** from the pop-up menu to indicate if these rooms are used for certain facilities, such as lab rooms.
Room Facilities	If you selected **Yes** for the Facility Use Only field, click **Associate** to select the facility or facilities for this room.
Room Maximum	Enter the maximum number of seats for this room.

5. Click **Submit**. The Rooms page appears. For more information about modifying room information, see *How to Edit a Room*.

How to Auto Fill Student Information

Use this function to fill in student information simultaneously for selected students. Student information that can be automatically filled includes next year grade, priority, and year of graduation.

You can set the next school indicator for all students before using this function, and you must set the next year grade indicator for returning twelfth graders before using this function. For more information, see *Next School Indicator*.

Note: The grade level entered affects all students for the grade level column selected whose next school indicator is set for the school submitting the information.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions**. The Scheduling Functions page appears.
3. Click **Auto Fill Student Information**. The Auto-Fill Student Info page appears.
4. Use the following table to enter information in the fields:

Field	Description
Next Year Grade	For each column, enter the next year grade to indicate which students' information to change. For example, enter 12 for eleventh graders who will be in the twelfth grade next year, and enter 12 in the next column for any returning twelfth graders.
Priority	Enter the scheduling priority for the students. For example, enter 1 for returning twelfth graders who need to be scheduled first, and enter a higher number for incoming ninth graders.
Schedule This Student	Select either **Yes** or **No** to indicate if the students in each column should be scheduled or not.
Year of Graduation	Enter the year of graduation to indicate in which school year the student will graduate. For example, enter **2009** for twelfth graders graduating at the end of the 2008-2009 school year.

5. Click **Submit**. The Auto-Fill Student Info page appears.

How to Auto Fill Course Information

Use this function to fill in course information simultaneously for selected courses. To automatically update course information, select courses (for example, by department) using the Update Selections function. For more information, see *Update Selections*.

When entering course information, use the pop-up menus to select No Change, Yes, or No for certain fields. All pop-up menus will have No Change as the default option. For entry fields, leave a field blank to not update existing course information. To clear any values in field, either enter 0 or select the Clear Value checkbox.

You can edit each course to enter individual information, such as facilities. When you edit a course, you cannot edit the Terms Per Year field unless you change the valid terms on the course page. If you use the Update Selections function to change the terms, this recalculation does not automatically occur; in that case, you must also use the Update Selections function to change the terms per year.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions**. The Scheduling Functions page appears.
3. Click **Auto Fill Course Information**. The Auto-Fill Course Info page appears.
4. Use the following table to enter information in the fields:

Field	Description
Apply To	Choose whether you want to apply the changes to all courses in the active catalog or only to the selected courses. By default, changes are only applied to the selected courses.
Schedule This Course	Choose **Yes** from the pop-up menu to indicate that these courses should be scheduled. Choose **No** to indicate that these courses should not be scheduled. Choose **No Change** to not affect the scheduling statuses of these courses.
Department	Click **Associate** to select the department for these courses. Select the **Clear Value** checkbox to remove department information for the selected courses.

Build Type	Build types define the shape of a course. Use the pop-up menu to select either **No Change** or one of the following options: • **Standard**: This course meets for the same number of periods every time it meets. For example, a course that meets every day for one period is standard, and a course that meets for one period every other day is also standard. • **Lab**: This is a standard course that meets for the same number of consecutive extra periods on certain days in the cycle. For example, a standard Chemistry course meets every day in a six-day cycle (Days A-F). Two days in the cycle, the class meets for two consecutive periods to complete an involved laboratory assignment. • **LabFloat**: This is a standard course that meets extra periods some days in the cycle, but the extra period is not consecutive to the course. For example, a Humanities course meets every day in a six-day cycle. One day during the cycle, the students attend a two-period lab in which they complete a community service assignment. The community service assignment does not have to occur directly before or after the Humanities course.
Maximum Enrollment	Enter the maximum number of students you want to schedule in sections of each course.
Target Number of Sections to Offer	Enter the number of sections to offer for each course. **Note:** To calculate this number manually, see *How to Define Scheduling Preferences*.
Number of Teacher Assignments	Enter the number of teacher assignments for each course. For example, if the school decides to offer four sections of Algebra, the engine requires that four teacher assignments are defined. As a result, Teacher A will have an assignment for one section, Teacher B will have an assignment for two sections, and Teacher C will have an assignment for one sections, totaling four teacher assignments. This tells the Scheduling Engine that four sections of Algebra must be built, and also tells the Engine who must teach those sections.

	Note: Only Build and Load scenarios allow for teacher assignments. Teacher assignments are not used by Load Only scenarios.
Frequency	Enter the number of times each course will meet per cycle.
Periods Per Meeting	Enter the number of periods each course will meet per day.
Lab Frequency	Enter the number of times each lab will meet per cycle.
Lab Periods Per Meeting	Enter the number of periods each lab will meet per day.
Repeats in Same Term	Choose **Yes** from the pop-up menu to indicate that these courses are offered more than once in the same term. Choose **No** to indicate that these courses should not be offered more than once in the same term. Choose **No Change** to not affect the scheduling statuses of these courses. **Note:** This setting does not affect the Repeats in Different Terms setting.
Repeats in Different Terms	Choose **Yes** from the pop-up menu to indicate that these courses can be offered more than once in different terms. Choose **No** to indicate that these courses cannot be offered more than once in different terms. Choose **No Change** to not affect the scheduling statuses of these courses. **Note:** This setting does not affect the Repeats in Same Terms setting.
Balance Terms	If the Repeats in Different Terms option is selected, use this pop-up menu to indicate if these courses should be offered evenly across all terms. For example, if a course is offered for three trimesters and you do not indicate that the terms should be balanced, the course could be offered twice in the first trimester, once in the second trimester, and not at all in the third.

Valid Start Periods	Select the checkboxes for the periods in which these courses can be offered. For example, a marching band course may always meet during the last period of the day. Select the **Clear Value** checkbox to remove valid start period information for the selected courses.
Valid Terms	Click **Associate** to select in which terms these courses are offered. Select the **Clear Value** checkbox to remove valid term information for the selected courses.
Facilities	Click **Associate** to select which facilities these courses use. Select the **Clear Value** checkbox to remove facility information for the selected courses.
Load Priority	Enter a load priority for these courses. The lower the number, the higher the priority during the load process.
Load Type	Use the pop-up menu to select the type of course for these courses: • **Academic** • **Elective**
Balance Priority	Use the pop-up menu to select the type of priority that should be used when loading these courses. • Section • Gender • Grade • Ethnic Code • House
Use Teams	Use the pop-up menu to indicate if these courses should be scheduled by associated teams.

Close at Max	Use the pop-up menu to indicate if these courses should close when enrollment reaches the maximum number of students specified in the Maximum Enrollment field.
Use Section Types	Use the pop-up menu to indicate if these courses should be scheduled by associated section types.
Don't Allow Substitutions	Use the pop-up menu to indicate if students should be scheduled in alternate courses.

5. Click **Submit**. The Changes Recorded page appears.

How to Auto Fill Teacher Information

Use this function to fill in teacher information simultaneously for selected teachers. To automatically update teacher information, select teachers using the Update Selections function. For more information about this function, see *Update Selections*.

When entering teacher information, use the pop-up menus to select No Change, Yes, or No for certain fields. All pop-up menus will have No Change as the default option. For entry fields, leave a field blank to not update existing teacher information. To clear any values in field, either enter 0 or select the Clear Value or Clear Room checkbox.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions**. The Scheduling Functions page appears.
3. Click **Auto Fill Teacher Information**. The Auto-Fill Teacher Info page displays.
4. Use the following table to enter information in the fields:

Field	Description
Apply To	Choose whether you want to apply the changes to all teachers who are ready to schedule or to the selected teachers only.
Department	Click **Associate** to select the department for these teachers. Select the **Clear Value** checkbox to remove any existing values in this field.

Preferred Room	Click **Associate** to select the room these teachers prefer. Select the **Clear Room** checkbox to remove any existing values in this field.
Maximum Consecutive Periods	Enter the maximum number of periods these teachers can teach in a row.
Schedule for Lunch	Select the checkbox if you want these teachers to be scheduled for a lunch period. For more information, see *Scheduled Lunch*.
Schedule This Teacher	Select either **Yes** or **No** to indicate if these teachers should be scheduled or not.
Is Always Free?	Select either **Yes** or **No** to indicate if these teachers are always free.

5. Click **Submit**. The Changes Recorded page appears.

Courses

To work with the courses that will be part of next year's schedule, you must first add any new courses you plan to offer and associate them with your school. See *New Courses*. Then, create a course catalog to make course selections available for student course requests. After creating a course catalog, you can edit or delete that catalog, depending on your needs. See *Course Catalogs*.

Note: It is possible for students to request a course that is not part of your course catalog if that course has been associated with your school.

Course relationships have consequences for how you manage new and modified courses. First, it is important to understand the ways to view courses and how those views are connected:

1. Course List (Start Page > District or School > Courses). This page lists all courses on the server and is the central point from which you can manage courses and course-related information at both the district and school level.
2. Available Courses for [Year] List (Start Page > School > Courses > Manage courses for this school). This page lists all courses on the server and is used to create new courses, as well as to make them active or inactive for the current school.

3. PowerScheduler Course Catalog (Start Page > PowerScheduler > Catalogs > Edit). This list matches what is listed on the PowerSchool School Course List. Indicate for each course if it is active for scheduling. When you submit this information, a new record is created for the course in a different table in PowerSchool's database. At that point, changes to courses listed in PowerSchool do not affect courses listed in PowerScheduler.
4. PowerScheduler School Course List (Start Page > PowerScheduler > Courses). This list includes the selected courses from the Scheduling Course Catalog. Selecting courses to be scheduled does not affect this list of courses.

In summary, view 4 is based on the selected courses of view 3, which, like view 2, is based on the selected courses of view 1. This means that to add a course to PowerScheduler, you must first add a course to the Available Courses for [Year] List (view 1). Then, in the Scheduling Course Catalog, select the checkbox next to the course and submit.

To change a course name but use same course number, there are two options. The first takes more thought but is easiest, whereas the second requires someone with the highest level of access to the database to make changes for you. Regardless of the option you choose, the current courses should not be modified at all if any of them are in use this school year by any school on the server. It is necessary to store grades using the courses' current names. Do not modify course names until you complete all necessary processes at the end of the school year. Also, changes made in PowerScheduler are void when you complete your master schedule and are ready to commit student schedules because the master schedule references courses in PowerSchool.

To change a course name but use same course number:

- Option 1: Leave everything as is and schedule using the old course name. After the end of the school year, change the course's name. This takes more thought because you must remember that you need to change the name at the end of the school year. Since you must change the course name regardless of which option you choose, no extra work is required.
- Option 2: Use DDA to search the SchedCourseCatalogs table for the course number. Be sure to search only within records belonging to your school, and make a backup of your data file before proceeding. Then, change the course name. This affects the course name in PowerScheduler.

New Courses

Add any new courses before building or loading a master schedule.

Note: You cannot add a new course to your course list in PowerSchool’s Scheduling area.

How to Add a New Course to the Course List (District)

Use the following procedure to create a new course. Once a course is created, it is available and active for both student course requests and inclusion in your course catalog for the selected schools and years.

Note: This procedure may also be performed when signed in to a school by choosing **School**, and then clicking **Courses**. If the **New Courses** button does not appear on the page, then the district may only allow new courses to be created at the district office. For more information, see *How to Edit Course Settings*.

1. On the start page, choose **District** under Setup in the main menu. The District Setup page appears.
2. Under Courses, click **Courses**. The Courses page appears.
3. Click **New Course**. The Create New Course page appears.
4. Use the following table to enter information in the fields:

Field	Description
Course Name	Enter the name of the course.
Course Number	Enter the number that will be used to identify this course.
Alternate Course Number	Enter an alternate course number if your school uses this field for state reporting or district purposes.
Associate Course with Schools	Indicate which schools you want this course to be made available to by doing one of the following: • To select a single school, click each school you want to associate. • To select multiple schools, press and hold COMMAND (Mac) or CONTROL (Windows) as you click each school. **Note:** By default all schools are selected. **Note:** This field only appears at the district level. If creating a new course at the school level, the new course is automatically associated only to the selected school.

Available School Years	Indicate which school years you want this course to be made available by doing one of the following: • To select a single year, click each year you want to associate. • To select multiple years, press and hold COMMAND (Mac) or CONTROL (Windows) as you click each year. **Note:** By default all current and future years are selected.
Credit Hours	Enter the number of credits a student receives for taking this course.
CIP Code	In some states, schools use CIP codes to identify courses as part of a state-managed vocational program. Enter this code, if applicable.
Vocational Class	Select the checkbox if this is a vocational course.
Credit Type	Enter the type of credit a student receives for passing this course, such as **MATH**, **ENG**, or **FINE**. You can then apply this credit to a graduation type.
Default Maximum Enrollment	Enter the maximum number of students that can be enrolled in this course.
Courses Notes	Enter descriptive text regarding the course or course enrollment, if any.
Grade Scale	Choose the grade scale from the pop-up menu. For more information, see *How to Assign Grade Scales to Courses*.
GPA Added Value Points	Enter any added value for the grade points, such as **1** for one additional grade point. You can also use fractions of a point. Most schools do not enter added values.

Exclude from GPA?	Select the option to either include or exclude the grade from the GPA calculation.
Exclude from Class Rank?	Select the option to either include or exclude the grade from the class rank calculation.
Exclude from Honor Roll?	Select the option to either include or exclude the grade from the honor roll calculation.
Use the Course for Lunch	Select the checkbox to indicate that this course will be used exclusively for scheduled lunches. Otherwise, deselect the checkbox. **Note:** For more information, see *Scheduled Lunch*.
Exclude on Report Cards/Transcripts	Select the checkbox to exclude all sections of this course from appearing on the schedule listing of Report Cards or the Transcript Object of Object reports. Otherwise, leave blank.

5. Click **Submit**. The new course appears on the Courses page.

How to Add a New Course to the Course List

1. On the start page, choose **School** under Setup in the main menu. The School Setup page appears.
2. Under Scheduling, click **Courses**. The Courses page appears.
3. Choose **Manage courses for this school**. The Available Courses for [Year] page appears.
4. Click **New**. The Create New Course page appears.
5. Enter information as needed. For detailed information, see *How to Add a New Course to the Course List*.
6. Click **Submit**. The new course appears on the Courses page.

Course Catalogs

Create the list of courses that your school will offer during the next school year. This list is referred to as the course catalog.

Courses in the course catalog are copied from the district level. Not all courses on the district course list are available for the catalog; only courses that appear on the school's Available Courses for [Year] page can be included. For more information, see *How to Edit Course Status*.

You can edit information in the course catalog without affecting the courses on the school's Available Courses for [Year] page. For example, you may want to change the credit hours for a course for scheduling purposes, but revert to the course's real credit hours when committing schedules for the next school year. Once a master schedule is committed, the course information, including credit hours, is retrieved from the district level.

Note: You can have more than one course catalog, and it is not necessary to create a new catalog for each scheduling year. Course catalogs are associated with builds, and a catalog is only active when it is associated with the active build scenario. This also means that you can only edit courses in the catalog that is active. For more information, see *Build Scenarios*.

Note: When navigating through the course catalog pages, you may see a warning icon next to the **Courses Catalog** and the **Edit Course Catalog** links. The warning icon indicates there are unavailable courses related to the course catalog of the active build scenario.

How to Create a Course Catalog

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Course Catalogs** from the PowerScheduler menu. The Catalogs page appears.
3. Click **New**. The New Course Catalog page appears.
4. Use the following table to enter information in the fields:

Field	Description
Name	Enter a name for this catalog. For example, if you are creating the course catalog for a specific school year, you might call it **2008-2009**.
Description	Enter a description of the catalog. Enter no more than 80 characters in this field.

5. Click **Submit**. The new catalog appears on the Catalogs page.
6. Click **Edit Course Catalog** in the row of the catalog you created. The Course Catalog page appears.

Note: If "Not active catalog" appears in the Edit Catalog column instead of "Edit Course Catalog," you must first make the new catalog the active catalog. Edit the current build scenario so that the new catalog is the active catalog. For more information, see *Build Scenarios*.

7. Deselect the checkbox next to each course you want to remove from this course catalog. By default, the checkboxes next to all of the courses available for scheduling at your school are selected. To sort the list, click **Course Name**, **Course Number**, or **Active Status**, which sorts the active (selected) courses first and the inactive (deselected) courses last.

   Note: Deselecting a course means that you will not be able to schedule that course for the upcoming schedule year, even if you have student course requests associated with it. Any student course requests will be automatically dropped from the scheduling process.

8. Click **Submit**. The Catalogs page appears.

   Note: You can edit the scheduling information for any of the courses within your active course catalog by clicking **Edit** in the Courses row. For more information, see *Build Scenarios*.

How to Edit a Course Catalog

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Course Catalogs** from the PowerScheduler menu. The Catalogs page appears.
3. Click the name of the catalog you want to edit. The Edit Course Catalog page appears.
4. Use the following table to enter information in the fields:

Field	Description
Name	Enter a name for this catalog. For example, if you are creating the course catalog for a specific school year, you might call it **2008-2009**.

Description	Enter a description of the catalog. Enter no more than 80 characters in this field.

5. Click **Submit**. The Catalogs page appears.

How to Edit Available Courses in the Course Catalog

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Course Catalogs** from the PowerScheduler menu. The Catalogs page appears.
3. Click **Edit Course Catalog**. The Course Catalog page appears.
4. Use the following table to enter information in the fields:

Field	Description
[Text]	The following informational text appears on the page: • This page lists courses in the course catalog (selected), as well as all available courses for this school and scheduling year not in the catalog (deselected). • To add or remove a course from the catalog, select or deselect the checkbox and click Submit. • Courses listed in black bold are available and active for live scheduling at this school for the designated scheduling year. • Warning icons indicate courses that are in the catalog, but not available for live scheduling at this school for the designated scheduling year. These courses must be made available in order to commit them in live schedules, and if not, should be removed from the course catalog after removing any related data in PowerScheduler. Examples of related data includes sections, class enrollments, teacher assignments, teacher recommendations, course requests, constraints, and course relationships. • If the district allows schools to change course availability, to edit availability for courses, use the Edit Availability for Schools and Years district level function, the Availability tab

	on the Course Edit page, or the Unavailable tab on the Courses for [year-year] page. • If the district does not allow schools to change course availability, to edit availability for courses, use the Edit Availability for Schools and Years district level function or the Availability tab on the Course Edit page at the district level. • To view all unavailable courses, go to the **Unavailable Courses** page.
Sort List By	Sort courses in the course catalog by clicking **Course Name**, **Course Number**, or **Active Status**.
[Course]	Do one of the following: • Select the checkbox next to each course you want to include in the course catalog. • Deselect the checkbox next to each course you want to remove from the course catalog.

5. Click **Submit**. The Catalogs page appears.

How to Edit Unavailable Courses in the Course Catalog

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Course Catalogs** from the PowerScheduler menu. The Catalogs page appears.
3. Click **Edit Course Catalog**. The Course Catalog page appears.
4. Click **Unavailable Courses.** The Unavailable Courses page displays all courses that are unavailable for the selected school and scheduling year.
5. Use the following table to enter information in the fields:

Field	Description
[Text]	The following informational text appears on the page:

	• This page lists all courses that are unavailable for the selected school and scheduling year. • Only available courses can be committed to the live side schedule. • Unavailable courses should only be included in the catalog if they will be made available prior to committing the schedule, or for the purpose of temporarily accessing them within PowerScheduler to remove related data. Examples of related data includes sections, class enrollments, teacher assignments, teacher recommendations, course requests, constraints, and course relationships. • To add or remove a course from the catalog, select or deselect the checkbox and click Submit. • If the district allows schools to change course availability, to edit availability for courses, use the Edit Availability for Schools and Years district level function, the Availability tab on the Course Edit page, or the Unavailable tab on the Courses for [year-year] page. • If the district does not allow schools to change course availability, to edit availability for courses, use the Edit Availability for Schools and Years district level function or the Availability tab on the Course Edit page at the district level. • To view all courses included in the course catalog, along with additional courses available for this school and scheduling year, select **View School Courses**.
Sort List By	Sort courses in the course catalog by clicking **Course Name** or **Course Number**.
[Course]	Select the checkbox next to each course you want to include in the course catalog.

6. Click **Submit**. The Course Catalog page appears.

How to Delete a Course Catalog

Deleting a course catalog deletes the following items related to that catalog: courses, teacher assignments, constraints, and course relationships. You cannot delete the active catalog. To inactivate a catalog so that it can be deleted, see *Build Scenarios*.

Note: This function does not delete courses from the school's Available Courses for [Year] page.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Course Catalogs** from the PowerScheduler menu. The Catalogs page appears.
3. Click the name of the catalog you want to delete. The Edit Course Catalog page appears.
4. Click **Delete**. The Delete Catalog page appears.
5. Select the checkbox if you are sure you want to delete this course catalog.
6. Click **Submit**. The Changes Recorded page appears.

Rooms Overview

Your school's layout and classrooms are essential parts of the scheduling process. Entering all of the necessary room information allows the system to consider the most efficient use of available space when building the master schedule.

When performing the *Schedule Parameters* function, you defined the departments and facilities within your school. Now it is time to enter the rooms. To each room, you can associate specific departments and facilities so that the system schedules courses in the appropriate locations.

Note: Only enter classrooms needed for next year's schedule. For example, if you know you are not going to hold classes in a particular room, do not enter its information in the system. If a room that you will not use next year is in the system, you can leave it there as long as you make it unavailable for scheduling. For more information, see *How to Edit a Room*.

To ensure that there is a place for each section of a course to meet, you must schedule them into classrooms. The system assigns courses to rooms based on the following priorities (listed from highest to lowest priority):

- The assigned teacher's preferred classroom
- Any classroom associated with the same department as the course being scheduled
- Any classroom associated with the same department as the assigned teacher
- Any classroom with an adequate number of seats

Note: If the course requires a special facility, the system considers rooms that provide the necessary facility only. If no facility is available, then the system cannot schedule the course.

Rooms

Define locations for courses so that the system best utilizes available space when building a master schedule. To create several rooms simultaneously, see *How to Auto Create Rooms*.

How to Filter the Rooms Page

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Rooms** from the PowerScheduler menu. The Rooms page appears.
3. If needed, click the **Filter** arrow to expand this section.

   Note: Click the **Filter** arrow again to collapse this section.

4. Use the following table refine your search:

Field	Description
Search	1. Enter search criteria in the field. 2. Click **Apply**. The page refreshes and display filtered results. **Note:** To remove all filter selections, click **Clear**.
[Column]	In addition to filtering by the Search field, you can filter by column headings. To filter by column headings: 1. Click **+**. **Note:** The **+** appears shaded if all filters have been added. To delete a filter, click **-** next the filter. 2. From the first pop-up menu, choose one of the following: • **Department** • **Dept. Use Only**

	• **Description** • **Facilities** • **Fac. Use Only** • **Always Free** • **Max** • **Number** • **Scheduled** 3. Enter search criteria in the search field. **Note:** Use a comma-separated list for multiple values. 4. To add another filter, repeat Step 1 through Step 3. 5. Click **Apply**. The page refreshes and display filtered results. **Note:** To remove all filter selections, click **Clear**.

The following information appears:

Note: Click the name of a column to sort by that column in ascending order. Click again to sort in descending order. By default, rooms are sorted by Room Number, Department, and then Facility.

- **Number**
- **Description**
- **Department**
- **Matrix**
- **Facilities**
- **Max**
- **Scheduled**
- **Dept. Use Only**
- **Fac. Use Only**
- **Always Free**

How to Add a Room

Create a room for each space within your school that will be used for scheduling. This could include offices and libraries.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Rooms** from the PowerScheduler menu. The Rooms page appears.

3. Click **New**. The Add/Edit Room page appears.
4. Use the following table to enter information in the fields:

Field	Description
Room Number	Enter the room number.
Room Description	Enter a description of this room.
Department	Click **Associate** to select the department for this room. If you associate this room with a specific department, such as **Math**, the system will do its best to schedule math courses in this room. To ensure that this room will only hold Math courses, you must also select the **Department Use Only** checkbox. **Note:** Click Department to create or edit departments at your school.
Building	Click **Associate** to select this room's building. **Note:** Click Building to create or edit buildings at your school.
House	Click **Associate** to select this room's house. **Note:** Click House to create or edit houses at your school.
Use for Scheduling	Select the checkbox if you want the system to consider this classroom when it assigns courses to rooms. Otherwise, deselect the checkbox. For example, some rooms (such as the cafeteria) are not used for scheduling. Deselect the checkbox to indicate if the room is not to be scheduled. If this is a room that you want to leave in the system but will not be using for scheduling next year, deselect the checkbox.
Room is Always Free	If you select the checkbox, the system can schedule multiple courses in this room at the same time. This function is often used with gymnasiums. However, sometimes the Room Maximum field can cause problems, and it

	would make more sense to break the class into Gym 1 and Gym 2 if you know that the maximum number of courses taught in the gym is two. If you deselect the checkbox, only one course can be scheduled in this room per period.
Department Use Only	Select the checkbox if you want the system to schedule in this room only courses that belong to this room's department. If you deselect the checkbox, the system schedules mostly courses with the same department as the room. But it is possible for the system to schedule a course that belongs to another department into this room. This would happen if some departments need more space than others. **Note:** If you select the checkbox, do not select the Facility Use Only checkbox.
Facility Use Only	Select the checkbox to specify that the system can schedule only courses requiring the facilities you enter in the Room Facilities field in this room. **Note:** If not many courses require the facilities in this room and you select the checkbox, the system does not fully schedule the room; the room remains free rather than accommodating another course. If you deselect the checkbox, the system considers the facilities you enter in the Room Facilities field as suggestions. For example, assume the system needs to schedule the computer course Algorithms and Data Structure. Though the course does not require a computer lab facility, the system can schedule the course in the room with the computer lab if it is free. **Note:** If you select the checkbox, do not select the Department Use Only checkbox.
Room Facilities	Click **Associate** to select the facilities of this room, if any. Facilities are any special characteristics of a room that courses may require. For example, a room might have a kitchen, computer

	lab, stage, or wood shop. Most classrooms do not have room facilities. There is a limit of 50 characters that can be entered in this field. **Note:** Click **Facilities** to create or edit facilities at your school.
Room Maximum	Enter a number to determine the maximum number of students that this room can accommodate. The capacity of the room limits the courses that the system can schedule there. For example, if you enter **25**, the system cannot schedule a course section with a maximum of 35 students into this room.

5. Click **Submit**. The Rooms page appears.

   Next, you might want to assign a course to a particular room. For example, maybe your school has several biology labs, and Biology 1 needs to be held in the classroom closest to the teacher's preferred room. To force a course to schedule in a particular room, define a Course Room constraint. For more information, see *Build Constraints*.

How to Edit a Room

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Rooms** from the PowerScheduler menu. The Rooms page appears.
3. To filter the page, see *How to Filter the Rooms Page*.
4. Click the number of the room you want to modify. The Add/Edit Room page appears.
5. Use the following table to edit information in the fields:

Field	Description
Room Number	Enter the room number.
Room Description	Enter a description of this room.

Department	Click **Associate** to select the department for this room. If you associate this room with a specific department, such as **Math**, the system will do its best to schedule math courses in this room. To ensure that this room will only hold Math courses, you must also select the **Department Use Only** checkbox. **Note:** Click Department to create or edit departments at your school.
Building	Click **Associate** to select this room's building. **Note:** Click Building to create or edit buildings at your school.
House	Click **Associate** to select this room's house. **Note:** Click House to create or edit houses at your school.
Use for Scheduling	Select the checkbox if you want the system to consider this classroom when it assigns courses to rooms. Otherwise, deselect the checkbox. For example, some rooms (such as the cafeteria) are not used for scheduling. Deselect the checkbox to indicate if the room is not to be scheduled. If this is a room that you want to leave in the system but will not be using for scheduling next year, deselect the checkbox.
Room is Always Free	If you select the checkbox, the system can schedule multiple courses in this room at the same time. This function is often used with gymnasiums. However, sometimes the Room Maximum field can cause problems, and it would make more sense to break the class into Gym 1 and Gym 2 if you know that the maximum number of courses taught in the gym is two. If you deselect the checkbox, only one course can be scheduled in this room per period.
Department Use Only	Select the checkbox if you want the system to schedule in this room only courses that belong to this room's department.

	If you deselect the checkbox, the system schedules mostly courses with the same department as the room. But it is possible for the system to schedule a course that belongs to another department into this room. This would happen if some departments need more space than others. **Note:** If you select the checkbox, do not select the Facility Use Only checkbox.
Facility Use Only	Select the checkbox to specify that the system can schedule only courses requiring the facilities you enter in the Room Facilities field in this room. **Note:** If not many courses require the facilities in this room and you select the checkbox, the system does not fully schedule the room; the room remains free rather than accommodating another course. If you deselect the checkbox, the system considers the facilities you enter in the Room Facilities field as suggestions. For example, assume the system needs to schedule the computer course Algorithms and Data Structure. Though the course does not require a computer lab facility, the system can schedule the course in the room with the computer lab if it is free. **Note:** If you select the checkbox, do not select the Department Use Only checkbox.
Room Facilities	Click **Associate** to select the facilities of this room, if any. Facilities are any special characteristics of a room that courses may require. For example, a room might have a kitchen, computer lab, stage, or wood shop. Most classrooms do not have room facilities. There is a limit of 50 characters that can be entered in this field. **Note:** Click **Facilities** to create or edit facilities at your school.
Room Maximum	Enter a number to determine the maximum number of students that this room can accommodate. The capacity of the room limits the courses that the system can schedule there. For example, if you enter **25**, the system cannot

	schedule a course section with a maximum of 35 students into this room.

6. Click **Submit**. The Rooms page appears.

How to Delete a Room

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Rooms** from the PowerScheduler menu. The Rooms page appears.
3. To filter the page, see *How to Filter the Rooms Page*.
4. Click the number of the room you want to delete. The Add/Edit Room page appears.
5. Click **Delete**. The Rooms page appears.

How to View the Room Matrix

The room matrix function creates a visual, graphical representation of a room's schedule. This schedule can be printed, though not for more than one room at a time.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Rooms** from the PowerScheduler menu. The Rooms page appears.
3. To filter the page, see *How to Filter the Rooms Page*.
4. Click **View** next to the room for which you want to view the room matrix. The room matrix displays a room's schedule for each period and day in each term. Identical colors on the schedule indicate the same section. A blank block means that nothing is scheduled for that block in that term. If all matrix preferences are selected, each block includes the following information:
    - **Name of the course**
    - **Course number**
    - **Section number**
    - **Name of the teacher for this section**
    - **Expression, which is the combination of periods and days**
    - **Term**
    - **Number of students scheduled for this section**
    - **Maximum enrollment for this section**

Student Information

As part of the process of preparing to build your master schedule, you need to confirm that the appropriate students are available in your database for scheduling. Before the system can build the schedule, you must enter detailed scheduling information for each student.

Update the following fields for all students who will attend your school next year:

- *Next School Indicator*
- *Next Year Grade*
- *Priority*
- *Year of Graduation*
- *Schedule This Student*

Update the following fields for students who will not attend your school next year:

- Schedule This Student
- Next School Indicator

In addition to the required settings, there are a number of optional settings you can use to assign students to houses, buildings, and teams.

It is easy to update for a group of students many of the required scheduling preferences fields, such as Next Year Grade and Schedule This Student. In certain circumstances, you may need to change or update a field for an individual student.

Warning: If you use the Update Selections tool to mass update a field value, that change cannot be undone; the new value appears in the field for all of the selected students. To remove the new value, you need to either manually change the value for each student's record or perform another Update Selections function to reverse your change.

Next Year Grade

Set the Next Year Grade field for all of the students who will attend your school next year. You do not need to set this field for students who are graduating from your school.

How to Set the Next Year Grade Field for a Student

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.

3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Preferences** from the pop-up menu.
    - Click the **Preferences** tab.

    The Edit Scheduling Preferences page appears.

6. Enter a grade level number in the **Next Year Grade** field.
7. Click **Submit**. The Changes Recorded page appears.

How to Set the Next Year Grade Field for an Entire Grade Level

Repeat this procedure for each appropriate grade level. Also, while you are working with a particular grade level, you may want to update the scheduling priority (Sched_Priority) and year of graduation (Sched_YearOfGraduation) fields in addition to the next year grade field (Sched_NextYearGrade).

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions** from the PowerScheduler menu. The Scheduling Functions page appears.
3. Click **Update Selections**. The Update Selections page appears.
4. Choose **Grade_Level** from the pop-up menu below Search Students.
5. Choose **=** from the pop-up menu in the second field.
6. Enter in the next field the number that represents the appropriate grade level, such as **9**.
7. Click **Search all records in this school**. The Update Selections page displays the new number of records.
8. Click **Modify Records**. The Modify Records page appears.
9. Choose **Sched_NextYearGrade** from the pop-up menu.
10. Enter in the next field the grade level number you want to assign to these students, such as **10**.
11. Click **Modify Selected Records**. The Update Selections page appears.

Priority

You can assign scheduling priorities to students for the system to follow when loading student schedules. Students can share the same priority.

For example, if there are more requests than available spots, you might want the system to schedule graduating students first because it is their last chance to take the courses they request. If this is the case, assign all twelfth graders a priority of 10, all eleventh graders a priority of 20, all tenth graders a priority of 30, and all ninth graders a priority of 40.

Note: Priority numbers can range from 1 to 999. The lower the number, the higher the priority. Some schools set priorities in increments of 10 to accommodate future modifications. Also, starting with 10 as the default priority number allows for special cases that need the highest priority to be given a number lower than 10.

To assign a priority to an entire grade level, see *How to Set the Next Year Grade Field for an Entire Grade Level*.

How to Assign Priority to a Student

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
   - Choose **Preferences** from the pop-up menu.
   - Click the **Preferences** tab.

   The Edit Scheduling Preferences page appears.

6. Enter a number in the **Priority** field.
7. Click **Submit**. The Changes Recorded page appears.

Year of Graduation

Set the Year of Graduation field for all of the students who will attend your school next year. Setting the year of graduation for any new registers and incoming students from previous grades reduces future scheduling work and provides another way to perform advanced student searches. You do not need to set this field for graduating students.

To set the year of graduation for an entire grade level, see *How to Set the Next Year Grade Field for an Entire Grade Level*.

How to Set the Year of Graduation for a Student

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Preferences** from the pop-up menu.
    - Click the **Preferences** tab.

    The Edit Scheduling Preferences page appears.

6. Enter a number in the **Year of Graduation** field, such as **2012**.
7. Click **Submit**. The Changes Recorded page appears.

Schedule This Student

Let the system know which of your students you want to include in the scheduling process. If you do not indicate that you want to schedule a student who has made course requests, the system will be unable to schedule that student.

Not only do you have to select the Schedule This Student checkbox to include the appropriate students, but also you must exclude graduating students by deselecting the Schedule This Student checkbox.

Though you can indicate that you want to schedule an individual student, you may prefer to modify this setting for a group of students.

How to Schedule an Individual Student

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Preferences** from the pop-up menu.

- Click the **Preferences** tab.

The Edit Scheduling Preferences page appears.

6. Select the **Schedule This Student** checkbox.
7. Click **Submit**. The Changes Recorded page appears.

How to Schedule All of Next Year's Students

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions** from the PowerScheduler menu. The Scheduling Functions page appears.
3. Click **Update Selections**. The Update Selections page appears.
4. Choose **Grade_Level** from the pop-up menu in the first field under the Search Students heading.

   Note: if the Search Students heading does not appear, choose **Students** from the Current Table pop-up menu.

5. Choose **<** from the pop-up menu in the second field.
6. Enter in the last field the number that represents the highest grade level at your school, such as **12**.
7. Click **Search all records in this school**. The Update Selections page displays the new number of records.
8. Click **Modify Records**. The Modify Records page appears.
9. Choose **Sched_Scheduled** from the pop-up menu.
10. Enter **True** in the next field to indicate that you want these students to be included in the scheduling process.
11. Click **Modify Selected Records**. The Update Selections page appears.

How to Exclude Graduating Students from Scheduling

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions** from the PowerScheduler menu. The Scheduling Functions page appears.
3. Click **Update Selections**. The Update Selections page appears.
4. Choose **Grade_Level** from the pop-up menu in the first field under the Search Students heading.

Note: if the Search Students heading does not appear, choose **Students** from the Current Table pop-up menu.

5. Choose **=** from the pop-up menu in the second field.
6. Enter in the last field the number that represents the highest grade level at your school, such as **12**.
7. Click **Search all records in this school**. The Update Selections page displays the new number of records.
8. Click **Modify Records**. The Modify Records page appears.
9. Choose **Sched_Scheduled** from the pop-up menu.
10. Enter **False** in the next field to indicate that you do not want these students to be included in the scheduling process.
11. Click **Modify Selected Records**. The Update Selections page appears.

Optional Scheduling Preferences

The following fields on the Edit Scheduling Preferences page are optional: Buildings, Houses, and Teams. It is possible that your school uses none, some, or all of these fields.

How to Assign a Student to a Building

If your school uses buildings, you should have created them using the section *Schedule Parameters*. Now you can assign students to those buildings.

To complete this task, you must know exactly what these buildings are named in the system. Find this information by choosing Buildings under the Parameters heading from the PowerScheduler menu.

To assign a group of students to a building, see *How to Assign a Group of Students to a Building, House, or Team*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Preferences** from the pop-up menu.
    - Click the **Preferences** tab.

The Edit Scheduling Preferences page appears.

6. Click **Associate** to select the name of the appropriate building in the Next Year Campus/Building field.
7. Click **Submit**. The Changes Recorded page appears.

How to Assign a Student to a House

If your school uses houses, you should have created them using the section *Schedule Parameters*. Now you can assign students to those houses.

To complete this task, you must know exactly what these houses are named in the system. Find this information by choosing Houses under the Parameters heading from the PowerScheduler menu.

To assign a group of students to a house, see *How to Assign a Group of Students to a Building, House, or Team*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Preferences** from the pop-up menu.
    - Click the **Preferences** tab.

    The Edit Scheduling Preferences page appears.

6. Click **Associate** to select the name of the appropriate house in the Next Year House field.
7. Click **Submit**. The Changes Recorded page appears.

How to Assign a Student to a Team

If your school uses teams, you should have created them using the section *Schedule Parameters*. Teams are either static or dynamic. If you are using static teams, you must assign each student to a particular team, either individually or in groups.

To complete this task, you must know exactly what these teams are named in the system, but you do not need to know the number of the team. The team number appears next to

the Next Year Team field after you complete the following procedure. Find the name of the team by choosing Team under the Parameters heading from the PowerScheduler menu. For more information, see *Teams*.

To assign a group of students to a team, see *How to Assign a Group of Students to a Building, House, or Team*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
   - Choose **Preferences** from the pop-up menu.
   - Click the **Preferences** tab.

   The Edit Scheduling Preferences page appears.

6. Choose the appropriate team in the **Next Year Team** field from the pop-up menu.

   Note: If there is a number to the right of the blank **Next Year Team** pop-up menu, the student was previously associated with a team at a different school. You must clear the **Next Year Team** field using the *Update Selection* function.

7. Click **Submit**. The Changes Recorded page appears.

How to Assign a Group of Students to a Building, House, or Team

Use this procedure to assign a group of students to a building, house, or team.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions** from the PowerScheduler menu. The Scheduling Functions page appears.
3. Click **Update Selections**. The Update Selections page appears.
4. Click **Select Records by Hand**. The Select Records By Hand: Students page appears.
5. Press and hold COMMAND (Mac) or CONTROL (Windows) and click the names of the students you want to assign to a particular building.
6. Click **Submit**. The Update Selections page appears.
7. Click **Modify Records**. The Modify Records page appears.

8. Choose **Sched_NextYearBuilding** from the pop-up menu. If assigning students to a house, choose **Sched_NextYearHouse**. If assigning students to a team, choose **Sched_NextYearTeam**.
9. Enter the name of the building, house, or team into which you want to assign these students in the next field. Enter the name exactly as it appears in the system.
10. Click **Modify Selected Records**. The Update Selections page appears.

Student Schedule Demographics

Use the Demographics page to view student information in the scheduling area. To edit the student's demographic information, see *Demographics*.

How to View Student Schedule Demographics

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Demographics** from the pop-up menu.
    - Click the **Demographics** tab.

    The Demographics page appears.

Graduation Plan Progress

Use the Graduation Plan Progress page in the schedule area to view information about a student's four-year graduation plan, any post-secondary plans, and the progress of each of those plans.

Note: This procedure may also be performed via **Start Page > Student Selection > Graduation Plan Progress**.

How to View a Student's Graduation Plan Progress

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.

2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Grad Planner** from pop-up menu.
    - Click the **Grad Planner** tab.

The Graduation Plan Progress page displays the following information for each plan:

Field	Description
Graduation Plan	The name of the graduation plan. To view additional information: 1. Click the name of the graduation plan. The [Graduation Plan] drawer opens. 2. Review information. 3. Click **Close**.
Graduation Plan	The name of the graduation plan. To view additional information: 1. Click the name of the graduation plan. The [Graduation Plan] drawer opens. 2. Review information. 3. Click **Close**.
Required Tests	
Test Name	The name of a required test for this graduation plan to track test scores, such as ACT, STAR, etc.
Action	If the **Allow Waiver** checkbox on the Edit Graduation Plan Test Requirements page has been enabled, you can waive the required test. To add a waiver to a required test, see *How to Add a Required Test Waiver*.

	To edit a waiver for a required test, see *How to Edit a Required Test Waiver*. To delete a waiver from a required test, see *How to Delete a Required Test Waiver*.
Attempts	The number of times the student has taken the required test.
Completed	Indicates whether the student has passed, failed, waived, or has not taken the required test.
Subjects Groups	
Subject Group	The name of the subject group within the graduation plan used to track credit hours for a specific subject area. To view additional information: 1. Click the name of a subject group. The [Subject Group] drawer opens. 2. Review information. 3. Click **Close**.
[Waiver]	If the **Allow Waiver** checkbox on the Edit Graduation Plan Requirement page has been enabled for a subject group, you can waive graduation requirements for students within the subject group. To add a waiver to a subject group, see *How to Add a Subject Group Waiver*. To edit a waiver for a subject group, see *How to Edit a Subject Group Waiver*. To delete a waiver from a subject group, see *How to Delete a Subject Group Waiver*.
Earned	The total number (and individual number) of credits for courses within the subject group that the student has earned.
Enrolled	The total number of courses within the subject group that the student is currently enrolled in.

Requested	The total number (and individual number) of credits for courses within the subject group that the student has requested.
Waived Credits	The total number of credits within the subject group that can be waived.
Applied Waiver Credits	The total number of credits within the subject group that have be waived.
Required	The total number of credits within the subject group that are required.
Progress	The total number of credits within the subject group that are in progress. Progress is indicated by the use of a color-coded bar: • Dark green indicates completed credits. • Green indicates current enrollments. • Blue indicates waived credits. • Yellow indicates requested credits.
[Checkmark]	A green checkmark indicates that a requirement has been completely satisfied with earned credits.

How to Add a Required Test Waiver

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
   - Choose **Grad Planner** from pop-up menu.
   - Click the **Grad Planner** tab.

   The Graduation Plan Progress page appears.

6. In the Required Tests section, click the **Plus (+)** button next to the required test for which you want to add a waiver. The Add Waiver drawer opens.
7. Use the following table to enter information in the fields:

Field	Description
Test Name	The name of a required test.
Waiver Type	Choose a waiver type from the pop-up menu.
Waiver Reason	Choose a waiver reason from the pop-up menu.
Waiver Source	Choose a waiver source from the pop-up menu.
Waiver Date	Indicate the date the waiver is effective.
Authorized By	Choose the name of the person authorizing the waiver from the pop-up menu.

8. Click **Submit**. The Add Waiver drawer closes.

How to Edit a Required Test Waiver

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Grad Planner** from pop-up menu.
    - Click the **Grad Planner** tab.

    The Graduation Plan Progress page appears.

6. In the Required Tests section, click the **Pencil** icon next to the required test for which you want to edit a waiver. The Edit Waiver drawer opens.

7. Edit as needed. For detailed field descriptions, see *How to Add a Required Test Waiver*.
8. Click **Submit**. The Edit Waiver drawer closes.

How to Delete a Required Test Waiver

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Grad Planner** from pop-up menu.
    - Click the **Grad Planner** tab.

    The Graduation Plan Progress page appears.

6. In the Required Tests section, click the **Pencil** icon next to the required test for which you want to delete a waiver. The Edit Waiver drawer opens.
7. Click **Delete**.
8. Click **Confirm Delete**. The Edit Waiver drawer closes.

How to Add a Subject Group Waiver

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Grad Planner** from pop-up menu.
    - Click the **Grad Planner** tab.

    The Graduation Plan Progress page appears.

6. In the Subject Groups section, click the **Plus (+)** button next to the subject group for which you want to add a waiver. The Add Waiver drawer opens.

7. Use the following table to enter information in the fields:

Field	Description
Graduation Plan	The name of the graduation plan.
Subject Group	The name of the subject group.
Path to Node	The location of the subject group within the subject group list.
Waiver Type	Choose a waiver type from the pop-up menu.
Waiver Reason	Choose a waiver reason from the pop-up menu.
Waiver Source	Choose a waiver source from the pop-up menu.
Elective Subject Group	Choose an elective subject group from the pop-up menu.
Waiver Date	Indicate the date the waiver is effective.
Credit Waived	Indicate the number of credits to waive.
Authorized By	Choose the name of the person authorizing the waiver from the pop-up menu.

8. Click **Submit**. The Add Waiver drawer closes.

How to Edit a Subject Group Waiver

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.

4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Grad Planner** from pop-up menu.
    - Click the **Grad Planner** tab.

    The Graduation Plan Progress page appears.

6. In the Subject Groups section, click the **Pencil** icon next to the subject group for which you want to edit a waiver. The Edit Waiver drawer opens.
7. Edit as needed. For detailed field descriptions, see *How to Add a Waiver*.
8. Click **Submit**. The Edit Waiver drawer closes.

How to Delete a Subject Group Waiver

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Grad Planner** from pop-up menu.
    - Click the **Grad Planner** tab.

    The Graduation Plan Progress page appears.

6. In the Subject Groups section, click the **Pencil** icon next to the subject group for which you want to delete a waiver. The Edit Waiver drawer opens.
7. Click **Delete**.
8. Click **Confirm Delete**. The Edit Waiver drawer closes.

Schedule Graduation Check

Use the Graduation Progress page in the schedule area to view information about a student's progress toward graduation. View the required classes and class categories, required credit hours, number of credit hours completed and currently in progress, and number of credit hours needed to meet graduation requirements.

How to View Schedule Graduation Check

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Grad Progress** from the pop-up menu.
    - Click the **Grad Progress** tab.

    The Graduation Progress page appears.

6. Select the appropriate graduation requirement set from the pop-up menu. The Graduation Progress page displays the student's progress towards the requirements for that graduation requirement set.

Student Schedule Matrix

The student matrix function creates a visual, graphical representation of a student's schedule. The matrix displays "100% Scheduled" when the schedule is complete. This schedule can be printed, though not for more than one student at a time.

You can also use the matrix to manually enroll students in courses based on their course requests. For more information, see *How to Manually Schedule Students*.

How to View the Student Schedule Matrix

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Matrix** from the pop-up menu.
    - Click the **Matrix** tab.

The Schedule Matrix page displays the percentage scheduled calculations for the student:

- % Scheduled - Percentage of requests successfully filled
- % Core Scheduled - Percentage of requests for core classes successfully filled
- % Primary Requests Satisfied - Percentage of primary requests (non-alternate requests) that were successfully filled
- % Total Requests Satisfied - Percentage of total requests including alternate requests that were filled

The schedule matrix displays the student's schedule for each period and day in each term. Identical colors on the schedule indicate the same section. A blank block means that nothing is scheduled for that block in that term. If all matrix preferences are selected, each block includes the following information:

- Course name
- Course number
- Section number
- Teacher name
- Room number
- Expression, which is the combination of periods and days
- Year term

How to Set Student Schedule Matrix Preferences

Indicate what type of information you want to display on the student schedule matrix. Though you can navigate to the Student Schedule Matrix Preferences page from an individual student's schedule matrix, the settings you select apply to all student schedule matrices.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
   - Choose **Matrix** from the pop-up menu.
   - Click the **Matrix** tab.

   The Schedule Matrix page appears.

6. Click **Matrix Preferences**. The Student Schedule Matrix Preferences page appears.
7. Use the following table to enter information in the fields:

Field	Description
Course Name	Select the checkbox to display the course name.
Course Number.Section Number	Select the checkbox to display the course and section numbers.
Teacher Name	Select the checkbox to display the teacher name.
Room	Select the checkbox to display the room number.
Expression Term	Select the checkbox to display the expression, which is the period and day combination.

8. Click **Submit**. The Schedule Matrix page displays the items selected on the Student Schedule Matrix Preferences page.

Student Course Requests

Student course requests are critical to scheduling, whether you use PowerScheduler or Automated Walk-In (AWI) scheduling. During the PowerScheduler Build process, for example, Student Course Requests are utilized to determine how many sections of a course are required. During the Scheduler Load process or when using AWI scheduling, the Requests are used to place the students into their desired or required courses. Requests can also be used to make PowerScheduler and AWI scheduling load students into selected sections of a course.

When using PowerScheduler to build a master schedule or load students into courses, the goal is to satisfy as many student course requests and to have the most balanced schedule possible. Both PowerScheduler and AWI scheduling utilize student course requests when creating Master Schedules or Student Schedules.

Before creating student course request pages, some preparation is required. This involves setting up the schools on the PowerSchool server for the upcoming scheduling year, setting student scheduling preferences, adding any new courses, collecting the appropriate grade-

level requirement information, and creating course groups and student request screens. Once complete, you can then begin building or loading schedules for the next school year.

The student course request process involves several steps. Complete these steps in the following order:

1. Create a scenario for each school before using PowerScheduler to build master schedules or load student schedules for each new scheduling year. It is recommended that you use Auto Schedule Setup to create a scenario for all schools in your district, whether or not the school will use PowerScheduler for scheduling purposes. That way, the appropriate students and their course requests will appear in the correct schools during the scheduling process. For more information, see *Auto Scheduler Setup*.
2. Set the schedule year for the upcoming year at all schools on the PowerSchool server. Approximate start and end dates for the new scheduling year will be required; these can be modified later, if necessary. For more information, see *How to Set the Schedule Year*.
3. Set the Next School, Next Year Grade, and Schedule This Student indicators for all active students using the Student Field Value and Next School group functions or by setting each student individually from the student's Schedule Setup page. These fields, with the exception of Next School, may also be mass-filled for each school using the Auto Fill Student Information function in PowerScheduler. Note that the Next School indicator must be set before using this function for those students who will be scheduled. For more information, see *How to Auto Fill Student Information*.
4. Add new courses to the Available Courses for [Year] page at any schools that will be using them for scheduling, then activate the courses in the course catalogs. For more information, see *Course Catalogs*.
5. Collect appropriate grade-level information. For more information about what information to gather, see *Grade-Level Requirements*.
6. Create course groups. For more information, see *Course Groups*.
7. Create student course request pages. For more information, see *Student Course Request Pages*.
8. Enter student course requests. For more information, see *Student Course Request Entry*.

Grade-Level Requirements

Determine the individual course requirements at your school, such as the names of required courses and number of credits students must take in each grade level. Having all of this information readily available for reference will make it much easier to create the student course request pages.

Collect the following information for each grade level:

- Required courses
- Number of credits that must be taken
- Possible semester elective courses
- Possible year-long elective courses
- Possible no-credit courses
- Number of terms for each request
- Before- or after-school courses
- Possible lunch periods

The following is an example of what you might collect for a ninth-grade request page:

Information to Collect	**Example**
Required courses	• One semester of each of the following: Software Applications 1, Software Applications 2, General Science 1, General Science 2, Health, Word Processing • Two semesters of English: English 9, English 9 Honors, or English 9 Basic Skills • Two semesters of math: Consumer Math, Pre-Algebra, Algebra I, Algebra II, or Geometry
Number of credits that must be taken	Ninth graders must take 7 full credits (14 semester classes)
Possible semester electives	Woods I, Woods II, Beginning Pottery, Art I, Art II, Beginning Foods, Fitness for Life (PE), any other Physical Education class, any computer class
Possible year-long electives	Band, Chorus, Audition Choir, any first-year Foreign Language, Agriculture I, Horticulture I
Possible no-credit courses	Only students with special permission can take no-credit periods: Study Hall, Work Experience, released time for religious or other academic classes, Independent Study

Number of terms for each request	Each request will represent one semester of course material
Before- or after-school courses	No class will be offered to ninth graders before or after school
Possible lunch periods	Lunch is not part of the ninth grade student schedule

Course Groups

To make it easier for students, parents, or staff members to enter requests, you have the option of creating course groups. Course groups represent the courses that are available to a student for a specific request.

For example, when eighth-grade students select a ninth-grade elective course for the next school year, they are presented with a list of valid ninth-grade elective course options. Students must make their selection from the list of courses that you determine are valid for a particular selection.

Note: It is recommended that course groups for scheduling use should only contain courses that require the same number of student course requests. For example, you should not combine single semester courses with year-long courses, as this could lead to an inaccurate count of requests and credit hours.

Create the lists by making a course group for all predetermined requirements. For example, in the case that you need to create six course groups for a particular grade level, you might create three groups for core courses, one for semester electives, one for year-long electives, and one for no credit electives.

Course group	Example
Core courses	Software Application I and II, General Science 1 and 2, Health, Word Processing English 9: English 9, Honors, Basic Skills Mathematics 9: Consumer Math, Pre-Algebra, Algebra I, Algebra II, Geometry

Semester electives	Woods I, Woods II, Beginning Pottery, Art I, Art II, Beginning Foods, Fitness for Life (PE), any other Physical Education class, any computer class
Yearlong electives	Band, Chorus, Audition Choir, any first-year Foreign Language, Agriculture I, Horticulture I
No credit electives	Study Hall, Work Experience, Released Time, Independent Study

How to Create a Course Group

Repeat this process for all course groups required for each grade level or request type at your school.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Requesting, choose **Course Groups** from the PowerScheduler menu. The Course Groups page appears.
3. Choose in which order you want courses to be listed on student course request pages, either by course name or course number, from the pop-up menu.
4. Click **New** in the courses menu. The Edit Course Group page appears.
5. Use the following table to enter information in the fields:

Field	Description
Name	Enter a name for the course group. All course groups and graduation requirement sets must have unique names in all schools. **Note:** If there are multiple schools on your server, you may want to create a system for naming your course groups so that they sort in a certain way. For example, you might call the course group containing Apple Grove High School's ninth-grade core courses **AGHS-9-Core Courses**. If you followed this system, all of your schools would sort together, as would the grade levels within them.
Type	Choose the type of course group from the pop-up menu:

	• **Both**: Course group is for both scheduling and graduation requirement purposes. Existing groups are set to Both by default. • **Scheduling Only**: Course group is used for scheduling purposes only. • **Graduation Set Only**: Course group is used for graduation requirement purposes only.
Applies to	Choose whether you want to apply the course group to all schools or only to the current school. By default, course groups are only applied to the current school.

6. Select the checkbox next to the name of each course that should belong to this group.
7. Click **Submit**. The Course Groups page appears.

How to Delete a Course Group

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Requesting, choose **Course Groups** from the PowerScheduler menu. The Course Groups page appears.
3. Choose the course group you want to edit from the courses menu. The Edit Course Group page appears.
4. Click **Delete**.
5. Click **Confirm Delete**. The Course Groups page appears.

Student Course Request Pages

Create course requirements and student course request pages for each grade level in the school. The course request pages contain courses you select for the various course groups from which students can make their selections. The request pages require students to select only courses and electives that have been approved for their grade level. If you need to make an exception, you can do so manually. For more information about grade-specific requirements, see *Requirements*.

Course Request Screens are relevant to whatever is selected as the scheduling year. The scheduling year also determines which Request Screen appears to parents and students.

For example, if the current school year is 2011-2012 and the schedule year is set to 2012-2013, students who are in tenth grade during 2011-2012 will use the Grade 11 request screen. For more information, see *How to Set the Schedule Year*.

When creating a year, the corresponding registration records from the previous year are copied to the new year. If registration records already exist for the school and year, then the registration records are not copied.

How to Create a Request Screen in PowerScheduler

Because course requirements vary for each grade level, you can create new or edit existing course request pages for each grade level in your school. The Next School Indicator field points to the school students will attend next year. For example, a school district consists of two high schools and three junior high schools. An eighth grader entering student course requests will view the request page for the high school set as his or her next school. Other eighth graders, whose next school is set to the other high school, would view a different request page.

Note: It is important to set all students' next school indicator, even if they stay at the same school next year. For more information, see *Student Information*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Requesting, choose **Screen Setup** from the PowerScheduler menu. The Requesting Setup Future page appears.
3. Note the Future Requests menu displays all of the grade levels at your school.
4. Click the appropriate grade level. The [grade level] Request Screen Setup for [school year] appears.

   Note: The grade level selected refers to the students' next year grade level.

5. Use the following table to enter information in the fields:

Field	Description
Enable student registration screen for this grade in	Indicate which portals you want the student registration screen for this grade to appear by choosing the appropriate checkboxes: • **PowerSchool Admin Portal** • **PowerSchool Student and Parent Portal**

	Click **Preview Student Registration Screen** to preview the registration screen.
Message to display on registration screens for students in this grade:	Enter any text you want to display on registration screens for students in this grade.
Number of credit hours each student must submit (excluding alternate requests)	Enter a minimum and maximum number of credits needed to complete the registration process. For example, you could enter **5** for Minimum and **7** for Maximum, thus ensuring that no student takes courses whose total credit hours are less than five or more than seven. **Note:** Leaving the Minimum and Maximum fields blank makes it possible for students to request too many or too few credit hours.
New Single Course Requirement	To enter a single class requirement, click to access the Grade-Specific Requirement For Course Requests page. For more information, see *Requirements*.
New Multi-Course Requirement	To enter a multi-class requirement, click to access the Grade-Specific Requirement For Course Requests page. For more information, see *Requirements*.
New Core Requirement	To enter a core requirement, click to access the Grade-Specific Requirement For Course Requests page. For more information, see *Requirements*.
Sort Order	Indicate the order in which you want requirements to display on the registration screens.
Requirement Name	The name of the requirement. Click to access the requirements page. For more information, see *Requirements*.
Type	Indicates the type of requirement: Core Required, Multi-Course, or Single Course. For more information, see *Requirements*.

Course Group	Indicates the course group. For more information, see *Requirements*.

6. Click **Submit**. The [grade level] Request Screen Setup Future page appears.

Requirements

You must create requirement entries for each student course request. Requirement entries make up the body of the request page, informing students which courses they must take and giving them selections from valid course groups. For more information about student course request pages, see *Student Course Request Pages*.

There are three types of requirement entries:

- Single Course Requirement: Students make single selections from a course group. For example, if all eleventh graders need to take one computer course next year, create a Computer course group that includes all of the computer courses. Students select one of the courses from the list to fulfill their Computer requirement.
- Multi-Course Requirement: Students make multiple selections from a course group. For example, if all eleventh graders need to take two business courses next year, create a Business course group that includes all business courses. Students select two or more of the courses from the list to fulfill their Business requirement.
- Core Requirement: Students view a set of requests that are predefined, such as a core set of courses for all ninth graders. There are no options from which students can make selections.

How to Enter a Single Course Requirement in PowerScheduler

A single course requirement appears on the request page as a pop-up menu. Students choose a single course from the list (course group) you create.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Requesting, choose **Screen Setup** from the PowerScheduler menu. The Future Requests menu displays the available grade levels.
3. Click the grade level for which you want to enter a single course requirement.
4. On the [grade level] Request Screen Setup Future page, click **New Single Course Requirement**. The Grade-Specific Requirement for Course Requests: [grade level] (Future) page appears.
5. Use the following table to enter information in the fields:

Field	Description
Name of this requirement	Enter a name for the requirement, such as **Ninth Grade Math**.
Description/Instructions	Enter a description or instructions for students to read on the screen so they understand exactly what they need to do to meet this requirement. For example: **You are required to enroll in one Math course. Use the pop-up menu to make your selection from the list of available courses.**
List of courses to present to the student in the pop-up menu	Use the pop-up menu to choose the course group you want students to make their selection from, such as **Math 9**.
Must students select a course from the pop-up, or may they leave it blank?	Choose either **Must select one** or **Can leave blank** from the pop-up menu.
Message to display if students are required to select a course, but they leave it blank instead	If you chose **Must select one** in the previous field, you can enter an alert message students will receive if they do not select one of the courses in the group. For example, enter: **You forgot to select one Math course**. If you do not enter a specific message for this requirement, the system displays a generic message: **You did not select a course for this requirement: [requirement name]**.
Request type	Use the pop-up menu to choose the type of request: • **Elective**: Not a requirement • **Alternate**: Used if an elective request is not met. If you select **Alternate**, the system uses this request if it cannot schedule the student in a requested elective. • **Required**: Required course for this grade level

	Note: An alternate request will never replace a required request.
Number of requests to generate	Use the pop-up menu to choose the number of requests that should be generated when this requirement is selected. For example, if Math is a year-long course but sections operate on semesters, choose **2** for two requests. Semester electives may only need one request.
Item sort order	Enter a number between **0** and **100** that indicates the order in which you want this requirement to appear on the request page you are creating.

6. Click **Submit**. The [grade level] Request Screen Setup Future page appears.

How to Enter a Multi-Course Requirement

A Multi-Course requirement appears on the request page as a pop-up menu. Students choose multiple courses from the list (course group) you create.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Requesting, choose **Screen Setup** from the PowerScheduler menu. The Future Requests menu displays the available grade levels.
3. Click the grade level for which you want to enter a single course requirement.
4. On the [grade level] Request Screen Setup Future page, click **New Multi-Course Requirement**. The Grade-Specific Requirement for Course Requests: [grade level] (Future) page appears.
5. Use the following table to enter information in the fields:

Field	**Description**
Name of this requirement	Enter a name for the requirement, such as **Ninth Grade Math**.
Description/Instructions	Enter a description or instructions for students to read on the screen so they understand exactly what they need to do to meet this requirement. For example: **You are required to**

	enroll in two Math courses. Use the pop-up menu to make your selection from the list of available courses.
List of valid courses for this item	Use the pop-up menu to choose the course group you want students to make their selection from, such as **Math 9**.
Number of courses student must select to meet this requirement	Enter the minimum and maximum number of courses students must select for this requirement. For example, enter **2** and **2** to require that no more and no less than two courses from the list are selected.
Message to display if the number of courses selected is not correct	Enter the message you want to appear to students if they do not select the correct number of requirements. If this field is left blank, a generic message will display.
Request type	Use the pop-up menu to choose the type of request: • **Elective**: Not a requirement • **Alternate**: Used if an elective request is not met. If you select Alternate, the system uses this request if it cannot schedule the student in a requested elective. • **Required**: Required course for this grade level. **Note:** An **Alternate** request will never replace a required request
Number of requests to generate	Use the pop-up menu to choose the number of requests that should be generated when this requirement is selected. For example, if Math is a year-long course but sections operate on semesters, choose **2** for requests. Semester electives may only need one request.
Item sort order	Enter a number between **0** and **100** that indicates the order in which you want this requirement to appear on the request page you are creating.

6. Click **Submit**. The [grade level] Request Screen Setup Future page appears.

How to Enter a Core Requirement

A core requirement is a set of courses that members of an entire grade level must request. There is no selection for students to make; you make the selection now so that students view an unalterable list of these required courses on their request pages.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Requesting, choose **Screen Setup** from the PowerScheduler menu. The grades menu displays the available grade levels.
3. Click the grade level for which you want to enter a single course requirement.
4. On the [grade level] Request Screen Setup Future page, click **New Core Requirement**. The Grade-Specific Requirement for Course Requests: [grade level] Future page appears.
5. Use the following table to enter information in the fields:

Field	Description
Requirement Name	Enter a name for the requirement. For example, assume you are creating a requirement for ninth graders that consists of the core courses in which they must enroll. You could name the requirement **Ninth Grade Core Required Courses**.
Description/Instructions	Enter a description or instructions. Since students will automatically receive the course requests you specify on this page, you could enter **All freshmen must take the following courses:**.
List of valid courses for this item	Use the pop-up menu to choose a course group, such as **Ninth Core Courses**.
Number of requests to generate per course	Use the pop-up menu to choose the number of requests that need to be generated for this requirement. For example, if these are semester-long courses, you would need to generate one request per course. In that case, choose **1** from the pop-up menu.

Item sort order	Enter a number between **0** and **100** that indicates the order in which you want this requirement to appear on the request page you are creating.

6. Click **Submit**. The [grade level] Request Screen Setup Future page appears.

How to Preview the Registration Request Page

After you enter all of the requirements you want to include on the request page, you have an opportunity to review how it looks and verify its accuracy.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Requesting, choose **Screen Setup** from the PowerScheduler menu. The grades menu displays the available grade levels.
3. Click the grade level for which you created a request page. The [grade level] Request Screen Setup Future page appears.
4. Enter any message you want to appear on the request page in the "Message to display on registration screens for students in this grade" field.

   Note: The checkbox "This grade may register for courses" should not be selected until the request pages are completely set up and you are ready for PowerScheduler to accept course requests.

5. Click **Submit**.
6. At the top of the [grade level] Request Screen Setup page, click **Preview Student Registration Screen** to review the actual output of the page. The Request Form Future page appears.
7. Click **Close** to return to the [grade level] Request Screen Setup Future page if you need to make corrections to any of the individual requirements.
8. Click **Submit**. The [grade level] Request Screen Setup page appears.

Student Course Request Entry

Once you complete and activate student course request pages for each grade level in your school, students and parents or guardians can use the PowerSchool Student and Parent portal to enter requests. You can also enter students' course requests in PowerScheduler.

To enter student course requests one at a time, see either *How to Enter Requests in the Scheduling Area* or *How to Enter Student Requests by Course*, depending on whether you are

working with a student or a course. To enter requests for more than one student at a time, see *How to Mass Assign Student Course Requests*.

Course requests entered in PowerScheduler appear on the requesting student's Requests Modify Future and Requests View Future pages in PowerSchool. In addition, administrative staff members can use PowerSchool to enter or delete requests for one or more students. To edit requests, see *How to Edit Student Course Requests*.

After the initial requests are made in PowerSchool or in PowerScheduler, future course requests can be modified or deleted in PowerScheduler.

You may also want to manually schedule a student once his or her course requests are made. For more information, see *How to Manually Schedule Students*.

For alternate course requests, PowerScheduler prioritizes scheduling alternates in the following order: associated Alternate course for a request, individual course requests with the Alternate checkbox selected, and global course substitutions made on the Course Information page. Any request with an Alternate Group Code of "E" (the only acceptable group code) can be replaced with any requests selected as "Alternate" according to PowerScheduler's priority for scheduling alternates.

How to Activate the Student Request Forms

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Requesting, choose **Screen Setup** from the PowerScheduler menu. The grades menu displays the available grade levels.
3. Click the name of a grade level at your school. The [grade level] Request Screen Setup page appears.

   Note: The selected grade level is the grade level for the future year. For example, to activate the course request page for students who will be in 10th grade next year, select **Grade 10**.

4. Select the **This grade may register for classes** checkbox.
5. Click **Submit**. The [grade level] Request Screen Setup page appears.

How to Enter Requests in the Scheduling Area

In addition to the Requests Modify Future page in PowerSchool, you can use PowerScheduler to enter student course requests for a future school year. That school year is determined by the setting on the Set Schedule Year page. For more information about setting the schedule year, see *How to Set the Schedule Year*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Requests** from the pop-up menu.
    - Click the **Requests** tab.

    The Requests page displays the percentage scheduled calculations for the student:

    - % Scheduled - Percentage of requests successfully filled
    - % Core Scheduled - Percentage of requests for core classes successfully filled
    - % Primary Requests Satisfied - Percentage of primary requests (non-alternate requests) that were successfully filled
    - % Total Requests Satisfied - Percentage of total requests including alternate requests that were filled
6. Click **New Request**. The Edit Course Request [student name] page appears.
7. Click **Associate**. The Courses pop-up appears.
8. Select the name of the course. Press and hold COMMAND (Mac) or CONTROL (Windows) to make multiple selections.
9. Click **Submit**. The Courses pop-up closes.
10. Click **Submit**. The Requests page appears.
11. Use the following table to enter information in the fields:

Field	Description
Number	The number of the requested course appears.
Course Name	The name of the requested course appears.
Note	Additional information about the request.
Alt	Select the checkbox to indicate whether this is an alternate course request.

Code	If this course request cannot be met, but can be replaced with any course request selected as "Alternate," enter **E** in this field.
Priority	If you selected the **Alt** checkbox, enter a priority number so the system will know which alternate to load first when a student does not receive the elective he or she wants.
Section Type	Choose the course's section type, if applicable, from the pop-up menu. For example, a student may request a bilingual section of a course.
Alternate 1	Click **Associate** to select the name of the first alternate for this course.

12. Click **Submit**. The Requests page appears.

How to Enter Student Requests by Course

If you are working with a course and want to enter student requests for that course, use the Requests function for the course.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Courses** from the PowerScheduler menu. The Courses page appears.
3. Click the name of the course you want to work with from the courses menu.
4. Do one of the following:
    - Choose **Requests** from the pop-up menu.
    - Click the **Requests** tab.

    The [Course Name] Requests page appears.

5. Click **New**. The Edit Course Request: [Course Name] page appears.
6. Use the following table to enter information in the fields:

Field	Description
Student	Click **Associate** to select the student for which you are making this request.
Section Type	Choose the course's section type, if applicable, from the pop-up menu. For example, a student may request a bilingual section of a course.
Alternate	Select the checkbox to indicate whether this is an alternate course request.
Alternate Group Code	If this course request cannot be met, but can be replaced with any course request selected as "Alternate," enter **E** in this field.
Alternate Priority	This field is reserved for future functionality.
Alternate Course 1	Click **Associate** to select the name of an alternate course for this request.
Alternate Course 2	Click **Associate** to select the name of an alternate course for this request.

7. Click **Submit**. The [Course Name] Requests page appears.

How to Manually Schedule Students

Use the student's Request page to quickly and efficiently schedule a student.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
    - Choose **Requests** from the pop-up menu.

- Click the **Requests** tab.

The Requests page appears.

6. Click **Manually Schedule Student**. The Manually Schedule Student page appears.
7. Select the checkbox next to the course, term, and expression in which you want to enroll the student. Deselect the checkbox next to the course, term, and expression from which you want to drop the student.

   Note: The student's currently scheduled classes appear in gray, available classes appear in green, and full classes appear in red. If an expression is gray and has a selected checkbox, the student is in the class. An asterisk (*) notation means that the class is full, regardless of color. If enrolling the student in a full class, enter the password to override the maximum enrollment in the field at the bottom of the page.

8. Click **Submit**. The Manually Schedule Student page appears.

   Note: To refresh the page to display the last saved selections, click **Reset**.

9. Click **Continue**. The student's Schedule page appears.

How to Edit Student Course Requests

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:
   - Choose **Requests** from the pop-up menu.
   - Click the **Requests** tab.

   The Requests page appears.

6. Use the following table to edit information in the fields:

Field	Description
Number	The number of the requested course appears.
Course Name	The name of the requested course appears.
Note	Additional information about the request.
Alt	Select the checkbox to indicate whether this is an alternate course request.
Code	If this course request cannot be met, but can be replaced with any course request selected as "Alternate," enter **E** in this field.
Priority	If you selected the **Alt** checkbox, enter a priority number so the system will know which alternate to load first when a student does not receive the elective he or she wants.
Section Type	Choose the course's section type, if applicable, from the pop-up menu. For example, a student may request a bilingual section of a course.
Alternate 1	Click **Associate** to select the name of the first alternate for this course.

7. Click **Submit**. The Requests page appears.

How to Delete Student Course Requests

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. Click the name of the student you want to work with from the students menu.
5. Do one of the following:

- Choose **Requests** from the pop-up menu.
- Click the **Requests** tab.

The Requests page appears.

6. Use the following table to edit information in the fields:

Field	Description
[Delete All]	Select the checkbox in the header row to delete all course requests.
[Delete]	Select the checkbox in the row of each course request you want to delete.

7. Click **Delete Selected**. The Requests page appears.

How to Mass Assign Student Course Requests

It is possible that an entire grade level or group of students will need to request the same course or courses. If this is the case, you have the option of mass assigning course requests to these students.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. On the Selected Students page, click **Functions**. The Scheduling Functions page appears.
5. Click **Mass Add Requests**. The Mass Add Requests page appears.
6. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the number of the course you want to assign to the group of students you selected.

Section Type	If applicable, choose the course's section type from the pop-up menu. For example, these students may request a bilingual section of a course.
Request Type	Choose the type of request from the pop-up menu: • **Required** • **Elective** • **Alternate**
Priority	If you selected Alternate in the Request Type field, enter a priority for the request. The lower the number, the higher the priority and the more likely these students will be scheduled into this alternate class.

7. Click **Submit**. The Changes Recorded page appears.

How to Mass Delete Student Course Requests

After student course requests have been entered, you may find that due to a data entry error, an entire group of students was assigned to the wrong course. Alternatively, perhaps there is not enough money in the budget to hold a particular course next year. In these and other similar situations, you have the option of mass deleting student course requests.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Students** from the PowerScheduler menu. The Scheduling page appears.
3. Select students for scheduling. For detailed information, see *Schedule Search and Select*.
4. On the Selected Students page, click **Functions**. The Scheduling Functions page appears.
5. Click **Mass Delete Requests**. The Mass Delete Requests page appears.
6. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the number of the course you want to delete from the group of students you selected.
Section Type	If appropriate, choose the Section Type from the pop-up menu. This ensures that only requests of the selected course that have this section type will be deleted.
Alternate	Select the checkbox to delete only requests for this course that are selected as Alternate.
What to Delete	Choose whether you want to apply the changes to the first occurrence or all occurrences of students' course requests. Deleting only the first occurrence of a request is useful for removing duplicate student course requests.

7. Click **Submit**. The Changes Recorded page appears.

Course Information

Define scheduling preferences for each course in your course catalog. These preferences control how PowerSchool builds your master schedule. See *Course Scheduling Setup*.

The process the system uses to schedule students in courses is similar to the process of constructing a wall of bricks. The master schedule is the wheelbarrow of available bricks. Each brick used to build the walls are the course sections in your course catalog. A good master schedule will have enough bricks with appropriate shapes and sizes to build solid walls for every student.

Building walls without gaps requires that the bricks all fit together. If your bricks come in different shapes, this can be a challenge. For example, a course that meets every day and all year long will have a very different shape from another course that meets every other day for one semester. Building a wall with all types of bricks requires that the wheelbarrow (master schedule) contain the right variety of bricks (course sections) from which to choose.

Course Scheduling Setup

For each course, define its shape or build type. You must also define sections, room requirements, load options, and substitute information. For information about relating courses, see *How to Define Related Courses*.

How to Define Scheduling Preferences

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Courses** from the PowerScheduler menu. The Courses page appears.
3. Click the name of the course you want to work with from the courses menu.
4. Do one of the following:
    - Choose **Preferences** from the pop-up menu.
    - Click the **Preferences** tab.

    The Course Information page appears.

5. Use the following table to enter information in the fields:

Field	Description
Course Number	The number that will be used to identify this course appears.
Course Name	The name of the course appears.
Course Description	Enter a detailed course description that will appear on the student course request pages and in the printed version of the course catalog.
Course Credit Hours	Displays the number of credits a that is set in the district course record. This is the value that is used in the live side of PowerSchool to determine what students receive for taking this course.

Request Screen Credits Hours	Enter the number of credits to be displayed on the course requests screens in PowerScheduler. For more information about course requests screens, see *Student Course Request Pages*. **Note:** This value does not copy to the district course record on the live side of PowerSchool. This is meant primarily to accommodate scheduling processes that use adjusted values. For example, if .5 is entered as the credit class value, 1 is used as the credit on the request screens because the schedule is being built as a year long class, but before the commit process the split year-long classes function will be used.
Credit Type	The type of credit a student receives for passing this course appears, such as **MATH**, **ENG**, or **FINE**.
Alternate Course Number	The alternate course number appears, if your school uses this field for state reporting or district purposes.
Grade Scale	The grade scale associated with this course appears.
CIP Code	In some states, schools use CIP codes to identify courses as part of a state-managed vocational program.
Vocational Class	Indicates if this is a vocational course.
Schedule This Course	Select the checkbox to schedule this course in the master schedule. If you deselect the checkbox, the system does not include the course in the master schedule.
Use The Course For Lunch	Select the checkbox to indicate that this course will be used exclusively for scheduled lunches. Otherwise, deselect the checkbox. **Note:** For more information, see *Scheduled Lunch*.
Exclude on Report Cards/Transcripts	Select the checkbox if you do not want this course to appear on report cards and transcripts. For example, you may not want courses designated for lunch to appear on students' reports.

Department	Click **Associate** to select the department to which this course belongs. Click **Department** to create a new department or edit an existing one.
Build Type	Build types define the shape of a course. Choose one of the following options from the pop-up menu: • **Standard**: This course meets for the same number of periods every time it meets. For example, a course that meets every day for one period is standard. A course that meets for one period every other day is also standard. • **Lab**: This is a standard course that meets for the same number of consecutive extra periods on certain days in the cycle. For example, a standard Chemistry course meets every day in a six-day cycle (Days A-F). Two days in the cycle, the class meets for two consecutive periods to complete an involved laboratory assignment. • **LabFloat**: This is a standard course that meets extra periods some days in the cycle, but the extra period is not consecutive to the course. For example, a Humanities course meets every day in a six-day cycle. One day during the cycle, the students attend a two-period lab in which they complete a community service assignment. The community service assignment does not have to occur directly before or after the Humanities course.
Maximum Enrollment	Enter the maximum number of students you want to schedule in sections of this course.
Target Number of Sections to Offer	Enter the number of sections to offer for this course. **Note:** To calculate this number automatically, your can use one of the following functions: the Calculate Target Number of Sections to Offer function, the Auto Fill Course Information function or the Auto Generate Course Information function.
Number of Teacher Assignments	Enter the number of teacher assignments for this course. For example, if the school decides to offer four sections of Algebra, the engine requires that four teacher assignments are

	defined. As a result, Teacher A will have an assignment for one section, Teacher B will have an assignment for two sections, and Teacher C will have an assignment for one sections, totaling four teacher assignments. This tells the Scheduling Engine that four sections of Algebra must be built, and also tells the Engine who must teach those sections. **Note:** Only Build and Load scenarios allow for teacher assignments. Teacher assignments are not used by Load Only scenarios.
Periods Per Cycle	The number of periods this course meets in the cycle appears. This number could be greater than or less than the number of days in the cycle. For example, a course could have a value of 4 in the Periods Per Cycle field for a school with a two-days-per-cycle schedule. This course meets for two periods during each day in the cycle. Another way to express periods per cycle is: Periods per meeting * Frequency + Lab Periods per meeting * Lab frequency = Periods per cycle.
Periods Per Meeting	Enter the number of periods this course section meets each time it convenes. Most courses meet for a single period. Some courses have an intensive curriculum and may convene for two or more periods per meeting.
Frequency	The number of days this course meets during a cycle appears. For example, Senior Gym is held A day and B day. Therefore, the frequency is 2. It is important to understand that the frequency of a course is not related to the number of periods it meets within a given cycle.
Terms per Year	The number of terms per year this course meets appears. This value is automatically calculated. For example, Introduction to Art has a Terms Per Year value of 1. This means that a section of this course only meets for a single term. However, Freshman English has a Terms Per Year value of 4, which means this course meets all four terms in the year. Terms Per Year is related to the number of terms you set in the build scenario. Remember that the Terms Per Year value equals

	the lowest common denominator (LCD) of all scheduling terms. For example, if a school has trimesters, semesters and quarters, the LCD is 12. For a semester course, the Terms Per Year value would be 6, or half of the schedule terms; a trimester course would have a Terms Per Year value of 4, and a quarterly course would have a Terms Per Year value of 3.
Allow Student Repeats in the Same Term	Select the checkbox to allow the system to schedule a student in more than one section of this course in the same term. For example, occasionally students need to double-up on a course within the same term. This is usually done for elective courses, such as Work Release.
Allow Student Repeats in Different Terms	Select the checkbox to allow the system to schedule a student in more than one section of this course in different terms. Use this option for either academic or elective courses.
Balance Terms	For courses with more than one section, select the checkbox if you want the system to attempt to place an equal number of sections in each valid term. For example, a course consisting of 13 sections is only offered during Term 1 and Term 3 in a four-term year. Therefore, the system schedules seven sections in one term and six sections in the other.
Valid Start Periods	Select the checkbox next to the appropriate periods to determine in which periods the course is valid to start. For example, if you want a course that has two periods per meeting to start any period except 6 or 7 in a seven-period day, select the checkboxes next to Period 1, Period 2, Period 3, Period 4, and Period 5.
Valid Terms	Click **Associate** to select the terms this course can meet. For example, assume you want the system to schedule a half-year course in the fall of a four-term school year. Select **S1** (first semester) as the only valid term for this course.
Valid Day Combinations	Enter the valid days that this course can meet. For example, if a teacher is available to teach a course only on the B day of an AB schedule, enter **B**. Click **Day** to add or edit a day. Enclose multiple

	entries in parentheses and separate multiple entries with commas, such as (A,B). Use dashes to indicate day combinations, such as (A-C).
Is This Course A Lab	Select the checkbox if this course is a lab.
Lab Frequency	Enter the number of days this lab meets during a cycle.
Lab Periods Per Meeting	Enter the number of periods this lab meets each time it meets.
Valid Lab Day Combinations	Click **Associate** to select the valid days that this lab can meet. Click **Day** to add or edit a day. Enclose multiple entries in parentheses and separate multiple entries with commas, such as **(A,B)**.
Facilities	Click **Associate** to select the special facilities this course requires, if any. For example, a facility could be a piano, biology lab, or wood shop. If you define a facility here, the system schedules this course in a room that contains that facility. Click **Facilities** to add or edit a facility.
Load Priority	Enter a numerical value of **1** to **99** (1 being the highest priority) to prioritize in which course the system should schedule a student when a conflict between two of the student's requests arises. You can enter the same load priority number for several courses. For example, enter a load priority of **10** for all academic courses to ensure that students are loaded into these courses first, **20** for academic electives, and **30** for non-academic electives. **Note:** If this course has a Section Link constraint associated with it, you may want to give it the highest load priority to prevent the section link from being broken.
Load Type	Use the pop-up menu to choose whether this is an **Academic**, **Elective**, or **Alternate** course. The system uses this classification to balance the types of courses in which the student is scheduled during a schedule term.

	For example, if your school's scheduling terms are semesters, the system does not schedule the student in all elective courses the first semester and all academic courses the second semester.
Balance Priority	Use this pop-up menu to set a secondary priority for the course when loading student schedules. The primary priority is determined by the load priority field. The following settings create an additional priority. For example, if you choose **Grade** from the pop-up menu, the system not only attempts to keep an equal number of students in each section, but also an equal number from all grade levels. The default setting for loading students into the master schedule is Section. Use the pop-up menu to choose one of the following options to ensure a balance of students in each section (optional): • **Section**: When loading students into sections, the system always attempts to keep an even number of students among sections. • **Gender**: Balanced number of males and females in each section. • **Grade**: Balanced number of students from each grade level within each section. • **EthnicCode**: Balanced number of students with different ethnic codes within each section. • **House**: Balanced number of members from each house within each section.
Use Pre-Established Teams	Select the checkbox if you want the system to reference teams when scheduling students into this course.
Close Section After Max	Select the checkbox if you want the system to stop scheduling students in a section of this course after the enrollment reaches the number you defined in the Maximum Enrollment field.
Use Section Types	Select the checkbox if you want the system to schedule courses according to section types. For more information about section types, see *Section Types*.

Don't Allow Student Substitutions	Select the checkbox if you do not want the system to attempt to schedule a student in alternate courses if this course is full.
Global Substitution 1	Click **Associate** to select the first course substitution you want the system to schedule for every student who cannot be scheduled in this course.
Global Substitution 2	Click **Associate** to select the second course substitution you want the system to schedule for every student who cannot be scheduled in this course. The system will use this substitution if Global Substitution 1 is no longer available.
Global Substitution 3	Click **Associate** to select the third course substitution you want the system to schedule for every student who cannot be scheduled in this course. The system will use this substitution if Global Substitution 2 is no longer available.

6. Click **Submit**. The Changes Recorded page appears.

How to Define Related Courses

For each course, you can define related courses. The system uses these course relationships when building the schedule. Relate courses to alert the system that it must consider other courses when determining the best place for a course in the master schedule.

For example, if a teacher can instruct multiple special education courses at one time in the same room, you can relate the courses so that the system knows it is possible to do so.

If you define a relationship for a course with another course, you do not have to define the relationship for both courses. But, you can define the relationship for both courses so that it is easy to identify this relationship regardless of which course you are viewing.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Courses** from the PowerScheduler menu. The Courses page appears.
3. Click the name of the course you want to work with from the courses menu.
4. Do one of the following:
    - Choose **Relationships** from the pop-up menu.

- Click the **Relationships** tab.

The Course Relationships page appears.

5. Click **New**. The Edit Course Relationship page appears.
6. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the number of the course for which you want to define a relationship.
Relationship Type	Use the pop-up menu to choose one of the following options: • **Is Blocked for Building With**: This relationship type is used for building a master schedule. Courses that must be related to one another in the schedule. For example, you may want pottery to be scheduled before or after ceramics so that they can share a hot kiln. Alternatively, a medieval literature class may follow a medieval history class. • **May Be Built Concurrent With**: This relationship type is used for building a master schedule. Courses that can meet at the same time, in the same place, and be taught by the same teacher. For example, a special education teacher might have a class of ten students, three of whom are taking remedial reading and the remainder of whom study remedial vocabulary and spelling. **Note:** When two courses are blocked simultaneously and share the same teachers, there is no need to add a concurrent relationship between the two courses. Also, the PowerScheduler engine propagates concurrent relationships amongst courses that share a concurrent relationship. For example, if Course A has a concurrent relationship with Course B and Course B has a concurrent relationship with Course C, there is no need to add a concurrent relationship between Course A and Course C. • **Has a Load Coreq of**: Two courses that are scheduled during the same term of a student's schedule. The term of

	one section must be the same as or a subsection of the term of the other section. For example, if one of the courses is scheduled in Semester 1, then the other may be Semester 1, Trimester 1, or Quarter 1 or Quarter 2. Though a Trimester 2 course overlaps a Semester 1 course, the courses cannot have a "coreq" relationship type. • **Has a Load Postreq of**: A course that must be in a student's schedule in a term after the related course. The course you associate using the Course Number field will be scheduled after the currently selected course. The term of the first section must end before the term of the second section begins. For example, Course B is a post-requisite of Course A. When the system schedules a student for these courses, it ensures that Course B is scheduled into a term after the student is scheduled for Course A. • **Has a Load Prereq of**: A course that must be in a student's schedule in a term before the related course. The course you associate using the Course Number field must be scheduled before the currently selected course. The term of the first section must start after the term of the second section ends. For example, Course A is a prerequisite of Course B. When the system schedules a student for these courses, it ensures that Course A is scheduled into a term before the student is scheduled for Course B. • **Must Not Load Coreq With**: The courses cannot be scheduled in the same term or sub-term. For example, if Course A is scheduled for Semester 1, then Course B may be scheduled for Trimester 2 or Trimester 3 but not Trimester 1. This relationship is bi-directional; that is, if you indicate that Course A "Must Not Load Coreq With" Course B, then Course B is automatically set to "Not Load Coreq With" Course A. • **Must Load Distinct (no term overlap) With**: The courses cannot load into overlapping terms. For example, if Course A is scheduled for Semester 1, then Course B may be scheduled for Trimester 3 but not Trimester 1 or Trimester 2. This is also a bi-directional relationship type. • **Must Load the Term After**: The course must load in the next term. For example, if Course A is scheduled for Quarter 1, then Course B may be scheduled in Quarter 2 but not Quarters 1, 3, or 4. Likewise, if Course A is

	scheduled for Semester 1, then Course B may be scheduled in Quarter 3 or Semester 2. To indicate the reverse of this relationship type, see the "Must Load the Term Before" option. • **Must Load the Term Before**: The course must load in the previous term. For example, if Course A is scheduled for Quarter 3, then Course B may be scheduled in Quarter 2 but not Quarters 1, 3, or 4. To indicate the reverse of this relationship type, see the "Must Load the Term After" option. **Note:** Coreq, Postreq, and Prereq only relate to the current scheduling year. The system does not check historical data for previous courses.
Relationship Code	If you selected a relationship type of **Block**, you must define a relationship code. Use the pop-up menu to choose one of the following options: • **Simultaneous**: The blocked course must be scheduled at the same time as the current course. If the same teacher instructs both courses, they must also be concurrent. Simultaneously blocked courses can have different attributes, such as numbers of sections, different frequencies, and different teachers. The courses can be scheduled at the same time with different teachers in different rooms. **Note:** The PowerScheduler engine propagates simultaneous relationships amongst courses that share a simultaneous relationship and have the same number of sections. For example, if Course A is blocked simultaneously with Course B, Course B is blocked simultaneously with Course C, and courses A, B, and C have the same number of sections, there is no need to add a simultaneous block relationship between Course A and Course C. • **Before or After**: The blocked course must be scheduled either before or after the current course.

	• **Before**: The selected course must be scheduled before the course you associate using the Course Number field. The blocked course selected in the Course Number field must be scheduled after the current course. • **After**: The selected course must be scheduled after the course you associate using the Course Number field. The blocked course selected in the Course Number field must be scheduled before the current course. • **Different Terms**: Two courses occur on the same days and periods, but in different terms. • **Combine Into**: Combine courses that have different student requests but have the same teacher and the same attributes, such as frequency, periods per meeting, valid start periods, and number of sections. Since the PowerScheduler engine processes combined courses as a single course, select an "anchor" course in the Course Number field from which you can combine additional courses. For example, a combined block relationship is applied to English I, English II, English III, which are all are taught by the same teacher but were requested by different students. Those three courses will be scheduled at the same time with the same teacher in the same room. When editing course relationships for English II and English III, associated English I as the anchor course for each combined relationship. • **Opposite Days**: Two courses occur during the same period and term, but on alternate days. • **Section**: The blocked course must have the same students in each section as the current course. For example, all students in section 1 of the blocked course must be in section 1 of the current course.

7. Click **Submit**. The Course Relationships page appears.

Calculate Target Number of Sections to Offer

Use the Calculate Target Number of Sections to Offer page if you want the system to calculate the recommended number of sections to offer for each course in the current catalog. When calculating the number of sections to offer for each course, PowerScheduler

divides the total number of primary requests for that course by the maximum enrollment per section. Any remainders in this calculation are rounded up to provide the necessary number of sections for the number of requests. For example, if 215 students request a Biology course and the maximum number of students in each section is 25, the system calculates a need for 9 sections of Biology.

Before you continue, you must enter a value in the **Maximum Enrollment** field on the Course Information page. For more information, see *How to Define Scheduling Preferences*.

How to Calculate Target Number of Sections to Offer

The Calculate Target Number of Sections to Offer function calculates the recommended number of sections to offer for each course in the current catalog, based upon the number of course requests, the course maximum enrollment, and whether students may repeat the class in a given school year. Be sure to enter scheduling preferences for all of your courses before using this function. For more information, see *How to Define Scheduling Preferences*.

Note: To select a group of course see **PowerScheduler** > **Functions** > **Update Selections** > Choose **ScheduleCourseCatalog** from the **Current Table** pop-up menu > **Select Records by Hand** > Hold down the COMMAND key to make multiple selections > **Submit**.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions** from the PowerScheduler menu. The Scheduling Functions page appears.
3. Click **Calculate Target Number of Sections to Offer**. The Calculate Target Number of Sections to Offer page appears.
4. Do one of the following:
    - Select the **All courses** option to perform the function for all courses.
    - Select the **Selected courses** option to perform the function for a selected group of courses.
5. Click **Submit**. The Changes Recorded page appears.

Teacher Scheduling Information

You must enter and define scheduling setup information for every teacher who instructs at least one course at your school. In addition, you can assign teachers to the courses they will be teaching. For more information, see *Teacher Scheduling Setup* and *Teacher Assignments*.

Teacher Scheduling Setup

To set up teachers for scheduling, set teacher scheduling preferences and view teacher constraints to determine if the constraints need to be modified.

How to Set Teacher Scheduling Preferences

When you set teacher scheduling preferences, there are a few fields that lend themselves to mass updating, such as Use for Scheduling. However, because the majority of the information needs to be set individually, it does not make sense to use the Update Selections tool in this area in most cases.

Repeat this procedure for every teacher at your school who will be instructing at least one course next schedule year.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.
3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:
    - Choose **Preferences** from the pop-up menu.
    - Click the **Preferences** tab.

    The Teacher Scheduling Preferences page appears.

5. Use the following table to enter information in the fields:

Field	Description
Department	Click **Associate** to select this teacher's department.
Preferred Room	Click **Associate** to select this teacher's classroom. The system always attempts to schedule courses assigned to this teacher in his or her preferred classroom first.
Maximum Consecutive Periods	Use the pop-up menu to choose the maximum number of periods this teacher can teach in a row (according to his or her contract).

Schedule This Teacher	Select the checkbox if you want the system to include this teacher when scheduling. **Note:** If you deselect the checkbox, the system will not include this teacher in the schedule build process.
Is Always Free?	Select the checkbox to allow this teacher to be scheduled for an unlimited number of courses during the same period. For example, some special education teachers teach different subjects to different students in the same room during the same period.
Schedule For Lunch	Select the checkbox if you want this teacher to be scheduled for a lunch period. For more information, see *Scheduled Lunch*.
Building Code (optional)	Click **Associate** to select this teacher's building.
House Code (optional)	Click **Associate** to select this teacher's house.
Team Code (optional)	Use the pop-up menu to choose the team to which you want this teacher to belong. **Note:** If there is a number to the right of the blank Team Code pop-up menu, the teacher was previously associated with a team at a different school. You must clear the Team Code field using the *Update Selections* function.
Maximum Student Load	Enter the maximum number of students that a teacher can have per day. This overrides the value of the Teacher's Maximum Daily Student Load, which is set at the district level. For more information, see *Miscellaneous District Settings*. Entering a value in this field does not prevent the teacher from being over-scheduled but only allows for reporting on the teachers whose schedules exceed the specified maximum student loads.

6. Click **Submit**. The Changes Recorded page appears.

How to View Teacher Constraints

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.
3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:
    - Choose **Constraints** from the pop-up menu.
    - Click the **Constraints** tab.

    The Teachers Constraints page appears.

    Note: For information about how to add, modify, or delete a teacher's constraints, see *Build Constraints*.

Teacher Assignments

Creating 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.

To enter teacher assignments, use one of the following methods:

- Select a teacher, enter all of his or her assignments, and go to the next teacher.
- Select a course, enter the teachers who will be teaching it, and go to the next course.

If you enter or edit an assignment for a teacher or course, the system automatically updates the information in both places.

How to Assign Teachers to Courses

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.
3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:
    - Choose **Assignments** from the pop-up menu.
    - Click the **Assignments** tab.

The Teachers Assignments page appears.

5. Click **New**. The Edit Teacher Assignment page appears.
6. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select a course from the active course catalog.
Section Type	If appropriate for the course you selected, use the pop-up menu to choose the section type you want to assign to this teacher, such as **Spanish** or **SPED**. If you use section types, you must indicate which teachers teach what section types. For example, if Teacher A teaches the Spanish section (section type) of course 100, choose Spanish and enter **1** in the Number of Sections field. If Teacher B teaches two sections of course 100 with only one of the two being a Spanish section type, you need to create two teacher assignments. For one, choose **Spanish** for the section type and enter **1** in the Number of Sections field; for the other, leave the Section Type field blank and enter **1** in the Number of Sections field.
Number of Sections	Enter the number of sections of the course this teacher will instruct.
Schedule Term Code	Use the pop-up menu to choose the schedule term in which this course is taught. **Note:** This field only applies to courses that are not full-year courses. For example, assume one teacher is instructing three sections of a single semester course. If you want two sections to meet Semester 1 and one section to meet Semester 2, enter two teacher assignments for the course. For one assignment, choose **S1** in this field and enter **2** in the Number of Sections field. For the other, choose **S2** in this field and enter **1** in the Number of Sections field.

	If you do not choose a term, the system decides in which term to schedule the course.

7. Click **Submit**. The teacher's Teacher Assignments page appears.

How to Assign Courses to Teachers

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Courses** from the PowerScheduler menu. The Courses page appears.
3. Click the name of the course you want to work with from the courses menu.
4. Do one of the following:
    - Choose **Assignments** from the pop-up menu.
    - Click the **Assignments** tab.

    Any teacher assignments previously entered for this course appears.

5. Click **New**. The Edit Course Assignment [course name] page appears.
6. Use the following table to enter information in the fields:

Field	Description
Teacher	Click **Associate** to select the name of the teacher to whom you want to assign this course.
Section Type	If appropriate for the course you selected, use the pop-up menu to choose the section type you want to assign to this teacher, such as **Spanish** or **SPED**. If you use section types, you must indicate which teachers teach what section types. For example, if Teacher A teaches the Spanish section (section type) of course 100, choose Spanish and enter **1** in the Number of Sections field. If Teacher B teaches two sections of course 100 with only one of the two being a Spanish section type, you need to create two teacher assignments. For one, choose **Spanish** for the section type and enter **1** in the Number of

	Sections field; for the other, leave the Section Type field blank and enter **1** in the Number of Sections field.
Number of Sections	Enter the number of sections of the course this teacher will instruct.
Schedule Term Code	Use the pop-up menu to choose the schedule term in which this course is taught. **Note:** This field only applies to courses that are not full-year courses. For example, assume one teacher is instructing three sections of a single semester course. If you want two sections to meet Semester 1 and one section to meet Semester 2, enter two teacher assignments for the course. For one assignment, choose **S1** in this field and enter **2** in the Number of Sections field. For the other, choose **S2** in this field and enter **1** in the Number of Sections field. If you do not choose a term, the system decides in which term to schedule the course.

7. Click **Submit**. The [course name] page appears.

How to View Teacher Assignments

Use this procedure to view teacher assignments for a specific teacher.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.
3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:
    - Choose **Assignments** from the pop-up menu.
    - Click the **Assignments** tab.

    The Teachers Assignments page appears.

Note: To edit or delete a teacher assignment, click the course number on the Teacher Assignments page or the teacher name on the [course name] page. Edit the assignment and click **Submit**, or click **Delete** to remove the assignment.

How to View Teacher Assignments by Course

Use this procedure to view all teacher assignments for a specific course.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Courses** from the PowerScheduler menu. The Courses page appears.
3. Click the name of the course you want to work with from the courses menu.
4. Do one of the following:
    - Choose **Assignments** from the pop-up menu.
    - Click the **Assignments** tab.

    Any teacher assignments previously entered for this course appears. The following information displays for each assignment:

    - Target Number of Sections to Offer
    - Teacher Name
    - Count
    - Section Type
    - Terms
    - Department
    - Room

Teacher Schedule

View a teacher's schedule, including courses, sections, and enrollment per section. You can add or delete sections from a teacher's schedule. In addition, you can modify a section, such as locking it to prevent the section from being changed when the system rebuilds the master schedule.

How to Add a Section to a Teacher Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.

3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:
    - Choose **Schedule** from the pop-up menu.
    - Click the **Schedule** tab.

    The Teacher Schedule page appears.

5. Click **New**. That teacher's Edit Section page appears.
6. Use the following table to enter information in the fields:

Field	Description
Teacher name	The name of the selected teacher appears.
Course Number	Click **Associate** to select a course from the active course catalog.
Term	Choose the term for the course from the pop-up menu.
Schedule	Select the checkboxes for the expressions for the appropriate days on which the staff member teaches this section. **Note:** The schedule expression is the combination of periods and days.
Room	Click **Associate** to select a room in which the staff member teaches this section.
Section number	Enter a unique section number for this section. Select the **Locked Section** checkbox if the section should not be rescheduled during the next build.
Close section at max	Identifies whether to enroll students into the section even if the maximum enrollment has been reached. If this is selected, no students will be enrolled if the current enrollment is equal to or greater than the maximum enrollment. Select the checkbox to not accept more enrollments than the maximum number of enrolled students.

Section type	Identifies the section as open only to be filled by students whose course requests are designated as the same section type. Choose the type of section, such as Bilingual, from the pop-up menu (optional). **Note:** For more information, see *How to Add a Section Type*.
Grade Level	Enter the grade level of this section.
Current enrollment	The current enrollment of students in this section appears.
Maximum enrollment	Enter the maximum number of students that can enroll in this section.
Team	Choose the team associated with this section from the pop-up menu.
House	Click **Associate** to select a team to which this section belongs.
Where Taught	Enter the school ID if the section is taught at a different school.
Dependent sections	Enter any dependent sections for this section. Separate multiple sections with commas.
Exclude From Attendance	Select the checkbox if you do not want to include this section in the student ADM/ADA counts.
Grade Scale	Choose the grade scale from the pop-up menu.
Maximum Load Status	Use the pop-up menu to indicate whether the section should be exempt from counting towards a teacher's maximum student load: • **Exempt**: Students enrolled in this section do not count towards a teacher's maximum student load. • **Lab**: Same as non-exempt.

	• **Non-Exempt:** Students enrolled in this section count towards a teacher's maximum student load. **Note:** At this time, the Non-Exempt selection is not saved on this page. Use Direct Database Export to set sections as non-exempt. In the Sections table, set the Max_Load_Status field to **Non-Exempt**. For more information, see *Teacher Maximum Load*. **Note:** For existing non-exempt sections and for all new sections, no values are stored for this field unless they are set to **Lab** or **Exempt** on this page, or they set to any of the three status types using Direct Database Export. Sections with no values are ignored when calculating the teacher maximum load.
Exclude from GPA?	Select the option to either include or exclude the grade from the GPA calculation.
Exclude from class rank?	Select the option to either include or exclude the grade from the class rank calculation.
Exclude from honor roll?	Select the option to either include or exclude the grade from the honor roll calculation.

7. Click **Submit**. The teacher's Schedule page displays the new section.

How to Edit a Section on a Teacher Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.
3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:
   - Choose **Schedule** from the pop-up menu.
   - Click the **Schedule** tab.

   The Teacher Schedule page appears.

5. Use the following table to filter information:

Note: Click the arrow to expand this section. Click the arrow again to collapse this section.

Field	Description
Filter	1. Enter search criteria in the **Search** field. 2. To filter by columns: a. Click **+**. b. From the first pop-up menu, choose one of the following: • **Course** • **Expression** • **Max** • **Students** • **Room** • **Section #** • **Section Type** • **Team** • **Term** c. From the second pop-up menu, choose the appropriate comparator: • **contains** • **contains all** • **contains any** • **does not contain** • **is empty** • **starts with** • **starts with any** d. Enter search criteria in the search field. **Note:** Use a comma-separated list for multiple values. If **contains** is selected, only one value may be entered. If **is empty** is selected, no value may be entered. e. Click **Apply**. The page refreshes and display filtered results. **Note:** The Filter (0) header refreshes and displays the number of applied filters. In addition, the

	header displays the fields being used to filter results. 3. Click the name of a column to sort by that column in ascending order. Click again to sort in descending order. 4. To add another filter, click **+** and repeat Step 1. **Note:** The **+** appears shaded if all filters have been added. 5. To delete a filter, click **-** next the filter. 6. Click **Apply**. The page refreshes and display filtered results. **Note:** To remove all filter selections, click **Clear**.

Note: Click the number in the **Students** column to view the class roster for the section.

6. Click the number in the **Section #** column for the section you want to edit. That teacher's Edit Section page appears.
7. Edit information as needed. For field descriptions, see *How to Add a Section to a Teacher Schedule*.
8. Click **Submit**. The teacher's Schedule page displays the edited section.

How to Delete a Section From a Teacher Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.
3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:
   - Choose **Schedule** from the pop-up menu.
   - Click the **Schedule** tab.

   The Teacher Schedule page appears.

   Note: Click the number in the Size column to view the class roster for the section.

5. Click the number in the Section # column for the section you want to delete. That teacher's Edit Section page appears.
6. Click **Delete**. The teacher's Schedule page appears.

Teacher Schedule Matrix

The teacher matrix function creates a visual, graphical representation of a teacher's schedule. This schedule can be printed, though not for more than one teacher at a time.

How to View the Teacher Schedule Matrix

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.
3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:
    - Choose **Matrix** from the pop-up menu.
    - Click the **Matrix** tab.

    The Teacher Schedule Matrix page displays the teacher's schedule for each period and day in each term. Identical colors on the schedule indicate the same section. A blank block means that nothing is scheduled for that block in that term. If all matrix preferences are selected, each block includes the following information:

    - Name of the course
    - Course number
    - Section number
    - Room number
    - Expression, which is the combination of periods and days
    - Year term
    - Number of students scheduled for this section
    - Maximum enrollment of this section

    To change the matrix preferences, see *How to Set Teacher Schedule Matrix Preferences*.

How to Set Teacher Schedule Matrix Preferences

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Teachers** from the PowerScheduler menu. The Teachers page appears.
3. Click the name of the teacher you want to work with from the teachers menu.
4. Do one of the following:

- Choose **Matrix** from the pop-up menu.
- Click the **Matrix** tab.

The Teacher Schedule Matrix page

5. Click **Matrix Preferences**. The Teacher Schedule Matrix Preferences page appears.
6. Use the following table to enter information in the fields:

Field	Description
Course Name	Select the checkbox to display the course name.
Course Number.Section Number	Select the checkbox to display the course and section numbers.
Room	Select the checkbox to display the room number.
Expression Term	Select the checkbox to display the expression, which is the period and day combination.
Enrollment	Select the checkbox to display enrollment information, which is the number of students enrolled and the maximum enrollment.

7. Click **Submit**. The Teacher Schedule Matrix page displays the items selected on the Teacher Schedule Matrix Preferences page.

Scheduled Lunch

To schedule time for lunch or teacher-supervised breaks in your school's master schedule, create lunch sections. Lunch sections are sections of a course that have been designated for lunch periods. To schedule students for lunch, a lunch course request must exist for each student before loading student schedules.

Start by creating a lunch course in PowerScheduler, indicating that it will be used exclusively for scheduled lunches. Then, create sections for that course. Select the periods that each section of the lunch course will span and the days on which it occurs. For more information about specifying that a course is used for scheduling lunch, see *Course Scheduling Setup*.

For each section of a lunch course, PowerScheduler can assign a teacher to supervise during lunchtime. If supervision is not necessary, scheduling teachers for lunch ensures that the teachers will have time set aside for their own lunch break. Teachers can be assigned to only one lunch section per day, though that section can span several periods. Teachers are scheduled for one section of the lunch course for each day combination and term specified by the lunch course.

For example, a five-day, quarterly schedule where lunch can be periods 3, 5, or 7, set up the lunch course with a frequency of five, valid terms for each quarter, and valid start periods selected for 3, 5 and 7. Each teacher can be scheduled for one of 20 lunch sections (one for each day and term) that will start in either period 3, 5, or 7 in the respective day and term combination. For more information about scheduling a teacher for lunch, see *Teacher Scheduling Setup*.

Students can also request lunch courses. Each student must request the lunch course for each day combination and term. Students will be loaded into lunch sections that have no assigned teacher. Using the earlier example, students also have 60 sections in which they can be scheduled (three per day per term).

Though PowerScheduler schedules lunch courses in the same manner as other courses, you can filter lunch courses for certain reports and functions. When defining course scheduling preferences, specify that the course is excluded from report cards and transcripts. The course will not appear on those object reports. Also, lunch courses are not included in functions such as splitting year-long courses.

If you use the lunch functionality for any other teacher scheduling purpose, remember that you can only have one lunch course and that it must follow the same rules as scheduled lunch. That is, there should be only one period of time each day of the year in which teachers are assigned to this activity.

Automated Study Hall

The Automated Study Hall function provides study hall periods to students with incomplete schedules. Automated Study Hall creates a study hall course and sections into which students, teachers, and rooms are scheduled.

How to Run the Automated Study Hall Function

Perform this function only after you build and load a master schedule. Also, set up a Study Hall course before creating study hall sections. For more information, see *New Courses*.

To set up study hall for a selected group of students, first select the group of students. For more information, see *Schedule Search and Select*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Automated Study Hall** from the PowerScheduler menu. The Automated Study Hall Parameters page appears.
3. Use the following table to enter information in the fields:

Field	Description
Run For	Choose whether you want to set up study hall sections for all students or only for the selected students.
Terms	Click **Associate** to select the terms in which you want to set up study hall sections. The terms available include only those terms in the active scenario.
Course	Click **Associate** to select a course from which you will create study hall sections. The courses available include only those courses in the active catalog.
Rooms Allowed	Click **Associate** to select the rooms that can be used for study hall sections. The rooms available include only those that are selected to be scheduled and are associated with the selected school. Select the **Allow Multiple Sections Per Room** checkbox if there can be more than one section in a particular room at the same time.
Teachers Allowed	Click **Associate** to select the teachers that can be scheduled for study hall sections. The teachers available include only those that are selected to be scheduled and are associated with the selected school. Select the **Allow Exceed Max-in-a-Row for Teachers** checkbox to override the maximum number of periods in a row on a teacher's schedule.
Max Number of Students per Section	Enter the maximum number of students that can be scheduled into a study hall section.

Periods Allowed	Click **Associate** to select the periods in which study hall sections can be scheduled. The periods available include only those in the active scenario.
Day Pattern List	Click **Add** and select a day pattern on which study hall sections can be scheduled. That way, PowerScheduler can be more efficient by setting up study hall sections that span multiple days, if possible. For example, a five-day schedule could include the day patterns MWF, TR, and MTF. PowerScheduler would first find the students that have free periods that fit a given day pattern. Then, for each period in the master schedule, it creates the appropriate number of study hall sections that occur on each day in the day pattern. Assuming the maximum number of students per section is 25, the day pattern MWF would produce study hall sections as follows: • Period 1: Two sections each on Monday, Wednesday, and Friday • Period 2: Zero sections • Period 3: One section each on Monday, Wednesday, and Friday Click **Add** for each day pattern you want to identify. Click **Modify** or **Delete** to edit or remove a day pattern. **Note:** The default day pattern, if none is entered, is one that reflects all the days in the schedule. In this case only those students who have an unscheduled meeting period that occurs on all days in the schedule will be enrolled in a study hall. For example; if a student is unscheduled during period 3 on both days of an A/B schedule, then the student will be enrolled. If a student is unscheduled during period 3 on only Day A, then the student will not be enrolled in a study hall.

4. Click **Create**. The Automated Study Hall Parameters page appears.

How to View the Automated Study Hall Results Log

After setting up study hall parameters, you can view the results of the study hall setup.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Automated Study Hall** from the PowerScheduler menu. The Automated Study Hall Parameters page appears.
3. Click **View last results log**. The Automated Study Hall - Results Log page displays the date and time the of the last study hall run and the parameters and values set for that run.

   Note: For descriptions of these parameters, see *How to Run the Automated Study Hall Function*.

   The following information appears in the Results section of the Automated Study Hall - Results Log page:

Field	Description
Students found with schedule holes	The number of students whose requests were fulfilled but whose schedules have open periods.
Total students fully scheduled	The number of students who had all unscheduled time filled with study hall sections as a result of the last Automated Study Hall run.
Total students not fully scheduled	The number of students who did not have all unscheduled time filled with study hall sections as a result of the last Automated Study Hall run.
[Study Hall Sections]	For each study hall section created, the following information appears: • Section # • Expression • Term • Teacher • Room • Size

4. Click **Back** to return to the Automated Study Hall Parameters page.

Note: If a "Warning Page Expired" message appears, click the **PowerSchool** logo to return to the start page.

Build Constraints Overview

Build constraints restrict the way the system schedules a course in the master schedule. Use constraints to tell the system exactly how you want to build your schedule.

PowerSchool includes many types of build constraints you can define. Use each constraint to constrain the schedule in a specific way. For example, use a Teacher Free constraint if you want the football coach to have a free period at the end of the day during the fall semester. Alternatively, to preschedule the Wind Ensemble course at a particular time and place, use a Pre-Schedule constraint.

Note: Since constraints restrict the schedule, the more constraints you define, the less flexibility the system has to build your schedule and the less optimal the resulting schedule will be. It is always best to use the fewest number of constraints required to accomplish your scheduling goals.

The most common constraints are Pre-Schedule and Teacher Free. There are also constraints to manage course and teacher teams and to restrict the meeting times of courses.

You do not have to define any constraints if you can build a satisfactory master schedule without them. Schools often start building schedules with only a few constraints, then gradually add new ones to refine the schedule and achieve particular results.

After creating constraints, you can edit and delete them as necessary. For more information, see *Work With Build Constraints*. In addition to build constraints, you can set constraints during the load process. For information about load constraints, see *Load Constraints*.

Build Constraints

Build constraints restrict the actual building of the master schedule. To view a list of build constraints and the number of each that have been defined for your schedule, choose **Build Constraints** from the constraints menu. For teacher-related build constraints, see *Teacher Build Constraints*.

How to Add a Course Optimize Constraint

Use a Course Optimize constraint to override the global sampling parameters when scheduling a specific course. For example, if you have a course that you know will be very

difficult to schedule, increase both the minimum number of combinations to sample and sampling percentage using this constraint.

Note: You can only define one Course Optimize constraint per course.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Course Optimize**. The Course Optimize Constraints page appears.
4. Click **New**. The Edit Course Optimization page appears.
5. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the course you want to optimize.
Minimum number of combinations to sample	Enter the minimum number of combinations you want the system to sample when scheduling this course into the master schedule. For example, if this field on the Edit Build Scenario page is set for 10,000 and you have a course you know will be difficult to schedule, enter **50,000** so that the system will evaluate five times as many combinations as it does for your other courses.
Sampling Percentage	Enter the percentage of combinations you want the system to sample when scheduling this course into the master schedule. For example, if this field on the Edit Build Scenario page is set for 75% and you have a course you know will be difficult to schedule, enter **100** to have the system evaluate all possible combinations.

6. Click **Submit**. The Course Optimize Constraints page appears.

How to Add a Course Restriction Constraint

Use a Course Restriction constraint to restrict sections of a course to particular periods and days or to meet any time except the specified periods and days.

For example, use this constraint to force three sections of a five-section course to schedule at the same time. The system normally spreads the sections out over different periods. With this constraint, you can force them to be scheduled where you want.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Course Restrict**. The Course Restrictions Constraints page appears.
4. Click **New**. The Edit Course Restriction page appears.
5. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the number of the course you want to restrict.
Term	Use the pop-up menu to choose to which term you want this constraint to apply.
Schedule	Select the checkbox next to each period in each day that you want this course to be taught.
Applies to days only	Select the checkbox to apply this constraint to only the days specified in the Schedule checkboxes. The system does not consider periods and terms for this constraint.
Applies to periods only	Select the checkbox to apply this constraint to only the periods specified in the Schedule checkboxes. The system does not consider days and terms for this constraint.
Minimum Number of Sections	Enter the minimum number of sections you want to restrict. **Note:** If the Minimum Number of Sections and Maximum Number of Sections fields are both 0, then this course can be taught in any period or day except the ones indicated.

Maximum Number of Sections	Enter the maximum number of sections you want to restrict. **Note:** If the Minimum Number of Sections and Maximum Number of Sections fields are both 0, then this course can be taught in any period or day except the ones indicated.
Section Type	If the course section you want to restrict has a section type, use the pop-up menu to choose it. If a course has five sections and the two sections you want to restrict contain section types, you must create two constraints.

6. Click **Submit**. The Course Restrictions Constraints page appears.

How to Add a Course Room Constraint

Use a Course Room constraint to assign a course to a particular room. For example, you could force the Computer-Aided Drafting class to be taught in the Computer Lab rather than the Shop.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Course Room**. The Course Room Constraints page appears.
4. Click **New**. The Edit Course Room Constraint page appears.
5. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the number of the course you want to assign to a particular room.
Room	Click **Associate** to select the room in which you want this course to be scheduled.
Teacher	Click **Associate** to select the teacher who will be instructing this course.

	Note: This constraint only applies to the sections of this course taught by the teacher you select. If you do not select a teacher, this constraint applies to all sections of the selected course.

6. Click **Submit**. The Course Room Constraints page appears.

How to Add a Course Team Constraint

Use a Course Team constraint to block teachers and courses together so that certain courses can only be taught at the same time as certain other courses. For example, a jazz band instructor can only teach a jazz band course when a jazz choir instructor leads a jazz choir class (or vise versa).

A blocking course relationship requires Course 1 and Course 2 to have the exact same number of sections. A Course Team constraint allows Course 1 and Course 2 to offer different numbers of sections, as long as there is at least one section of each using the blocking specified. For more information, see *Course Information*.

Note: The order of the courses is irrelevant when creating this constraint.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Course Team**. The Course Team Constraints page appears.
4. Click **New**. The Edit Course Team Constraint page appears.
5. Use the following table to enter information in the fields:

Field	Description
Course Number 1	Click **Associate** next to the Course Number field to select the name of the first course you want to team together.
Teacher	Click **Associate** next to the Teacher field to select the name of the teacher instructing this course.
Course Number 2	Click **Associate** next to the Course Number field to select the name of the course you want to team with Course Number 1.

Teacher	Click **Associate** next to the Teacher field to select the name of the teacher instructing Course Number 2.
Simultaneous Blocking?	Select the checkbox if you need these two courses to be scheduled at the same time. Otherwise, any other blocking course relationship (such as Before or After) prevails. **Note:** For more information, see *Course Information*.
Same Room?	Select the checkbox to force both courses to be scheduled in the same room.
Minimum Number of Teaming Sections	Enter the minimum number of sections of these courses that will be teamed together. For example, if each course has four sections but you enter **2** in this field, then only two of the four sections will be teamed.

6. Click **Submit**. The Course Team Constraints page appears.

How to Add a Pre-Schedule Constraint

Use a Pre-Schedule constraint to schedule sections of a course ahead of time when you already know exactly when and where they must meet in the master schedule. For example, use this constraint to schedule sections of Band in sixth and seventh periods, which is the only time the band teacher is available.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Pre-Schedule**. The Pre-Schedule Constraints page appears.
4. Click **New**. The Edit Pre-Schedule Constraint page appears.
5. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the number of the course you want to preschedule.
Schedule	Use the pop-up menu to select the term in which this constraint applies. Select the checkbox next to each period in each day that you want to schedule this course. For example, if you have a one-day schedule and select Period 1 and Period 2, a section of this course will span periods 1 and 2 every day. Alternatively, if you have a two-day schedule and select Period 1 for both days, the section will meet every day during first period.
Room	Click **Associate** to select the number of the room in which you want to preschedule this course.
Teacher	Click **Associate** to select the name of the teacher who instructs the course you want to preschedule.
Section Type	If the section of the course you want to preschedule has a section type, use the pop-up menu to choose it. **Note:** To preschedule two sections of the same course, one of which has a section type, you must create two constraints.
Team Code	If the section of the course you want to pre-schedule is associated with a teacher team, use the pop-up menu to choose it.

6. Click **Submit**. The Pre-Schedule Constraints page appears.

How to Add a Room Free Constraint

Use a Room Free constraint to block a room from being scheduled for a particular term, day, and period. For example, use this constraint to keep a classroom free during the last period of the day for after-school detention.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Room Free**. The Room Free Constraints page appears.
4. Click **New**. The Edit Room Free Constraint page appears.
5. Use the following table to enter information in the fields:

Field	Description
Room	Click **Associate** to select room you want to keep free when scheduling.
Schedule	Use the pop-up menu to select the term in which this constraint applies. Select the checkbox next to each period in each day that you want keep this room free. For example, select the checkboxes across the first row if you want to keep the room free during the first period of each day.

6. Click **Submit**. The Changes Recorded page appears.

How to Add a Schedule Break Constraint

Use a Schedule Break constraint to add flexibility to teachers' max-in-a-row count. For example, if your teachers can instruct a maximum of three periods in a row, work around this by putting a 10-minute homeroom period after Period 2. This would make it possible to schedule teachers for Periods 1 through 5.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Schedule Break**. The Schedule Break Constraints page appears.
4. Click **New**. The Edit Schedule Break Constraint page appears.
5. Choose the period after which you want to insert a break in the schedule from the pop-up menu.

6. Click **Submit**. The Schedule Break Constraints page appears.

Teacher Build Constraints

Teacher-related build constraints consider teachers' restrictions when building a master schedule. To view a list of build constraints and the number of each that have been defined for your schedule, choose **Build Constraints** from the constraints menu. For other build constraints, see *Build Constraints*.

How to Add a Teacher Dovetail Constraint

Use a Teacher Dovetail constraint to fit partial courses together during the same period so that they take up less room.

For example, Course 1 is a partial course that meets three times during a six-day schedule cycle. Course 2 is a partial course taught by the same teacher and also meets three days in the cycle. Use this constraint to force both courses to meet during the same period, but on alternate days. Together the partial courses act as a full course, allowing greater flexibility in that teacher's schedule.

Note: You only have to define this constraint for one of the courses you want to fit together with another course.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Teacher Dovetail**. The Teacher Dovetail Constraints page appears.
4. Click **New**. The Edit Teacher Dovetail Constraint page appears.
5. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the name of one of the courses you want to dovetail with another.
Teacher	Click **Associate** to select the name of the teacher who instructs this course. Only the sections of the course taught by this teacher will be constrained.

	Note: If you do not select a teacher, all sections of the course you selected will be constrained.

6. Click **Submit**. The Teacher Dovetail Constraints page appears.

How to Add a Teacher Free Constraint

Use a Teacher Free constraint to specify those periods when a teacher must be free, such as when teaching at another school. This is the opposite of the Teacher Part-Time constraint.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Teacher Free**. The Teacher Free Constraints page appears.
4. Click **New**. The Edit Teacher Free Constraint page appears.
5. Use the following table to enter information in the fields:

Field	Description
Teacher	Click **Associate** to select the name of the teacher who you want to be free during certain periods of the day.
Schedule	Use the pop-up menu to choose the term to which you want to apply this constraint. Select the checkbox next to each period in each day that you want this teacher to be free.

6. Click **Submit**. The Teacher Free Constraints page appears.

How to Add a Teacher Part-Time Constraint

Use a Teacher Part-Time Constraint to define which periods a part-time teacher is available to be scheduled. This is the opposite of the Teacher Free constraint.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Teacher Part-Time**. The Teacher Part-Time Constraints page appears.
4. Click **New**. The Edit Teacher Part-Time Constraint page appears.
5. Use the following table to enter information in the fields:

Field	Description
Teacher	Click **Associate** to select the name of the teacher who is on a part-time schedule.
Beginning Period	Choose the period that this teacher is available from the pop-up menu.
Ending Period	Choose the last period that this teacher is available from the pop-up menu.
Maximum Consecutive Periods	Enter the maximum number of consecutive periods this teacher is available. This setting works in conjunction with the **Beginning Period** and **Ending Period** fields. For example, assume you have selected 1 for the Beginning Period and 7 for the Ending Period and 4 for the Maximum Periods field. This teacher would be available for periods 1-4, 2-5, 3-6, or 4-7.

6. Click **Submit**. The Teacher Part-Time Constraints page appears.

How to Add a Teacher Team Constraint

Use a Teacher Team constraint to allow teachers to teach course sections outside of their own team. For example, if a teacher belongs to the Team 1but also must teach a section for the Team 2, define this constraint to allow Team 2 students to be scheduled with this teacher for a particular course.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Under Build Constraints, choose **Teacher Team**. The Teacher Team Constraints page appears.
4. Click **New**. The Edit Teacher Team Constraint page appears.
5. Use the following table to enter information in the fields:

Field	Description
Course Number	Click **Associate** to select the number of the course you want to link to a teacher.
Team Code	Choose the appropriate teacher team code from the pop-up menu.
Teacher	Click **Associate** to select the name of the teacher who will be teaching outside of his or her assigned team.
Number of Sections	Enter the number of course sections you want this teacher to teach outside of his or her assigned team.

6. Click **Submit**. The Teacher Team Constraints page appears.

Work With Build Constraints

Use the PowerScheduler menu to view build constraints by type or to modify or delete build constraints.

To view constraints that affect courses, sections, students, or teachers, choose the appropriate resource from the PowerScheduler menu. Then, view the constraints either by choosing **Constraints** from the pop-up menu or by clicking **Constraints** on the page. The Constraints page displays all constraints that affect that resource, regardless of type.

How to Modify Build Constraints

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Click the name of the type of constraint you want to modify, such as **Course Optimize**.
4. Click the course name, student name, teacher name, or period number in the row of the constraint you want to modify. The Edit page for that particular constraint appears.
5. Edit the information as needed.
6. Click **Submit**. The appropriate constraints page appears.

How to Delete Build Constraints

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Click the name of the type of constraint you want to delete, such as **Course Team**.
4. Click the course name, student name, teacher name, or period number in the row of the constraint you want to delete. The Edit page for that particular constraint appears.
5. Click **Delete**. The appropriate constraints page appears.

Course Rank

Building a course rank is the last step before building the master schedule.

The course rank file defines the order in which the system schedules courses into the master schedule. The rank is a value that a course is given according to how difficult it is to schedule. As the system fills the master schedule with courses during the build, it becomes more and more difficult to schedule each successive course. Therefore, the order in which the system schedules courses is important. The best course rank places the courses that are the most difficult to schedule at the beginning of the build process and saves the courses that are easiest to schedule for the end.

For example, singletons (courses that are offered only once per term) are scheduled before regular courses because they are more difficult to fit in a schedule. The system schedules

prescheduled courses first, and then schedules singletons, doubletons, core sections, and electives.

Demand for a course (the number of student course requests) and constraints on a course affect course rank. The system initially builds the course rank based on constraints and other parameters that you defined.

It is important to keep the course rank file up-to-date as you build your schedule and adjust your courses, teachers, constraints, and other parameters.

The first time you build the course rank, the system creates a rank file. As you build your schedule and adjust parameters, such as courses, teachers, and constraints, the rank file needs to be updated. For more information, see *Build Course Rank*.

Build Course Rank

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

The system assigns a sequential number to each course to indicate its place in rank using numbers in increments of ten, such as 10, 20, 30. The smaller the number, the higher the course rank.

Use this numbering system to edit the ranks of courses and put courses between system-defined ranks. For example, you can re-rank a course to 11, 12, or 13 without affecting the ranks of the system-defined courses ranked at 10 and 20.

After building the course rank and making modifications, you may need to rebuild the course rank. Rebuilding the course rank overwrites any changes you have made to the rank file. Rebuild the course rank after you add or delete a course. If you rebuild the rank, you will lose any edits you made. Be sure to make note of those changes so that you can re-create them in the rebuilt course rank. To rebuild the course rank, see *How to Build Initial Course Rank*. To rebuild the rank without updating your manual changes, use the Update Rank function. For more information, see *Update Rank*.

How to Build Initial Course Rank

Use this function to set up an initial course rank or rebuild a course rank. This will overwrite any manual changes to the course rank.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Course Rank** from the PowerScheduler menu. The Course Rank page appears.
3. Click **Build Rank**. The Confirm Build Course Rank page appears.

4. Click **Submit**. The Course Rank page appears.

How to Edit a Course Rank

After creating an initial rank file, you can modify, update, and rebuild it. These are the final steps before building the master schedule.

The system evaluates all factors that affect courses to determine the best course rank. After the system builds the course rank, you can make manual adjustments based on your own experience or special circumstances not reflected in the parameters and constraints you defined. The rank you manually give a course overrides the rank assigned by the system.

For example, the system calculates a course rank of 90 for Concert Band based on the constraints you entered for this course compared to the constraints you entered for other courses. Due to experience in dealing with the conflicts band members face when trying to schedule Concert Band, you decide to change the rank of this class. By changing the rank from 90 to 5, you force other courses to schedule around Concert Band, reducing the chance of conflicts.

Note: 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, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Course Rank** from the PowerScheduler menu. The Course Rank page appears.
3. Use the following table to edit information in the fields:

Field	Description
Delete	Select the checkbox to delete this course from the course rank. **Note:** Only delete a course from the course rank if it is not going to be scheduled.
Sys Rank	The rank that the system determined for the course appears.
Rank	The rank that the system determined for the course appears. The Sys Rank value is the same as the Rank value if the course rank has not been manually changed.

Crs Num	The number of the course appears.
Crs Name	The name of the course appears.
Sections	The number of sections offered for the course appears.
PPC	The number of periods per cycle for the course appears.
Demand	The number of requests for the course appears.
Crs Conflicts	The number of unique courses among students who are requesting a particular course appears. The course in that row is not included in the calculation.
Stu Conflicts	The sum of all requests made by students who have requested the course appears.
Constraints	This field contains a dot if any constraints have been associated with the course. It is blank if the course has no constraints.
Comments	Enter any comments about why you are editing a particular course rank number.

4. Click **Submit**. The system displays the changes on the Course Rank page.

How to Update Rank

Update the course rank after you do any of the following:

- Edit the number of sections of a course.
- Significantly change the number of student course requests.
- Add or delete constraints.

Updating the course rank recalculates the system rank and updates the course rank for courses that you have not adjusted.

Note: To overwrite any manual changes and rebuild your entire course rank, rebuild the course rank. For more information, see *How to Build Initial Course Rank*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Course Rank** from the PowerScheduler menu. The Course Rank page appears.
3. Click **Update Rank**. The Confirm Update Course Rank page appears.
4. Click **Submit**. The Course Rank page appears.

Build Master Schedule Introduction

After you define all of the parameters and constraints outlined in the section *Prepare to Build the Master Schedule*, proceed by building the master schedule. When you build the master schedule, do the following:

- Validate the data you entered. For more information, see *Validate Build Scenarios*.
- Begin the build. For more information, see *Build the Master Schedule Overview*.
- Fix any issues the system finds when building the schedule. If the system stops the build, see *When the System Stops the Build*.
- Optimize the built schedule.
- Load students into the master schedule.
- Commit the master schedule for the next school year.

You can follow these steps several times to create the best possible master schedule. For example, you might build the schedule and realize you need to add some course sections. After adding the sections, rebuild the schedule. Then, you may find that you need to define a Teacher Part-time constraint, which restricts when the system can schedule a course to which a particular teacher is assigned. Add the constraint and build the schedule again.

You will most likely build the master schedule several times before committing it for the next school year. To ensure that your student schedules are complete, see *Checklist to Know Your Student Schedules are Complete*.

Complete the appropriate steps in *Prepare to Build the Master Schedule* before proceeding. There are five main steps you must complete in the following order when building the master schedule:

- Validate Build Scenarios
- Build the Master Schedule
- Load Constraints
- Load Students
- Commit the Master Schedule

Validate Build Scenarios

Before PowerScheduler builds your master schedule, you must validate the information that was entered. The validation process finds any errors in your data, such as too many sections assigned to a teacher.

The system checks the following:

- 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.

The validation process also alerts you to potential problems, such as students with no scheduled course requests or a teacher who has more periods assigned than periods available.

Before validating your build scenario, confirm that the build parameters are correct. For more information, see *Build Scenario Parameters*.

How to Validate a Scenario

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Build** from the PowerScheduler menu. The Build Schedule page appears.
3. Select the **Validate only** checkbox.
4. Click **Submit**. The engine starts to run. For more information, see *Understand the PowerSchool Scheduler Page*.
5. Make the necessary corrections using the steps described in the section *Build Validation*. Continue to validate your data until it is error-free.

Build Scenario Parameters

Before you validate your data, verify that the details of the build scenario are correct.

How to Confirm Build Scenario Parameters

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Scenarios** from the PowerScheduler menu. The Scenarios page appears.
3. Click the name of the build scenario you will use to build your master schedule. The Edit Build Scenario page appears.
4. Verify that the data in the following fields are correct: Build Name, Terms, Periods, Days, and Course Catalog. Make modifications, if necessary.
5. Make sure that the **Active Build** checkbox is selected.

6. Enter comments in the Build Description field to describe this scenario. If you build a master schedule using another scenario, comments make it easy to differentiate between the two.

   Note: You can also use this field to denote changes as the build process progresses.

7. Click **Submit** to save any changes. The Scenarios page appears.

Load Validation

Validate the data in your schedule before loading. This process finds any errors that would prevent the system from loading a master schedule.

Note: The Import link does not appear on the Load Student Schedules Queue page if only validation was performed.

How to Validate Load Data

Before running a load, you should validate the data. The validation process finds any errors in your data and alerts you to potential problems.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Load** from the PowerScheduler menu. The Load Student Schedules Queue page appears.
3. Select the **Validate only** checkbox.
4. Click **Submit**. The engine starts to run. For more information, see *Understand the PowerSchool Scheduler Page*.
5. Under Processing, choose **(Q)** next to Load from the PowerScheduler menu. The Load Student Schedules Queue page appears.
6. Click **View** in the Results Log column of the appropriate load. The "Results Log for [school name]" page appears.
7. Make the necessary corrections and continue to validate your data until it is error-free.

Build Validation

Use the results log to identify any errors in your data. Items in the log can be of three types: information, warnings, and errors. All errors must be corrected before you begin building the master schedule. Though warnings do not need to be corrected, you may want to review them before building the master schedule.

When you start the validate process, the system checks the following types of data:

- Courses
- Students
- Blocks
- Constraints
- Parameters
- Teachers

The following table displays examples of error messages contained in the validation log:

Validation type	**Error messages**
Course	• Course has been dropped. Missing from course rank. Sections offered is zero. • Invalid minimum periods-per-day. • Invalid frequency. • Invalid maximum days-per-cycle. • Invalid term length. • Invalid schedule type. • Dropped course still listed in course rank. • Course is not flagged to be scheduled. • The assigned course number is not valid. • Requested course number is not a valid course flagged for scheduling.
Blocks	• Invalid block -courses can only be blocked in pairs (no chaining). • Invalid block - a course cannot have multiple blocking relationships.
Teachers	• Teacher is flagged for scheduling but has no teacher assignments. • Teacher has more periods assigned than periods available. • Teacher's max-in-a-row is zero. • Scheduled teacher has no scheduled assignments. • Invalid teacher. • Too many sections assigned to teachers. • Not enough sections assigned to teachers.

Students	• Scheduled student has no scheduled requests. • Student with requests is not flagged for scheduling. • Student is not flagged for scheduling but has requests.

Once you know where the errors in your data are, go back and correct them. For example, if the sign indicates that too many sections are assigned to a teacher, find the related course number and make the necessary changes. Then, validate your scenario until it is error-free.

Build the Master Schedule Overview

When building a master schedule, the goal is to satisfy the most student course requests possible while maintaining a good balance of students in course sections. PowerScheduler assigns each section to a period and schedules the sections into classrooms based on the teacher assignments. The system attempts to satisfy as many student course requests as possible, while respecting constraints and the course rank. Before you can build the master schedule, you must download and install the scheduling engine.

Plan to build the master schedule several times. After you build the schedule for the first time, you may find that you forgot to define a constraint or that you need to add sections to a course. Make those changes and build the schedule again. It is likely that you will make changes and rebuild several times before you have a satisfactory schedule.

After you decide on a master schedule, you have the option of allowing the system to optimize it. Then, finalize the master schedule before loading student schedules.

Download and Install the Scheduling Engine

When you install the scheduling engine, all of the necessary files download to your local computer. Complete the instructions for your specific type of computer.

Note: Occasionally, there are enhancements made to the scheduling engine. If you navigate to a PowerScheduler page and see a message about updating your engine, you must download the most recent engine.

Important Note: If you have previously installed the scheduling engine, uninstall it before re-installing an updated version.

How to Download the Scheduling Engine for Macintosh

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Engine Download** from the PowerScheduler page. The Engine Download page appears.
3. Click **PSSchedEngineInstall.dmg**. The scheduling engine disk image downloads.
4. Double-click the downloaded file, if necessary. The Install PowerSchool Scheduling Engine page appears.
5. Click **Continue**. The Choose Destination Location page appears.
6. Click the disk onto which you want to install the engine. Click **Choose Folder** to navigate to your preferred location.
7. Click **Continue**.
8. Click **Install**.

9. Click **Close** when the successful installation message appears.

   Note: If you are using Mac OS X 10.2.2 without the Security Update 2002-11-21 installed, the engine will not run properly. To install the security update, select Software Update in the Mac OS X System Preferences dialog, which is available from the Apple menu.

To continue the process of building a master schedule, see *Build the Master Schedule*.

How to Download the Scheduling Engine for Windows

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Engine Download** from the PowerScheduler menu. The Engine Download page appears.
3. Click **PSSchedEngineInstall.ZIP**. Depending on the type of computer you are using, different pages may appear. However, everyone must save the scheduling engine software.
4. When asked where to store the software, select a folder or directory.
5. Double-click **PSSchedEngineInstall.exe** to extract the file. The InstallShield Wizard page appears.
6. Click **Next**. The Choose Destination Location page appears.
7. Click **Browse** in the Destination Folder field to navigate your preferred location.
8. Click **Next**. The InstallShield Wizard Complete page appears.
9. Click **Finish**. The InstallShield Wizard page closes.

To continue the process of building a master schedule, see *Build the Master Schedule*.

Build the Master Schedule

After you prepare the master schedule, validate the build scenario you want to use, build the master schedule, and then optimize the master schedule. For information about data validation, see *Validate Build Scenarios*. For information about optimization, see *Optimize the Master Schedule*.

Note: It is recommended that you do not use Safari when building your master schedule.

How to Build the Master Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.

2. Under Processing, choose **Build** from the PowerScheduler menu. The Build Schedule page appears.
3. Select the **Build master schedule** option.
4. Select the **Use locked master records** checkbox if you are rebuilding the schedule after fixing an issue with a particular item, such as a course, room, or teacher, or if you manually entered any sections using the Sections link on the PowerScheduler menu. The system restarts the build at the course it was scheduling when the build stopped, leaving where they were originally scheduled all of the courses it had scheduled before the build stopped. For more information about locked course sections, see *Unlock Previously Scheduled Courses*.

   Note: Do not select the checkbox if you are building the master schedule for the first time or optimizing a completed master schedule.

5. Click **Execute**. The engine starts to run and the PowerSchool Scheduler page appears. See *Understand the PowerSchool Scheduler Page*.
6. Click **(Q)** next to Build on the PowerScheduler menu to view the results of the build. The Build Master Schedule Queue page appears.

   Note: Each time you run a build, a new result appears on the Build Master Schedule Queue page.

7. Use the following table to enter information in the fields:

Field	Description
Build Type	The function performed (either Build or Optimize) appears.
Started	An indication of whether the function started (either True or False) appears.
Success	An indication of whether the function was successful (either True or False) appears.
Completed	For events where the Success is "True," the date and time at which the function completed appears. The date and time is according to the server's settings.

Results Log	Click **View** to see the results of the build. For more information, see *Build Results Log*.
Results	Click **Import** to import the results of the build from PowerScheduler Engine into PowerSchool. For more information, see *Import the Master Schedule*. **Note:** The Import link does not appear if only validation was performed.
Build Log	Click **View** to see the build log. For more information, see *Build Log*.
Comment	Enter a comment for the build, such as **First Attempt**.
Delete	Select the **Delete** checkbox to clear the build information from the queue.

8. Click **Submit** to save your changes if you entered a comment or selected the **Delete** checkbox. The Build Master Schedule Queue page refreshes.

Understand the PowerSchool Scheduler Page

After you click **Execute** on the Build Schedule page, PowerSchool prepares the information and notifies the scheduling engine on your computer that it is ready to begin the build process. The engine downloads the files necessary for the build and begins to build the schedule.

Note: With Internet Explorer, you can add a File Helper for the PowerScheduler engine application so that you're not prompted to save the engine each time you build. However, if you then work outside the network on which your PowerSchool server resides, you must change the IP address for the engine by modifying the Preferences in the engine application.

It is normal for the engine to immediately quit. The first build attempts cause the engine to do more validation. To proceed, you must eliminate all validation errors. For more information, see *Build Results Log*.

Once all of the engine validations are eliminated, the engine begins scheduling each course in the course catalog in the order defined in the course rank. The build process can take a

long time. You may want to monitor the system's progress to troubleshoot if the build stops.

For each course, the system displays the following:

- Course number
- Course name
- Number of sections
- Number of courses that have been successfully scheduled
- Percentage of courses that have been successfully scheduled

The PowerSchool Scheduler page contains the following buttons:

- **More Information:** Select this option to view additional information about the course the engine is scheduling. Click **Faster Scheduling** to viewing less information so that the engine runs faster.
- **Stop:** Click this button to stop the build. Then, click **Yes** when asked if you are sure you want to stop scheduling. The system saves the schedule it created before you click **Stop**, but does not schedule the course it is currently reviewing. For example, you start the build process on Friday afternoon but want to stop the build before you leave for the weekend. On Monday, restart the build where the system left off on Friday afternoon. For more information, see *Restart the Build*.
- **Skip:** Click this button to force the system to move on to schedule the next course. You should wait until at least 10% of the combinations are tried before skipping the course. Then, click **Yes** when asked if you are sure you want to skip this course. You may want to click **Skip** if the system has tested one million of more than two million combinations for a course and is beginning to slow while attempting the final million combinations. The system then schedules the course in the best combination it has already attempted.

While the engine runs, you may notice that it sometimes slows down. This is because with thousands of scheduling possibilities, the engine must cycle through them to produce the most optimal schedule possible while taking into account student requests, courses, and the constraints upon them. The engine must sort through more and more information as it proceeds with the building or loading process. For example, when the process first begins, it is easy to find a section for a student's request; however, as more sections fill up and fewer sections are available, the engine must work through a student's schedule to attempt to fulfill all course requests. Thus, you may notice periodic slow points as the engine proceeds.

When the System Stops the Build

PowerScheduler may stop the build process for one of several reasons, including the following:

- The engine has encountered validation errors. View the build results log.
- The system has encountered a course for which it cannot schedule all of its sections due to constraints that cannot be respected, data entry mistakes, or some other problem. View the build log.
- The build process is complete.

If the system stops immediately, the PowerSchool Scheduler page displays the following message: "No longer listening for incoming connections." This means that your data has uncorrected validation errors. Use the build log to correct these errors. For more information, see *Build Log*.

Build Results Log

To see the results of the build or if the engine stops immediately after starting, check the build results log. This log displays any new validation errors the engine discovered.

How to View the Build Results Log

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **(Q)** next to Build from the PowerScheduler menu. The Build Master Schedule Queue page appears.
3. Click **View** in the Results Log column of the appropriate build. The "Results Log for [school name]" page appears.

If the build stops because of validation errors, the results log displays details about these errors. There are three types of errors:

- Info: These messages are informational, such as "Course [x]: Rescheduled [x] students out of [x] (leaving [x] unscheduled)." These do not prevent a successful build.
- Warning: These are "red flag" messages, such as "The teacher's preferred room is not suitable for the course the teacher is teaching." These do not prevent a successful build.

- Error: These messages are validation errors that must be corrected in order for the engine to run, such as "Invalid valid term found in the Course file (does not match the term length)." These do prevent a successful build.

For more information about validation messages, see *Build Validation*.

Build Log

The build log displays the possible reasons the engine stopped the build while scheduling a particular course. It also displays information about course attributes, teachers, and rooms.

How to View the Build Log

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **(Q)** next to Build from the PowerScheduler menu. The Build Master Schedule Queue page appears.
3. Click **View** in the Build Log column of the appropriate build. The Build Log page appears.

How to Interpret the Build Log

If PowerScheduler completes the build, the build log displays a quick summary of the build. If the build stops because of a problem scheduling a course, the build log displays details about the course for which it stopped the build. Determine how to resolve the issue based on the following information the system lists for the course:

- Summary of the course parameters, such as whether facilities are needed
- Rooms in which the system already scheduled the course
- Names of teachers assigned to teach the course and their parameters, such as max-in-a-row
- Availability of the required facilities and rooms
- List of possible reasons for stopping

Once you have this information, make adjustments to eliminate or work around the problem. The system will not schedule any additional courses until you correct the issues.

Import the Master Schedule

Each time you build a schedule, you must import the results of that build unless you want to rebuild from scratch. Importing the master schedule flags the sections as locked. If you rebuild from this point forward, you must select the "Use locked master records?" option when building. For more information about locked course sections, see *Unlock Previously Scheduled Courses*.

If the engine stops the build before all courses have been scheduled, you can import the master schedule to view the schedule information in PowerSchool.

How to Import the Master Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **(Q)** next to Build from the PowerScheduler menu. The Build Master Schedule Queue page appears.

   Note: Each time you run a build, a new result appears on the Build Master Schedule Queue page.

3. Click **Import**. The Import Schedule page appears.
4. Use the following table to enter information in the fields:

Field	Description
Master Schedule?	Select this option to import the master schedule without student schedules.
Master Schedule with Student Schedules?	Select this option to import the master schedule with student schedules.

5. Click **Submit**. The Import Schedule page appears.

Review Course Rank

Before you restart the build, you may need to rebuild or update your course rank if you made significant changes to a course or to student course requests.

PowerScheduler uses the course rank to determine the order in which it schedules each course. If you make changes to a course or student course requests, those changes may affect when the system should schedule the course during the build process.

Update the course rank if you add a new course to the course catalog. When you update the rank, the system fits the new course into the rank without moving or recalculating the rank of all the other courses. Rebuild the course rank for all courses if you add or drop sections from a course. The system deletes the previous course rank file and recalculates the rank for every course. For more information, see *Build Course Rank*.

If you rebuild the rank, do not lock previously scheduled courses when you build the schedule again. Rebuilding the rank places all courses, including those that were scheduled during the last build, in a new scheduling order. To allow the system to create the most successful schedule with the new rank order, build the schedule again by deselecting the "Use locked master records?" checkbox on the Build Master Schedule (Step 2) page.

Restart the Build

If you made significant changes to a course or student course requests, review your course rank before restarting the build. For more information, see *Review Course Rank*. After you solve all issues with the course, click **Build** on the Scheduling page to build the schedule again.

When you restart the build, you can do one of the following:

- Build the schedule again from scratch, which overwrites any courses that the system scheduled before the last build stopped. For more information, see *Restart the Build from Scratch*.
- Restart the build and lock all or specific courses the system successfully scheduled during the previous build. The system reschedules only courses you do not lock. To unlock sections of courses, see *Unlock Previously Scheduled Courses*.

After completing one of the above steps, analyze the build to determine if you need to adjust it. For more information, see *Analyze the Built Master Schedule*.

Restart the Build From Scratch

You may want to rebuild the schedule from scratch if either of the following are true:

- Adjustments you made to the course impact courses that were successfully scheduled during the previous build before it stopped.
- You rebuilt the entire course rank file.

For example, if you corrected a teacher conflict by defining a Teacher Part-Time constraint, the correction is likely to affect any other courses that the teacher was previously scheduled to instruct. Therefore, PowerScheduler must reschedule those courses, too.

Unlock Previously Scheduled Courses

When you rebuild the schedule, PowerScheduler automatically selects the Locked Section checkbox on the Edit Section page to lock sections that were successfully scheduled in the previous build. The purpose of locking sections is to save time when rebuilding the master schedule.

Unlock all sections for a course when you want to rebuild that course in the master schedule. The sections are locked as the build runs successfully. If the build partially finishes and then you later rebuild, the system starts where it left off. To have the system rebuild sections of a certain course and then jump to where it left off, you must unlock the sections of the course and select the Use Locked Master Records checkbox when rebuilding. For example, unlock sections of a Biology course. When rebuilding, select the Use Locked Master Records checkbox. The system starts rebuilding with Biology and then skips to where it left off in the previous build.

If you do not select the Use Locked Master Records checkbox when rebuilding the master schedule, the system rebuilds all sections, locked or not. For more information, see *Build the Master Schedule*.

How to Unlock an Individual Section

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Schedule, choose **Sections** from the PowerScheduler menu. The Sections page appears.
3. Choose the course from the courses menu for the section you want to unlock. The course information page appears.
4. Click the number of the section you want to unlock in the Section # column. The Edit Section page appears.
5. Deselect the **Locked Section** checkbox.
6. Click **Submit**. The course information page appears.

How to Unlock More Than One Section

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.

2. Under Tools, choose **Functions** from the PowerScheduler menu. The Scheduling Functions page appears.
3. Click **Update Selections**. The Update Selections page appears.
4. Choose **ScheduleSections** from the Current Table pop-up menu.
5. Choose **Course_Number** from the pop-up menu under Search ScheduleSections.
6. Enter the numbers of the courses you want to select, separated by commas, in the blank field in that row.
7. Click **Search all [number] records in this school**. The Update Selections page displays the new number of records.
8. Click **Modify Records**. The Modify Records page appears.
9. Choose **LockedSection** from the pop-up menu.
10. Ensure that the next pop-up menu displays **=** and that the following field is blank.
11. Click **Modify Selected Records**. The Update Selections page appears.

Schedule Sections

A section is an occurrence of a course. Each course can have several sections that meet in different rooms at different times and are taught by different teachers. Using the Sections page, you can view, add, edit, and delete sections for a selected course.

Note: The Sections page can be accessed using the **Sections** link under Schedule or the **Courses** link under Resources.

How to Add a Section on the Master Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Schedule, choose **Sections** from the PowerScheduler menu. The Sections page appears.
3. Choose the course for the section you want to edit from the courses menu.
4. Click the **Sections** tab. The Sections page for the selected course appears.

   Note: Click the number in the Size column to view the class roster for the section.

5. Click **New**. The Edit Section page appears.
6. Use the following table to enter information in the fields:

Field	Description
Course Name	The name of the selected course appears.
Course Number	The number of the selected course appears.
Term	Choose the term in which the section is offered from the pop-up menu.
Schedule	Select the checkboxes for the periods for the appropriate days on which this section is taught. **Note:** This creates the schedule expression that appears next to the section on several pages.
Teacher	Choose a teacher from the pop-up menu.
Room	Enter the room name or number in which this section is taught.
Section Number	Enter a unique section number for this section. Select the **Locked Section** checkbox if the section should not be rescheduled during the next build.
Close Section at Max	Select the checkbox to not accept more enrollments than the maximum number of enrolled students.
Section Type	Choose the type of section, such as Bilingual, from the pop-up menu (optional).
Grade Level	Enter the grade level of this section.
Current Enrollment	The current enrollment of students in this section appears.
Maximum Enrollment	Enter the maximum number of students that can enroll in this section.

Team	Choose the team associated with this section from the pop-up menu.
House	Click **Associate** to select a team to which this section belongs.
Where Taught	Enter the school ID if the section is taught at a different school.
Dependent Sections	Enter any dependent sections for this section. Separate multiple sections with commas.
Scheduling Program Restrictions	Choose one of the following options: • **Include** to only include students of specified special programs in being scheduled into specified sections. • **Exclude** to exclude students of specified special programs from being scheduled into specified sections. If the **Include** option was selected, specify which special programs to include by doing one of the following: • Select the **Select All Programs** checkbox to select all programs. • Select the individual checkbox of each program. The **Evaluated as of [Date]** defaults to date entered in **Evaluate Programs as of this date** field. See *How to Define Program Balancing*.
Exclude From Attendance	Select the checkbox if you do not want to include this section in the student ADM/ADA counts.
Grade Scale	Choose the grade scale from the pop-up menu.
Maximum Load Status	Use the pop-up menu to indicate whether the section should be exempt from counting towards a teacher's maximum student load:

	• **Exempt**: Students enrolled in this section do not count towards a teacher's maximum student load. • **Lab**: Includes the students enrolled in this section in the calculated average of the number of students scheduled into all lab sections assigned to a teacher. This average is then applied to the teacher's maximum student load. • **Non-Exempt:** Students enrolled in this section count towards a teacher's maximum student load.
Exclude from GPA?	Select the option to either include or exclude the grade from the GPA calculation.
Exclude from Class Rank?	Select the option to either include or exclude the grade from the class rank calculation.
Exclude from Honor Roll?	Select the option to either include or exclude the grade from the honor roll calculation.

7. Click **Submit**. The Sections page for the selected course appears.

How to Edit a Section on the Master Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Schedule, choose **Sections** from the PowerScheduler menu. The Sections page appears.
3. Choose the course for the section you want to edit from the courses menu.
4. Click **Sections**. The Sections page for the selected course appears.
5. Use the following table to filter information:

   Note: Click the arrow to expand this section. Click the arrow again to collapse this section.

Field	Description
Filter	To narrow the list:

	1. Enter search criteria in the **Search** field. To filter by columns: 1. Click **+**. 2. From the first pop-up menu, choose one of the following: • **Expression** • **Max** • **Students** • **Room** • **Section #** • **Section Type** • **Teacher** • **Term** 3. From the second pop-up menu, choose the appropriate comparator: • c**ontains** • **contains all** • **contains any** • **does not contain** • **is empty** • **starts with** • **starts with any** 4. Enter search criteria in the search field. **Note:** Use a comma-separated list for multiple values. If **contains** is selected, only one value may be entered. If is empty is selected, no value may be entered. 5. Click **Apply**. The page refreshes and display filtered results. **Note:** The Filter (0) header refreshes and displays the number of applied filters. In addition, the header displays the fields being used to filter results. **Note:** Click the name of a column to sort by that column in ascending order. Click again to sort in descending order. To add another filter: 1. Click **+**.

	2. Repeat Step 1 through Step 5. **Note:** The + appears shaded if all filters have been added. To delete a filter: 1. Click **-** next to the filter.

Note: Click the number in the **Students** column to view the class roster for the section.

6. Click the number in the **Section #** column for the section you want to edit. The Edit Section page appears.
7. Enter information as needed. For field descriptions, see *How to Add a Section*.
8. Click **Submit**. The Sections page for the selected course appears.

How to Delete a Section From the Master Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Schedule, choose **Sections** from the PowerScheduler menu. The Sections page appears.
3. Choose the course for the section you want to edit from the courses menu.
4. Click **Sections**. The Sections page for the selected course appears.

   Note: Click the number in the Size column to view the class roster for the section.

5. Click the number in the Section # column for the section you want to edit. The Edit Section page appears.
6. Click **Delete**. The Delete Section page appears.
7. Click **Delete**.
8. Click **Confirm Delete**. The Sections page for the selected course appears.

How to Add a Section from the Courses Page

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Courses** from the PowerScheduler menu. The Courses page appears.
3. Click the name of the course you want to work with from the courses menu.

4. Do one of the following:
    - Choose **Sections** from the pop-up menu.
    - Click the **Sections** tab.

    The Sections page for the selected course appears.

5. Click **New**. The Edit Teacher Assignment page appears.
6. Enter information as needed. For field descriptions, see *How to Add a Section*.
7. Click **Submit**. The Sections page for the selected course appears.

How to Edit a Section from the Courses Page

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Courses** from the PowerScheduler menu. The Courses page appears.
3. Click the name of the course you want to work with from the courses menu.
4. Do one of the following:
    - Choose **Sections** from the pop-up menu.
    - Click the **Sections** tab.

    The Sections page for the selected course appears.

5. Click the number in the Section # column for the section you want to edit. The Edit Section page appears.
6. Edit information as needed. For field descriptions, see *How to Add a Section*.
7. Click **Submit**. The Sections page for the selected course appears.

How to Delete a Section from the Courses Page

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Resources, choose **Courses** from the PowerScheduler menu. The Courses page appears.
3. Click the name of the course you want to work with from the courses menu.
4. Do one of the following:
    - Choose **Sections** from the pop-up menu.
    - Click the **Sections** tab.

    The Sections page for the selected course appears.

5. Click the number in the Section # column for the section you want to edit. The Edit Section page appears.
6. Click **Delete**. The Delete Section page appears.
7. Click **Delete**.
8. Click **Confirm Delete**. The Sections page for the selected course appears.

Master Schedule

The master schedule displays the schedule for all teachers in your school.

How to View the Master Schedule

View the master schedule for all teachers for all periods. The first time you display the master schedule after creating or modifying it, the Master Schedule Preferences page appears. For more information, see *How to Modify Master Schedule Preferences*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Schedule, choose **Master Schedule** from the PowerScheduler menu. Depending on your preferences, classes for each teacher and the number of students in each class appear on the Master Schedule page.
3. Do one of the following (optional):
    - Click a course number to edit the information for that section of the selected course. The Edit Section page appears.

      Note: For more information about editing the section, see *Schedule Sections*. If you do not want to edit the section, click your Web browser's **Back** button to display the Master Schedule page.

    - Click a number for one of the classes to view a list of students in that class. The Class Roster page displays the students for the class.
    - Do one of the following (optional):
        - Click **Make this the current selection of students** to select the students in the class as the only group you want to work with. The Student Scheduling Functions page appears, including the number of selected students.
        - Click **Add these students to the current selection of students** to add this group to a previously selected group. The Student Scheduling Functions page appears, including the number of selected students.

How to Modify Master Schedule Preferences

The first time you display the master schedule after creating or modifying it, the Master Schedule Preferences page appears. Use this page to filter information that appears on the master schedule page.

The master schedule preferences are associated with each user account. Therefore, your preferences will appear when you sign in to any computer with your username and password.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Schedule, choose **Master Schedule** from the PowerScheduler menu. The Master Schedule Preferences page appears.
3. Use the following table to enter information in the fields:

Field	Description
Periods	Select the checkboxes to indicate which periods to display on the master schedule. To display all periods, select the **All Periods** checkbox.
Days	Select the checkboxes to indicate which days to display on the master schedule. To display all days, select the **All Days** checkbox.
Credit Type	Enter the credit type to indicate which credit type to display on the master schedule, such as **MATH**. To display all credit types, do not enter anything in the field.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale.

4. Click **Submit**. The master schedule appears.

   Unless any changes are made to your master schedule, the Master Schedule page appears according to your set preferences. To change your preferences, click **Show Preferences** at the bottom of the Master Schedule page.

Analyze the Built Master Schedule

After the system completes the build, evaluate the master schedule to see if you need to either make changes and rebuild the schedule or manually adjust it.

To analyze the completed master schedule:

- Print the master schedule.
- Print post-scheduling reports. For more information, see *Build the Master Schedule Reports*.

To evaluate the master schedule:

- Use the student numbers to evaluate how the system balanced students among sections.
- Evaluate how and when a room is used.
- Be sure teachers are not over- or under-scheduled. Teachers should not be over-scheduled unless you entered an excess number of teacher assignments.

Master Schedule Checklist

Use the following checklist to help you determine that the master schedule is complete and ready to optimize, load, or print. For more information, see *Optimize the Completed Master Schedule*, *Load Students*, and *Print Schedules and Rosters*.

- Are all of the courses in the course catalog defined to be included in the master schedule?
- Do all of the courses in the master schedule contain the correct number of sections?
- Did the system respect all of the constraints you defined?
- Did the system schedule all of the courses in rooms with any required facilities?

Optimize the Completed Master Schedule

When you determine that your master schedule is complete, PowerScheduler can perform a final optimization. Although it is not required, you should optimize the master schedule. For more information, see *Optimize the Master Schedule*.

Optimize your schedule before or after you make any manual adjustments. If you want to optimize your master schedule after you make manual adjustments and you want to keep these courses where you manually scheduled them, enter very high rank numbers for the adjusted courses in the course rank. You can then define that the system only optimizes courses with a lower rank number. If you did not keep track of the courses you adjusted, do not optimize.

Optimizing your schedule can only make it better. To safeguard the original completed master schedule before you optimize, duplicate the scenario. For more information, see *Duplicate the Scenario*.

After optimizing the master schedule, you can finalize it. For more information, see *Finalize the Master Schedule*.

Duplicate the Scenario

Make a copy of the original completed master schedule before you optimize it.

How to Duplicate the Scenario

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Functions** from the PowerScheduler menu. The Scheduling Functions page appears.
3. Click **Duplicate Scenarios**. The Duplicate Scenarios page appears.
4. Use the following table to enter information in the fields:

Field	Description
Source Scenario	Choose the name of the scenario you want to duplicate from the pop-up menu.
New Scenario Name	Enter a name for the new scenario.
New Scenario Description	Enter a description of the new scenario.
Master Schedule	Select the checkbox to copy the master schedule into the new scenario.
Student Schedules	Select the checkbox to copy the student schedules into the new scenario.
Teacher Assignments	Select the checkbox to copy the teacher assignments into the new scenario.

Constraints	Select the checkbox to copy the constraints into the new scenario.
Course Relationships	Select the checkbox to copy the course relationships into the new scenario.

Note: Be sure to select all of the checkboxes in the "Select items to copy" section to duplicate your current scenario in its entirety.

5. Click **Submit**. The Changes Recorded page appears.

Optimize the Master Schedule

Optimize your master schedule to meet as many student course requests as possible within the given parameters.

How to Optimize the Master Schedule

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Build** from the PowerScheduler menu. The Build Schedule page appears.
3. Select the **Optimize master schedule** option.
4. Use the following table to enter information in the fields:

Field	Description
Time Allowed for Optimizations	Enter the number of hours in the first field and the number of minutes in the next field that you want the system to spend optimizing your master schedule. **Note:** Because PowerSchool restarts nightly, do not enter a number higher than 12 in the Hours field.
Skip courses with rank above	Enter the course rank number of the course at which you want the system to stop optimizing. For example, you do not need to optimize course rank numbers 800-910 if these courses are ranked as such because they are already successfully scheduled.

	Enter 800 in the Max Rank field to have the system optimize the courses with a course rank of 1-799.

5. Click **Execute**. The engine starts to run. For more information, see *Understand the PowerSchool Scheduler Page*.

Finalize the Master Schedule

Once you built and possibly optimized the master schedule, you need to import the information from the scheduling engine back to PowerSchool. For more information, see *Import the Master Schedule*.

Note: For more information about this page, see *Understand the PowerSchool Scheduler Page*.

Load Constraints

Load constraints restrict the way PowerScheduler loads students into courses in the master schedule.

PowerSchool includes six types of definable load constraints. Each constrain student schedules in a specific way. For example, use a Student Preference constraint to force a student to be scheduled in a particular teacher's section.

Note: Since constraints restrict student schedules, the more constraints you define, the less flexibility the system has to load students into courses and the less optimal the resulting schedule will be. It is always best to use the fewest number of constraints required to accomplish your scheduling goals.

Load constraints differ from build constraints, which are defined before building a master schedule. For information about build constraints, see *Build Constraints*.

Work With Load Constraints

After creating load constraints, you can view them by choosing **Constraints** under the Resources heading from the PowerScheduler menu. Select the constraint you created to view the constraints by type.

To view constraints that affect courses, sections, students, or teachers, choose the appropriate resource from the PowerScheduler menu. Then, view the constraints by choosing Constraints from the pop-up menu. The Constraints page displays all constraints that affect that resource, regardless of type.

Use the PowerScheduler menu to view the constraints by type or to modify or delete constraints.

How to Modify Load Constraints

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Click the name of the type of constraint you want to modify, such as **Balance Adjustment**.
4. Click the course name, student name, or teacher name in the row of the constraint you want to modify. The Edit page for that particular constraint appears.
5. Make your changes to the fields, as necessary.
6. Click **Submit**. The appropriate constraints page appears.

How to Delete Load Constraints

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Scheduling Setup, choose **Constraints** from the PowerScheduler menu. The Constraints menu appears.
3. Click the name of the type of constraint you want to delete, such as **Student Preference**.
4. Click the course name, student name, or teacher name in the row of the constraint you want to delete. The Edit page for that particular constraint appears.
5. Click **Delete**. The appropriate constraints page appears.

Load Students

When using PowerSchool to create a complete master schedule, you need to be familiar with both building and loading a master schedule.

The build process creates the master schedule by placing courses in specific rooms during certain periods and scheduling teachers to instruct those courses. The load process places students in a schedule that has been or is being created, based on their course requests. Effectively, the build creates the master schedule and the load creates the student schedules.

Although students are loaded into the schedule as it is building, this is not necessarily an optimal load. Students who are loaded into the schedule earlier have an advantage over those loaded later. Their course requests are more likely to be met. Also, while these students may be fully or close to fully scheduled, theirs may not be the best possible schedule that the system can create based on the completed master schedule.

When the students' schedules were created during the build process, the best possible schedules were chosen for them at that time; however, the build was not complete and optimized, and the system could not take into account any changes made to the schedule after they were loaded.

Note: The build function only does one pass; it does not go back to review better alternatives for courses already scheduled.

Once you have built a satisfactory master schedule, you can begin fine-tuning student schedules by running a load. While this function has no impact on the number of students enrolled in courses, it could have a positive effect on section balances. For example, it is possible that during your first load, you gain eight students in one course, five students in another, and ten in a third. Then, you can try again to help individual students get all of their course requests.

Do not load students into your master schedule until you are satisfied with it. Loading will not have any impact on the structure of the schedule, just on the placement of students within it. Also, do not make manual adjustments to student schedules and then reload students because the system will overwrite all of the changes you made.

Loading is required in most cases. You need to load if you entered alternate course requests or global substitutions, or if you chose to close course sections at a maximum number. The build process does not handle these factors, which are not considered unless you load. Also, if you are making manual adjustments to your master schedule, you need to do a load under most circumstances.

After running a load, analyze the results. For more information, see *Analyze the Results*. After analysis, proceed with one of the steps outlined in the section *Post-Load Options*.

Run a Load

Adjusting the master schedule potentially affects and causes conflicts for many students' schedules. For example, moving a course section to a different period may satisfy a number of unmet course requests, but this action can cause problems with others course requests.

As a result, whenever you change the master schedule, you need to reload students. You can also load students to see if the system can create better schedules for all students. Do this after you finish building a master schedule or if you made a number of changes to the schedule.

After running a load, import student schedules and then analyze the results. For more information, see *Analyze the Results*. After analysis, proceed with one of the steps outlined in the section *Post-Load Options*.

When performing a load, consider the following:

- Load priority is used to determine which substitutions should be made as well as which requests should go unfilled, if that is necessary. The engine always prefers to use substitutions instead of leaving a request unfilled, even if that means using a substitution on an important course instead of leaving an elective course unfilled.
- Load priorities are not a rank ordering. They are an importance rating. One request for a course with a load priority of 5 is equivalent to two requests with a 10 priority, three with a 15 priority, or four with a 20 priority. That means that, while these courses may have a priority of 5 and other courses have a priority of 10, it is just as good for the engine to leave the priority 5 unfilled as it is to leave two priority 10 courses unfilled; it is actually better for the engine to leave one priority 5 unfilled than to leave two courses with priority 9 or lower unfilled.

  For example, if a student has two 7 requests and one 5 request; while neither of the 7 requests can be filled outright, they both have substitutions; the substitutions, however, conflict with the 5 course, so the student can't get both. Therefore, it is better for the engine to miss the 5 and fill the two 7 requests with substitutions than it would be to leave the 7s unfilled and get the 5.
- To rate a course as really important, assign it a load priority of 1 or 10. For all other courses, rank according to how important they are relative to that 1 (or 10) course (even if that means using numbers like 1000). Then, as a second pass, double or quadruple their load priorities if any of those are semester or quarter courses.

How to Run a Load

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Processing, choose **Load** from the PowerScheduler menu. The Load Student Schedules Queue page appears.
3. Use the following table to enter information in the fields:

Field	Description
Load type	Select a type of load: • **Load all students**: The system reschedules all students. Previously created student schedules or manually adjusted student schedules are deleted. • **Balance**: The system adjusts student schedules to help improve the balance of students among sections. There is no guarantee that students' schedules will not change. • **Reschedule the selected [x] students**: The system reschedules only students whose schedules have not been locked. You can select this option multiple times.
Close sections at maximum	Select the checkbox to ensure that courses close at their maximum enrollment numbers. **Note:** Do not select the checkbox the first time you do a load. The build itself runs without considering section maximums, so this will let you determine if you can get a little better load percentage. Also, not closing sections at their maximums will help you focus on students with conflicts.
Use global course substitutes	Select the checkbox to ensure that the system automatically inserts any global course substitutes after student course substitutes have been tried and rejected.
Use student course substitutes	Select the checkbox to ensure that the system automatically inserts student course substitutes in the order chosen, if needed.

4. Click **Execute**. The engine starts to run. For more information, see *Understand the PowerSchool Scheduler Page*.

   To view details about the load, click **(Q)** next to Load in the PowerScheduler menu, then click **View** in the Load Log column on the Load Student Schedules Queue page. To view errors and messages produced by the load, click **View** in the Results Log column. For more information about the Results Log, see *Load Results Log*. After successfully loading schedules, import the results of the load. For more information about importing, see *Import Student Schedules*.

   Note: The Import link does not appear on the Load Student Schedules Queue page if only validation was performed. For more information about load validation, see *Load Validation*.

Post-Load Options

After completing your first load, you can do one or more of the following procedures:

1. Accept the results of the load and begin manually adjusting student schedules. Select this option only if you are certain that the master schedule will not change and that student schedules are correct. Verify student schedules to make sure the master schedule is correct. For more information about adjusting student schedules, see *Manually Adjust Student Schedules*.
2. Resolve student conflicts by using or adding alternate course requests if you did not use them in the first load. If your schedule contains alternate student course requests but you did not allow the system to use them, rerun the load and select the substitutes options. For more information about creating alternate course requests, see *How to Enter Requests in the Scheduling Area*.
3. Manually adjust student course requests to allow better scheduling. For example, if a student has a course request that is impossible to meet, change it. Repeat this process until you are satisfied with the results. For more information about adjusting alternate course requests, see *How to Enter Requests in the Scheduling Area*.
4. Select the students you want to reschedule. Then, reload student schedules.

   If you select option 2, 3, or 4 above, you probably need to reload student schedules. For more information, see *Reload Students*.

   In the event that the unsatisfactory load results are due to discrepancies in the master schedule, you need to rebuild or manually adjust the master schedule. For more information, see *Restart the Build*.

Lock Student Schedules

If you manually adjusted students' course requests and are satisfied with the resulting schedules, you can effectively lock those students' schedules before reloading by excluding them from the student selection before reloading. That way, only the selected students are included in the load.

Note: If one of the students in the selection has an association with another student, such as a Student Avoid constraint, the schedule of the “other” student not included in the selection may be affected by the load process.

For more information about selecting students, see *Schedule Search and Select*.

Checklist to Know Your Student Schedules are Complete

The following is a checklist you can use to be sure that your student schedules are complete:

- You built a master schedule.
- You worked on conflicts, identified patterns, and corrected problems.
- You updated your master schedule.
- You optimized your master schedule. (optional)
- You ran a load.
- You checked your balances.
- You accommodated all student course requests. (optional)
- You reloaded and made any manual adjustments.
- Your balances are satisfactory.
- Your teacher schedules are satisfactory.

Print Schedules and Rosters

Print Student Schedules

If you would like to print student and teacher schedules, you can do so either before or after you commit your master schedule. For more information, see *How to Run the Student Schedule Listing Report*.

You can also print student schedules using a report card template. For more information, see *Report Cards*.

Print Class Rosters

You can print class lists either before or after you commit your master schedule. For more information, see *How to Run the Class Roster (PDF) Report*.

Master Schedule Reports

Before building your master schedule, use the pre-build reports to determine that the scenario information is correct and view how student course requests will affect your schedule for the next school year. For example, run the Course Request Tally report if there are more requests than you originally planned for a particular course. You can then adjust the section count before building. For pre-build reports, see *Prepare to Build the Master Schedule Reports*.

You can also view reports to display which teachers are assigned to which courses and print a teacher assignments list. The teacher reports only display the names of teachers who are already assigned to courses.

After you build a master schedule, use the post-build reports to help you correct any errors in your data, such as non-scheduled course requests, non-scheduled student requests, and under-scheduled students. You can also use these reports to view your room utilization, a list of student schedules, and your new master schedule. For post-build reports, see *Build the Master Schedule Reports*.

Report Output Locale

Using the **Report Output Locale** pop-up menu, you can select a locale. The report output will then appear in the language associated with the selected locale.

Prepare to Build the Master Schedule Reports

PowerSchool includes many reports pertaining to the master schedule. The following reports are specific to the first part of the master schedule process, prepare to build the master schedule, and relate to courses, student course requests, rooms, students, and teachers. For request-related reports, see *Prepare to Build the Master Schedule Request Reports*. For teacher-related reports, see *Prepare to Build the Master Schedule Teacher Reports*. Use the Scheduling Reports page to navigate to each report.

How to Run the Conflict Matrix Export Report

The Conflict Matrix Export report displays student course request conflicts between courses. For example, you might find that 16 students have requested both AP Calculus and Anatomy/Physiology. Therefore, you would try not to schedule these two classes during the same period.

Note: This report is used primarily by schools and districts that are not building their master schedule in PowerSchool.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Conflict Matrix Export**. The Export Conflict Matrix page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the Include Only In Grades field, enter the numbers of the grade levels you want to include in this report (optional).
Output Form	Select **Tab-Delimited** to open the report in a program such as Excel or **Simple HTML** to open in a Web browser. **Note**: If SSL is enabled, you must manually assign a port to view the HTML output. For more information, see the *Load Balancer Requirements and Configuration Guide* available on PowerSource. Select the **Link each count to the conflicting students list** checkbox to display a link to the list of students who have scheduling conflicts.
Conflict Definition	Select **Count students with multiple requests for a course as a single conflict** to identify multiple requests of the same course as one conflict. With the checkbox selected, the number of student requests matches the number of conflicts. For example, if a student creates two requests for History and one for Math, the report displays this as one History-Math conflict instead of two. Deselect the checkbox to display multiple requests as multiple conflicts. Select **Count every request as a conflict with itself** to count multiple requests for a course plus the individual requests that create the conflict. This may be useful to show conflicts where a student requests a course twice. Deselect the checkbox to only

	count multiple requests and not the individual requests that create the conflict.
Identify Course By	Select the **Course numbers** option to include course numbers, the **Course names** option to include course names, or **Course numbers + names** to include both.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. **Note:** Clicking on hyperlinks within the report may display a different page in PowerSchool, which will appear in your preferred language and not in the locale you selected for the report output.

5. In the Courses Across Top section, use the following table to enter information in the fields to display information on the X axis of the report:

Field	Description
Include Courses	Select one of the following options: • **All Courses** to include all courses in your active course catalog in this report. **Note:** If you select **All Courses**, you do not have to select the checkboxes next to each course name at the bottom of the page. • **In Department** to include all courses in a specific department. Either enter the name of the department or click **Associate** to select the department. • **With Number of Sections between** to include courses with a specified number of sections. Enter the range of section numbers in the fields. • **Selected courses (below)** to include just the courses you select at the bottom of the page. Select the **Include courses with No Requests from selected students** checkbox to include courses that do not have any

	student requests. This may be useful when comparing multiple exports, as the reports will align if the checkbox is selected for both. Deselect the checkbox to include only courses with student requests.
Sort by	Select one of the following options to sort the report columns (all ascending except Number of Conflicts): • **Course Number** • **Course Name** • **Number of Sections** • **Number of Requests** • **Number of Conflicts (with the courses along the other axis)**
Include Rows for	Select any or all of the following checkboxes to add rows to the report for each: • Number of Sections • Number of Requests • Terms Offered • Total Conflicts

6. In the Courses Along Side section, use the following table to enter information in the fields to display information on the Y axis of the report:

Field	**Description**
Include Courses	Select one of the following options: • **All Courses** to include all courses in your active course catalog in this report. **Note:** If you select **All Courses**, you do not have to select the checkboxes next to each course name at the bottom of the page.

	• **In Department** to include all courses in a specific department. Either enter the name of the department or click **Associate** to select the department. • **With Number of Sections** between to include courses with a specified number of sections. Enter the range of section numbers in the fields. • **Selected courses (below)** to include just the courses you select at the bottom of the page. Select the **Include courses with No Requests from selected students** checkbox to include courses that do not have any student requests. This may be useful when comparing multiple exports, as the reports will align if the checkbox is selected for both. Deselect the checkbox to include only courses with student requests.
Sort by	Select one of the following options to sort the report columns (all ascending except Number of Conflicts): • **Course Number** • **Course Name** • **Number of Sections** • **Number of Requests** • **Number of Conflicts (with the courses along the other axis)**
Include Columns for	Select any or all of the following checkboxes to add rows to the report for each: • **Number of Sections** • **Number of Requests** • **Terms Offered** • **Total Conflicts**

7. If you chose **Selected Courses (below)** for either axis, select the checkbox next to the name of each course you want to include in this report.
8. Click **Submit**. The report runs.

How to Run the Conflicting Students List Report

The Conflicting Students List Report displays the students with primary requests for two specific courses. For example, run this report to determine if any students requested both Pre-Algebra and Algebra courses that should not be taken simultaneously, or if any students requested two courses that take place only on the same day and period. If you identify conflicts, you could move the assignments, sections, or requests before loading student schedules.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Conflicting Students List**. The Students With Request Conflict page appears.
4. Use the following table to enter information in the fields:

Field	Description
Course Number 1	Click **Associate** to select one of the courses.
Course Number 2	Click **Associate** to select the other course.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale.

5. Click **Submit**. The Students with Conflict page displays all students who requested both courses.

How to Run the Course List Report

The Course List report displays scheduling information for each course in your active course catalog.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Course List**. The Course List page appears.

4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The Courses page displays the following information:

Field	Description
Number	The course number.
Name	The course name.
Scheduled	Indicates whether or not the course is scheduled.
Department	The course's department.
Max	The maximum enrollment of the course.
Sections	The number of sections of the course.
PP Meeting	The number of periods per meeting.
Frequency	The number of days the course meets per cycle.
PP Cycle	The number of days per cycle.
Valid Start Periods	The periods in which periods the course is valid to start.
Sched Terms	The number of schedule terms in which the course is offered.
Terms Offered	The terms in which the course if offered.
Facilities	Any facilities associated with this course.
LP	The order in which students are scheduled in this course during the load process.

Team	Indicates if this course is scheduled by team.
Section Type	Indicates if this course is scheduled by section type.
Section to Offer	The number of sections to offer for the course.
Rank	The rank of the course that determines the order in which PowerSchool schedules courses into the master schedule.

6. To narrow the list of courses, see *How to Filter (Simple) the Course List Report* or *How to Filter (Advanced) the Course List Report*.

How to Filter (Simple) the Course List Report

1. To narrow the list of courses using simple search, use the following table to enter information in the Filter section:

   Note: If you apply a filter, those settings are retained and available each time you navigate back to this page.

   Note: Click the arrow to expand this section. Click the arrow again to collapse this section

Field	Description
Advanced	Verify this checkbox is deselected.
Search	Enter search criteria in the search field.

2. Click **Apply**. The page refreshes and display filtered results.

   Note: To remove all filter selections, click **Clear**.

How to Filter (Advanced) the Course List Report

1. To narrow the list of courses using advanced search, use the following table to enter information in the Filter section:

Note: If you apply a filter, those settings are retained and available each time you navigate back to this page.

Note: Click the arrow to expand this section. Click the arrow again to collapse this section.

Field	Description
Advanced	Select the checkbox.
[Column]	Choose the column by which you want to filter courses: • Number • Name • Scheduled • Department • Max • Sections • PP Meeting • Frequency • PP Cycle • Valid Start Periods • Sched Terms • Terms Offered • Facilities • LP • Team • Section Type • Section to Offer • Rank
[Comparator]	If you selected a column where a comparator is applicable, choose the appropriate comparator: • = equals • < is less than • > is greater than
[Field]	Enter search criteria in the search field.

2. To add another filter, click **+** and repeat Step 1.
3. To delete a filter, click **-** next the filter.
4. Click **Apply**. The page refreshes and display filtered results.

   Note: To remove all filter selections, click **Clear**.

How to Run the Course Relationships Report

The Course Relationships report displays any course relationships defined for courses in your course catalog.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Course Relationships**. The Course Relationships page appears.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The Course Relationships page displays the following information:

Field	Description
Course Number 1	The number of the first course.
Course Name 1	The name of the first course.
Course Number 2	The number of the second course.
Course Name 2	The name of the second course.
Type	The type of relationship that has been defined for these two courses: • Block: Courses that must be related to one another in the schedule. For example, you may want Pottery to be scheduled before or after Ceramics so that they can share a hot kiln. Alternatively, a medieval literature class may follow a medieval history class.

	• Concurrent: Courses that can meet at the same time, in the same place, and be taught by the same teacher. For example, a special education teacher might have a class of ten students, three of whom are taking remedial reading and the remainder of whom study remedial vocabulary and spelling. • Coreq: Two courses that are scheduled during the same term of a student's schedule. • Postreq: A course that must be in a student's schedule in a term after the related course. • Prereq: A course that must be in a student's schedule in a term before the related course. For example, Course A is a prerequisite of Course B. When the system schedules a student for these courses, it ensures that Course A is scheduled into a term before when Course B is in the student's schedule.
Code	If the two courses share a block relationship type, this field describes the type of block relationship, such as Term or Simultaneous.

How to Run the Room List Report

The Room List report provides scheduling information for all of the rooms available in the school.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Room List**.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The Rooms page displays the following information:

Field	Description
Number	The room number.
Description	A description of the room.
Max	The maximum enrollment of the room.
Sched	Displays the word True if the room is included in the scheduling process or False if it is not.
Department	The department to which the room belongs.
Dept. Use Only	Displays the word True if the room can only hold courses from its own department or False if it can hold courses from any department.
Facilities	The facilities associated with the room.
Fac. Use Only	Displays the word True if the room can only hold courses requiring a facility or False if it can hold courses that do not require a facility.
Always Free	Displays the word True if the room has no limit to the number of courses it can hold or False if it can only hold one course per period.
Building	The building associated with the room.
House	The house associated with the room.

How to Run the Student List Report

The Student List report provides scheduling preference information for all of the students who will attend your school next year.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Student List**.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The report displays the following information:

Field	Description
Number	The student's number.
Name	The student's name.
Grade	The student's grade level.
Gender	The student's gender.
Next Grade	The grade level the student will be in next year.
Priority	The student's scheduling priority.

YOG	The student's year of graduation.
Locked	Displays the word True if the student's schedule has been locked or False if it has not been locked.
Building	The student's building.
House	The student's house.
Team	The student's team.

Prepare to Build the Master Schedule Teacher Reports

PowerSchool includes many reports pertaining to the master schedule. The following reports are specific to the first part of the master schedule process, prepare to build the master schedule, and relate to teachers. For other reports, see *Prepare to Build the Master Schedule Reports*. Use the Scheduling Reports page to navigate to each report.

How to Run the Teacher Assignments by Course Report

The Teacher Assignments by Course report lists the courses assigned to each teacher in your school.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Teacher Assignments By Course**.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The Teacher Assignments By Course page displays the following information:

Field	Description
Course #	The course number.
Course Name	The course name.
#	The numbered list of teachers.
Teacher Name	The teacher's name.
# Sections	The number of sections assigned to the teacher.
Term	The terms for which an assignment has been made. If this field is blank, the system will determine the term based on course preference information.

How to Run the Teacher Assignments by Teacher Report

The Teacher Assignments by Teacher report lists the courses assigned to each teacher in your school.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Teacher Assignments By Teacher**.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The Teacher Assignments By Teacher page displays the following information:

Field	Description
Teacher Name	The teacher's name.

#	The numbered list of courses for each teacher.
Course Name	The course name.
Course #	The course number.
# Sections	The number of sections assigned to the teacher.
Term	The terms for which an assignment has been made. If this field is blank, the system determines the term based on course preference information.

How to Run the Teacher List Report

The Teacher List report lists the scheduling preferences for all of the teachers in your school.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Teacher List**.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The Teachers page displays the following information:

Field	Description
Teacher	The teacher's name.
Department	The teacher's department.
Room	The teacher's preferred room number.

Consecutive	The maximum number of consecutive periods the teacher can instruct.
Always Free	Displays the word True if the teacher can be scheduled to teach more than one course during the same period or False if the teacher can teach only one course per period.
Building	The teacher's building.
House	The teacher's house.
Team	The teacher's team.

Prepare to Build the Master Schedule Request Reports

The following reports relate to student course requests. For other reports that are useful before building a master schedule, see *Prepare to Build the Master Schedule Reports*.

How to Run the Course Request Tally Report

The Course Request Tally report lists the number of primary and alternate student course requests by course. Use this report to determine how many sections of a course you need.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Course Request Tally**. The Course Request Tally page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students.

	In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Exclude Alternates	Select **Yes** from the pop-up menu to exclude alternate requests.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The Course Request Tally page displays the following information:

Field	Description
Course	The course number.
Course Name	The course name.
Primary	The number of primary student course requests for the course. Click a number to view the list of students who requested a particular course.
Alternate	The number of alternate student course requests for the course. Click a number to view the list of students who requested a particular course.
Elective Alt	The number of elective alternate student course requests for the course. Click a number to view the list of students who requested a particular course.
Total	The total number of requests for the course. Click a number to view the list of students who requested a particular course.

Note: Click any column heading to sort the list.

How to Run the Requests by Course Report

The Requests by Course report lists the names of the students who requested each of the courses in your course catalog.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Requests by Course**. The Requests By Course page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The Requests By Course page displays the following information:

Field	Description
Course #	The course number.
Course Name	The course name.
#	The numbered list of students for each course.
Student Name	The names of the students who requested each course.

How to Run the Requests by Student Report

The Requests by Student report lists the names of the courses each student requested.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Requests by Student**. The Requests By Student page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The Requests By Student page displays the following information:

Field	Description
Student #	The student number.
Student Name	The student's name.
#	The numbered list of courses requested by each student.
Course #	The course number for the course requested by each student.
Course Name	The name of the course requested by each student.

How to Run the Student Request Tally Report

The Student Request Tally report displays the number of primary and alternate student course requests made by each student.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Student Request Tally**. The Student Request Tally page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The Student Request Tally page displays the following information:

Field	Description
#	The numbered list of students.
Student	The student's name.
% Scheduled	The percentage of the student's course requests that were fulfilled.
Primary	The number of primary course requests made by the student.

Credits	The number of credit hours for primary course requests.
Alternate	The number of alternate course requests made by the student.
Credits	The number of credit hours for alternate course requests.
Total	The total number of course requests made by the student.
Credits	The number of credit hours for all course requests.

Build the Master Schedule Reports

PowerSchool includes a number of reports that help you evaluate a completed master schedule. Use these reports to determine whether maximum enrollment parameters need to be increased, the teachers are correctly scheduled, and the system scheduled courses in rooms and their facilities at the correct times.

The following reports are specific to the second part of the master schedule process, build the master schedule, and relate to the master schedule, student course requests, rooms, schedules, and students.

Reports

- *Alternate Request Report*
- *Individual Student Conflict Matrix Report*
- *Master Schedule Report*
- *Master Schedule (PDF) Report*
- *Master Schedule List Report*
- *Non-Scheduled Course Requests Report*
- *Non-Scheduled Student Requests Report*
- *Non-scheduled Student Requests for Scheduled Courses Report*
- *Percent Schedule By Students Report*
- *Room Schedule Report*
- *Room Utilization Report*
- *Schedule Periods by Grade Report*
- *Schedule Course Enrollment Report*
- *Schedule Results by Grade Report*
- *Student Program Balancing*

- *Student Schedule List Report*
- *Student Schedule Report*
- *Teacher Maximum Load Report*
- *Under-Scheduled Students Report*
- *Unscheduled Rooms Report*
- *Unscheduled Students Report*
- *Unscheduled Teachers Report*

How to Run the Alternate Request Report

Use the Alternate Request report to list the number of course requests made by a student and whether or not the student was scheduled in his or her requested course. The report separates the requests by course and alternate course.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Alternate Request Report**.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The Requests By Student page displays the following information:

Field	Description
Student Name	The name of the student.
Requests	The names and numbers of the requested courses.
Scheduled Alternates	The names and numbers of the scheduled alternate courses.
Scheduled	An X next to a course indicates that the student was scheduled in that course.

How to Run the Master Schedule Report

Use the Master Schedule report to evaluate the schedule the system built. View the master schedule for all teachers for all periods. The first time you display the master schedule after creating or modifying it, the Master Schedule Preferences page appears. For more information, see *How to Modify Master Schedule Preferences*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Master Schedule**. The Master Schedule page appears.

   Depending on your preferences, the report may display the teacher's name, the selected day, and the following information for each period:

   - Name of the course assigned to a teacher
   - Course number.Section number (click to view that section's Edit Section page)
   - Number of students scheduled for this section (click to view the class roster)
   - Maximum enrollment of this section
   - Room number
   - Expression, which is the combination of periods and days
   - Term

How to Run the Master Schedule (PDF) Report

Use the Master Schedule PDF report to generate a PDF of the master schedule. View the master schedule for all teachers for all periods. The first time you display the master schedule after creating or modifying it, the Master Schedule Preferences page appears. For more information, see *How to Modify Master Schedule Preferences*.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Master Schedule (PDF)**. The Master Schedule PDF page appears.
4. Use the following table to enter information in the Master Schedule Options fields:

Field	Description
Periods	Select the checkboxes to indicate which periods to display on the master schedule. To display all periods, select the **All Periods** checkbox.
Days	Select the checkboxes to indicate which days to display on the master schedule. To display all days, select the **All Days** checkbox.
Credit Type	Enter the credit type to indicate which credit type to display on the master schedule, such as **MATH**. To display all credit types, do not enter anything in the field.
Rooms	Select the rooms to display on the master schedule. Press and hold COMMAND (Mac) or CONTROL (Windows) to make multiple selections. Select **All Rooms** to display all rooms.
Teachers	Select the teachers to display on the master schedule. Press and hold COMMAND (Mac) or CONTROL (Windows) to make multiple selections. Select **All Teachers** to display all teachers.
Sort By	Select a sort order option for the master schedule: • **Teacher** • **Credit Type**

	• **Department** • **Room**
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale.

5. Use the following table to enter information in the Printing Options fields:

Field	**Description**
Period/Day orientation	Select an option to determine which axis should display periods and which axis should display days: • **Periods across the top** • **Days across the top**
Heading Font	Choose the heading font from the pop-up menu.
Size, line height, style	Enter the heading font size and line height in points. One point equals 1/72 of an inch. Select the formatting checkboxes you want to use. For example, select the **Bold** checkbox to bold the heading.
Print Heading On	Choose the page on which to print the heading from the pop-up menu.
Column Title Font	Choose the column title font from the pop-up menu.
Size, line height, style	Enter the column title font size and line height in points. One point equals 1/72 of an inch. Select the formatting checkboxes you want to use. For example, select the **Bold** checkbox to bold the column title.

Print Column Titles On	Choose from the pop-up menu the page on which to print the column titles: • **All pages** • **First page** • **Do not print column titles**
Body Font	Choose from the pop-up menu the font for the body of the report.
Size, line height, style	Enter the body font size and line height in points. One point equals 1/72 of an inch. Select the formatting checkboxes you want to use. For example, select the **Bold** checkbox to bold the body.
Cell padding (points)	Enter the width of each cell and the amount of space from all sides of the cells to the text in points. One point equals 1/72 of an inch.
Page size	Choose from the pop-up menu the size of the paper on which you want to print this report. To enter a custom size, enter the horizontal and vertical page measurements in the Custom Size fields.
Margins (inches)	Enter the size of the margins in inches.
Orientation, Scale	Choose the page layout from the pop-up menu. **Portrait** is a vertical page; **Landscape** is a horizontal page. Scale is the finished size of the report. Fit more on a page by reducing it by a percentage, but remember to leave it as large as possible for easier viewing.
Watermark Text	To print text as a watermark on each page of the report, use the pop-up menu to either choose one of the standard phrases or choose **Custom** and enter the text you want to print as a watermark in the field.

Watermark Mode	Use the pop-up menu to determine how you want the text to print. **Watermark** prints the text behind objects on the report, while **Overlay** prints the text over objects on the report.
When to print	Select a time to run the report: • **ASAP:** Execute immediately. • **At Night:** Execute during the next evening. • **On Weekend:** Execute during the next weekend. • **On Specific Date/Time:** Execute on the date and time specified in the following fields.

6. Click **Submit**. The report queue appears.
7. Click **View** once the report is completed.

   Note: Click **Refresh** to update the status of the report.

   The page displays a PDF file of the report. Thoroughly review it to verify that the formatting and content are correct. If the report provides the data you need and is formatted properly, print it from this page or save it to another application.

How to Run the Master Schedule List Report

Use this report to display the master schedule with filters. For example, filter the report to show the master schedule for a certain credit type, room, and teacher.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Master Schedule List**. The Master Schedule List page appears.

   Note: The first time you display the master schedule after creating or modifying it, the Master Schedule Preferences page appears. Use this page to filter information that appears on the master schedule page. To change your preferences after running the report, click **Show Preferences** at the bottom of the master Schedule List page. For more information, see *How to Modify Master Schedule Preferences*.

4. Use the following table to filter information:

Note: Click the arrow to expand this section. Click the arrow again to collapse this section.

Field	Description
Filter	1. Enter search criteria in the **Search** field. 2. To filter by columns: a. Click **+**. b. From the first pop-up menu, choose one of the following: • **Course Name** • **Expression** • **Max** • **Number.Section** • **Section #** • **Room** • **Section Type** • **Students** • **Teacher Department** • **Teacher Name** • **Team** • **Term** c. From the second pop-up menu, choose the appropriate comparator: • **contains** • **contains all** • **contains any** • **does not contain** • **is empty** • **starts with** • **starts with any** d. Enter search criteria in the search field. **Note:** Use a comma-separated list for multiple values. If **contains** is selected, only one value may be entered. If **is empty** is selected, no value may be entered. e. Click **Apply**. The page refreshes and display filtered results.

	Note: The Filter (0) header refreshes and displays the number of applied filters. In addition, the header displays the fields being used to filter results. **Note:** Click the name of a column to sort by that column in ascending order. Click again to sort in descending order. 3. To add another filter, click **+** and repeat Step 1. **Note:** The **+** appears shaded if all filters have been added. 4. To delete a filter, click **-** next the filter. 5. Click **Apply**. The page refreshes and display filtered results. **Note:** To remove all filter selections, click **Clear**.

Note: Click the number in the **Students** column to view the class roster for the section.

5. Click the number in the **Section #** column for the section you want to edit. The Edit Section page appears.
6. Enter information as needed. For field descriptions, see *How to Add a Section*.
7. Click **Submit**. The Sections page for the selected course appears.

   The master schedule list displays the course and section numbers, course name, schedule expression, term, teacher name, teacher department, room number, number of students enrolled, and maximum enrollment for each course section.

How to Run the Non-Scheduled Course Requests Report

Use the Non-Scheduled Course Requests report to view for each course the students whose course requests could not be honored during the scheduling process. This information can help you determine if you need to ease course maximum restrictions, add more course sections, or update a student's course requests.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.

Note: To exclude alternate requests, click **Exclude Alternates** below the report name.

3. Click **Non-scheduled Course Requests**. The Non-Scheduled Course Requests page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Exclude Alternates	Select **Yes** from the pop-up menu to exclude alternate requests.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The report displays the following information:

Field	Description
Course Number	The course number. **Note:** Alternate course requests are noted with (Alt).
Course Name	The course name. **Note:** Alternate course requests are noted with (Alt).
Student Number	The number of the requesting student that was not scheduled in this course.

Student Name	The name of the requesting student that was not scheduled in this course.

How to Run the Non-Scheduled Student Requests Report

Use the Non-Scheduled Student Requests report to determine which course requests have not been satisfied on a student-by-student basis. The information can help you decide if you need to ease course maximum restrictions or update a student's course requests.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.

   Note: To exclude alternate requests, click **Exclude Alternates** below the report name.

3. Click **Non-scheduled Student Requests**. The Non-Scheduled Student Requests page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Exclude Alternates	Select **Yes** from the pop-up menu to exclude alternate requests.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The report displays the following information:

Field	Description
Student Number	The number of the requesting student that was not scheduled in this course.
Student Name	The name of the requesting student that was not scheduled in this course.
Course Number	The course number. **Note:** Alternate course requests are noted with (Alt)
Course Name	The course name. **Note:** Alternate course requests are noted with (Alt).

How to Run the Non-Scheduled Student Requests for Scheduled Courses Report

Use the Non-Scheduled Student Requests for Scheduled Courses report to determine which requests for scheduled courses have not been satisfied on a student-by-student basis.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.

   Note: To exclude alternate requests, click **Exclude Alternates** below the report name.

3. Click **Non-scheduled Student Requests for Scheduled Courses**. The Non-Scheduled Student Requests for Scheduled Courses page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students .In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Exclude Alternates	Select **Yes** from the pop-up menu to exclude alternate requests.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The report displays the following information:

Field	Description
Student Number	The number of the requesting student that was not scheduled in this course.
Student Name	The name of the requesting student that was not scheduled in this course.
Course Number	The course number. **Note:** Alternate course requests are noted with (Alt).
Course Name	The course name. **Note:** Alternate course requests are noted with (Alt).

How to Run the Room Schedule Report

Use the Room Schedule report to determine which courses are being taught in a particular room.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Room Schedule**. The Room Schedule page appears.
4. Click **Associate** to select the number of the room you want.
5. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
6. Click **Submit**. The report displays the following information:

Field	Description
Sec#	The section number of the course.
Expression	The period and days in which the course is taught.
Term	The term in which the course is taught.
Teacher	The name of the teacher instructing the course.
Course#	The course number.
Course	The course name.
Size	The number of students enrolled in the course. Click the number to display the class roster.

How to Run the Room Utilization Report

Use the Room Utilization report to verify that the system scheduled courses in the correct rooms, with the appropriate facilities, and at the correct times. You can also use this report to make sure that you correctly defined room capacities.

For each room, the system displays the courses that take place in the room by period. For each period, the system displays the number of available seats, scheduled students, and maximum seats.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Room Utilization**. The Room Utilization page appears.
4. Click **Associate** to select the rooms that you want to display on the report.
5. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
6. Click **Submit**. The report displays the following information:

Field	Description
Room	The room number and maximum seats for each room.
Day	The day the room is scheduled.
Terms	The terms that the room is scheduled.
Period	The course name, course and section number, teacher name, expression (period and day), term, number of taken seats, and number of seats available.

How to Run the Schedule Periods by Grade Report

Use the Schedule Periods by Grade report to view the number of students scheduled into courses by period, grade, and term.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Schedule Periods By Grade**. The Schedule Periods By Grade page appears.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The report displays the following information:

Field	Description
Term	The term number.
Expressions	The period and day combination.
Grade [number]	The number of unscheduled students, scheduled students, and total number of students for this grade level.

How to Run the Schedule Course Enrollment Report

Use the Scheduled Course Enrollment report to view the number of seats available, requested, occupied, and vacant per course. The report also displays the number of unfilled student requests for each course.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Schedule Course Enrollment**. The Schedule Course Enrollment page appears.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The report displays the following information:

Field	Description
Number	The course number.
Course Name	The course name.
Seats Available	The maximum enrollment for the course.
Primary Requests	The number of primary requests made for the course. Click the number to display the names of the students that requested the course. The Course detail page appears with the Primary Requests

	tab selected. To view other Course detail information, click a different tab.
Alternate Requests	The number of alternate requests made for the course. Click the number to display the names of the students that requested the course. The Course detail page appears with the Alternate Requests tab selected. To view other Course detail information, click a different tab. **Note:** The **Alt** checkbox on the Requests page must be selected to indicate that the request is an alternate course request.
Seats Filled	The number of fulfilled requests for the course. Click the number to display the names of the students enrolled in the course. The Course detail page appears with the Seats Filled tab selected. To view other Course detail information, click a different tab.
Seats Vacant	The number of empty seats in the course.
Unfilled Primary Requests	The number of unfulfilled primary requests for the course. Click the number to display the names of the students that requested the course but are not enrolled in it. The Course detail page appears with the Unfilled Primary Requests tab selected. To view other Course detail information, click a different tab.

How to Run the Schedule Results by Grade Report

Use the Schedule Results by Grade report to view a summary of how many students in each grade were fully scheduled and not scheduled. To give you a better indication of the success of your schedule, run this report after loading student schedules but before working with individual students' scheduled.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Schedule Results by Grade**. The Scheduling Results By Grade page appears.

4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The report displays the following information:

Field	Description
Students Scheduled	Next year's student grade level and the total number of students that submitted course requests for each grade level.
All Periods	When all periods are considered, the number and percentage of students in each grade that have a complete schedule and the number and percentage of students in each grade that do not have a complete schedule.
Core Periods	When only core periods are considered, the number and percentage of students in each grade that have a complete schedule and the number and percentage of students in each grade that do not have a complete schedule. Core periods are those that are flagged as such and are those in which the school expects students to be scheduled.
Requests Scheduled	Next year's student grade level and the total number of requests submitted by students for each grade level.
Including Alternates	When alternate course requests are considered, the number and percentage of students in each grade that have a complete schedule and the number and percentage of students in each grade that do not have a complete schedule.
Primary Requests Only	When only primary course requests are considered, the number and percentage of students in each grade that have a complete schedule and the number and percentage of students in each grade that do not have a complete schedule.

Student Schedule Reports

How to Run the Student Schedule List Report

Use the Student Schedule List report to view the number of courses scheduled by each student. You can also use this report to view each student's schedule.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Student Schedule List**. The Student Classes Scheduled page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*. **Note:** Clicking on hyperlinks within the report may display a different page in PowerSchool, which will appear in your preferred language and not in the locale you selected for the report output.

5. Click **Submit**. The report displays the following information:

Field	Description
#	The numbered list of students.

Student	The student's name. Click the heading to sort the list by student name.
% Scheduled	The percent of the period/term combinations that were fulfilled. Click the heading to sort the list by percentage scheduled.
Classes Scheduled	The number of courses that have been scheduled for this student. Click the heading to sort the list by the number of classes scheduled. Click the number per student to view the student's Schedule page.

How to Run the Student Schedule Report

The Student Schedule Matrix allows you to produce and print student schedule reports with page breaks between students. Though this report can be viewed with Safari for Mac OS X and Microsoft Internet Explorer for Windows, other browsers may not display the report formatting appropriately.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Student Schedule Report**. The Student Schedule Matrix Report page appears.
4. Use the following table to enter information in the fields:

Field	Description
Report Title	Enter a title for the report.
Term to Display	Select from the pop-up menu which term to use for the report.
Students to scan	Select an option to indicate the students to include, if applicable.
Max Students per Page	Enter the maximum number of student reports to display per page.

Sort Order	Select an option to indicate the sort order: • **Last Name** • **(Next Year) Grade Level** • **Homeroom**
Show Other-School Enrollments	Select the checkbox to display any enrollments at other schools. The enrollments are based on the selected scenarios.
Color Sections By:	Select an option for the report colors: • **No Coloring**: Report displays no coloration. • **Section**: Report displays sections in the same color. • **Course**: Report displays courses in the same color.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale.

5. Click **Submit**. The Student Schedule Matrix appears.

How to Run the Student Schedule Matrix Report

The Student Schedule Matrix allows you to produce and print student schedules for the current year with page breaks between students. Though this report can be viewed with Safari for Mac OS X and Microsoft Internet Explorer for Windows, other browsers may not appropriately display the report formatting.

1. On the start page, search for and select a group of students. A list of students appears in the Current Student Selection section. For more information, see *Select a Group of Students*.
2. Click the **[Select Function]** arrow. The Group Functions pop-up menu appears.
3. Under Scheduling, choose **Student Schedule Report**. The Student Schedule Matrix Report page appears.

   Note: Alternatively, if you have a current selection of students, you can choose **Special Functions** under Functions in the main menu and then click **Groups Functions**.

4. Use the following table to enter information in the fields:

Field	Description
Report Title	Enter a title for the report.
Students to scan	Select an option to indicate the students to include, if applicable.
Max Students per Page	Enter the maximum number of students to display per page.
Sort Order	Select an option to indicate the sort order.
Include Active Enrollments As Of	Enter a date to filter report results by the specified date of active enrollments. Use the format mm/dd/yyyy or mm-dd-yyyy.
Show Dropped Enrollments in Separate List	Select the checkbox to display a student's dropped enrollments below the student's matrix. A Withdrawn Classes table displays the enrollment information for each dropped course, including the date of withdrawal.
Bell Schedule for Period Start/End Times	Select from the pop-up menu which bell schedule to use to display the start and end times for each period.
Color Sections By:	Select an option for the report colors: • **No Coloring**: Report displays no coloration. • **Section**: Report displays sections in the same color. • **Course**: Report displays courses in the same color.

5. Click **Submit**. The Student Schedule Matrix appears.

Tips for Printing the Student Schedule Matrix Report

- Enable the printing of backgrounds. Shading and colorations in reports are all considered backgrounds. Not printing backgrounds may lead to illegible printouts.
- Turn off the printing of header information in your browser settings. If this is not off, each page printed may include the URL of this page, a page number, and a time stamp. These are generally not desired for this report.
- Use your browser's Print Preview function to confirm that the output is correct prior to sending to the printer. You may adjust text size using the text font size controls of your browser. You may also control the page orientation using your browser settings to fix table cells that span page breaks or reports that print too small.

How to Run the Under-Scheduled Students Report

Use the Under-Scheduled Students report to determine the number of students who have been under-scheduled for each period.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Under-scheduled Students**. The Under-Scheduled Students page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The report displays the following information:

Field	Description
# of Blocks	The number of blocks, or units, available in the schedule. Units are periods multiplied by the number of days multiplied by the number of schedule terms. For example, a scenario with 2 days, 8 periods, and 4 terms would have 64 blocks.
Percent	The number of blocks divided by the total number of blocks possible.
# of Students	The number of students who have the corresponding number of blocks scheduled.
Percent	The percentage of the total number of students that have the corresponding number of blocks scheduled.

How to Run the Unscheduled Rooms Report

Use the Unscheduled Rooms report to determine the number of rooms that have not been scheduled for classes per term, period, and day.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Unscheduled Rooms**. The Unscheduled Rooms page appears.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The report displays the following information:

   Note: If each room is scheduled, the message "All rooms are fully scheduled" appears.

Field	Description
Term Period Day Description	The term, period, and schedule day in which there are unscheduled rooms.
# of Rooms	The number of unscheduled rooms for each term, period, and day. Click the number of rooms to display the list of rooms.

How to Run the Unscheduled Students Report

Use the Unscheduled Students report to determine the number of students who have not been scheduled into classes per term, period, and day. When making adjustments after loading student schedules, school counselors can use this report to find "holes" in student schedules.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Unscheduled Students**. The UnScheduled Students page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The report displays the following information:

Field	Description
Term Period Day Description	The term, period, and schedule day in which there are unscheduled students.
# of Students	The number of unscheduled students for each term, period, and day. Click the number of students to display the list of students, from which you can select students and perform functions for the group of students.

How to Run the Unscheduled Teachers Report

Use the Unscheduled Teachers report to determine the number of teachers who have not been scheduled into classes per term, period, and day.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Unscheduled Teachers**. The UnScheduled Teachers page appears.
4. Select the **Report Output Locale** from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.
5. Click **Submit**. The report displays the following information:

Field	Description
Term Period Day Description	The term, period, and schedule day in which there are unscheduled teachers.
# of Teachers	The number of unscheduled teachers for each term, period, and day. Click the number of teachers to display the list of teachers.

How to Run the Percent Schedule By Students Report

Use the Percent Schedule By Students report to determine how successful your current schedule is based on percentage scheduled calculations for a given student for the active PowerScheduler scenario.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Percent Schedule By Students**. The Percent Scheduled By Students page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Number of students included in scheduling for next year. If a student or group of students have been selected, choose to run the report for only that student selection or for all students. In the **Include Only In Grades** field, enter the numbers of the grade levels you want to include in this report (optional).
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale. For more information, see *Report Output Locale*.

5. Click **Submit**. The report displays the following information:

Field	Description
Student Name	Name of the student.
Next Year Grade	Students' grade levels for next year. This report sorts by next year grade level followed by student name.
# Requests	Number of course requests made by the student.

# Classes Scheduled	Number of classes scheduled for the student.
% Scheduled	Percent scheduled based on all possible time slots that can be scheduled according to periods, days, and terms.
% Core Periods	Percent of core periods scheduled based on all possible time slots that can be scheduled according to periods, days, and terms. Core periods are flagged as such and are the periods in which the school expects students to be scheduled.
% Primary Requests	Percent of primary requests (non-alternate requests) that were successfully filled.
% All Requests	Percent of total requests including alternate requests that were filled.

How to Run the Individual Student Conflict Matrix Report

Use the Individual Student Conflict Matrix report to identify whether it is possible to rearrange a student's schedule so that more or all of their course requests can be fulfilled.

In the process of scheduling, it is inevitable that some students will not have all their requests fulfilled. This is often due to limited resource availability but it can also be due to inherent limitations of using a scheduling engine. At some point, the effort that the engine expends investigating the different possibilities of a schedule runs into diminishing returns. While PowerSchool's scheduling engine often reaches into the 90 percent fulfillment of requests range, manual intervention is necessary at some point to achieve an even higher percentage. Often it requires investigating students to identify why all of their requests were not scheduled.

While PowerSchool provides reports that identify unfilled requests, you must investigate various other reports to determine how, or even if, a particular request can be filled. Questions that a scheduling administrator might ask include: "Are any of the sections of the requested class available during an unscheduled period for the student?", "If not, can I reschedule a filled class so that the student can be scheduled into the missed one?", "Is there enough room in another class so that I can squeeze the student in?". This report provides sufficient information for an administrator to begin answering these questions.

Note: As an example, consider four sections: Course A1 with no section type, Course A2 with a section type of Bilingual, Course B1 with no section type, and Course B2 with a

section type of Bilingual. If a student requests Course A1 with an alternate of Course B and gets enrolled in B so that it appears as an alternate on the report, the report displays both sections of Course B but only one section of Course A. The same result appears if the student does not request Course B as a primary or alternate request but is enrolled in the course, anyway; all sections appear on the report regardless of section type.

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Individual Student Conflict Matrix**. The Individual Student Conflict Matrix page appears.
4. Use the following table to enter information in the fields:

Field	Description
Students to Include	Select the students you want to run the report for: • Select **The selected students only** to run the report students in the current selection enrolled in the date range specified. • Select **All students** to run the report for all students in the current school enrolled in the date range specified.
Filter Students By	Select how you want students to be filtered: • Select **Students with requests** to view only students who have requests in the course request file. • Select **Include students with no requests** to view students with requests as well as those without any requests. • Select **Only students with unfilled requests** to view only students who have requests existing in the course request file with no corresponding scheduled course.
Sort Order	Select the sort order: • **Student Name**

	• **Grade Level** Many times scheduling administrators work with students on a grade-by-grade basis and it is useful to see all those students in the lowest grade first, then the next, and so on.
Enforce Teams	Select the checkbox so that only sections that belong to the student's team appear in the report. In case of an unassigned team, the section is listed.
Enforce Houses	Select the checkbox so that only sections that belong to the student's house appear in the report. In case of an unassigned house, the section is listed.
Enforces Buildings	Select the checkbox so that only sections occurring in a room belonging to the student's assigned building appear in the report. In case of an unassigned room, the section is listed.
Enforce Student Avoid	Select the checkbox so that only sections that do not violate an existing student-student avoid constraint for the students appearing in the report. In case the student is already enrolled in a section that violates this constraint, the section is listed.
Enforce Teacher Avoid	Select the checkbox so that only sections that do not violate an existing student-teacher avoid constraint for the student appear in the report. In case the student is already enrolled in a section that violates this constraint, the section is listed.
Enforce Free Time	Select the checkbox so that only sections that do not violate an existing student free time constraint appears in the report. In case the student is already enrolled in a section that violates this constraint, the section is listed.
Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale.

5. Click **Submit**. The report displays the following information:

Field	Description
Student Number	The student's number.
Student Name	The student's last name, first name, and middle initial.
Next Year Grade	The next year grade level of the student.
Requested	The classes for which a primary request exists for the student.
Alt	Identifies whether the request is an alternate request as opposed to a primary request.
Section Type	Identifies any section type that was part of the request.
Crs-ID	The course number of the requested (or alternate) course.
Course Name	The course name of the requested (or alternate) course.
Term	The term for which sections of the requested course has been scheduled.
[Period]	The period for which sections of the requested course have been scheduled.
Section Number	The identification number of the section (course number plus section) in which the student is enrolled. In the case of requests that were not scheduled, "Unscheduled" displays.
Expression	The period/day combination.
# Sec	The total number of sections that are available for the requested course.

How to Run the Teacher Maximum Load Report

Use the Teacher Maximum Load Report to identify teachers who are scheduled to teach more students in a day than is allowed by their contracts. This report displays expected loads based on the schedule in PowerScheduler. For more information about setting the value of a teacher's maximum load, see *Teacher Scheduling Setup*.

Sections can be exempted from counting towards a teacher's maximum load. For more information, see *Teacher Schedule*.

Note: A similar report is available for the current year, which is especially helpful when performing walk-in scheduling. For more information, see *How to Run the Teacher Maximum Load Report.*

1. On the start page, choose **PowerScheduler** under Applications in the main menu. The Scheduling page appears.
2. Under Tools, choose **Reports** from the PowerScheduler menu. The Scheduling Reports page appears.
3. Click **Teacher Maximum Load Report**. The Teacher Maximum Load page appears.
4. Use the following table to enter information in the fields:

Field	Description
Select a Teacher	Use the pop-up menu to select the teacher for whom you want to run this report. To select all teachers at the selected school, choose **All Teachers**.
Limit report to	Select an option to limit the results of the report: • **All Selected Teacher(s)**: Displays results for all teachers selected in the Select a Teacher field, even those whose schedules do not exceed their maximum loads. • **Only those over the limit**: Displays only the teachers selected in the Select a Teacher field that exceed the specified student load.
For this date	Enter a date to display report results as of the specified date. Use the format mm/dd/yyyy or mm-dd-yyyy.

Report Output Locale	Select the locale from the pop-up menu. The report output will be in the language associated with the locale.

5. Click **Submit**. The report displays the following information:

Field	Description
No.	The teacher's number.
Teacher Name	The teacher's last name, first name, middle initial.
Course	The name of the course that has a section contributing to the teacher's student load.
Section	The identification number of the section contributing to the teacher's student load. **Note:** To exempt a section from being included, see *Schedule Sections*.
Max	Maximum number of students allowed in the section.
Room	Room number of the section.
[Day]	Cycle day of the school's schedule, such as A or B.
Flag	Indicates whether a maximum load or section maximum has been exceeded.