

SUNGARD® PUBLIC SECTOR

eSchoolPLUS Master Schedule Builder Procedures

Procedural Overview

- The Master Schedule Builder subsystem (MSB) allows building administrators to enter parameters about the building's scheduling patterns, and to run a utility program that creates a Master Schedule based on those parameters.
- This utility can be used in the place of hand-keying a Master Schedule for the building, and would typically be used if the building develops a new Master Schedule "from scratch" each year and does not copy the Master Schedule from the previous year.
- After the Master Schedule is created (either using Master Schedule Builder subsystem or by entering the Master Schedule by hand), schedule students into courses by running the standard Schedule Students program and using the associated Student Scheduler utility programs and reports (Save/Restore Scheduling Run, Error Scan, Mass Load/Unload/Lock/Erase Scheduled Courses, etc.) Refer to the Scheduling Procedural Outline and the online help for more information about scheduling students.

Note: Before working with the Master Schedule Builder subsystem, the building's Course Catalog **must** be completed and **all** Student Requests must have been entered.

To run the Build Master Schedule option for the first time in a scheduling interval:

1. Create/Update **Meeting Code** Information.
2. (Optional) Create/Update **Resource Group** Information.
3. Update Room and Staff Allocation and restriction information.
4. Run the **Course Setup Utility**.
5. Update the **Course Setup** page for each course. It is recommended that you allow several days for completion of this process.
6. Run the **Error Scan** to detect errors in the Course Catalog, Student Request file, or Course Setup data.
7. Run the **Build Master Schedule** option.
8. Run **Master Schedule Reports** to analyze the results.

To re-run the Build Master Schedule option within a scheduling interval:

1. Run the **Save/Restore** to save results of a build if you want to try additional builds by making changes to setups and courses, but want the option to revert back to your current setups and master schedule.
2. After you have made changes to the master schedule and/or student requests, re-run the **Error Scan**.
3. Re-run **Build Master Schedule**.
4. Run **Master Schedule** reports to analyze the results of the build.

From Year to Year:

1. Select **Utilities > Copy Setups**.
2. The following setups can be copied from year to year for your building: Master Schedule Builder Allocations, Master Schedule Builder Resources, Master Schedule Builder Meeting Codes, and Master Schedule Builder Course Setup.

SUNGARD® PUBLIC SECTOR

eSchoolPLUS Master Schedule Builder Procedures

Meeting Codes





Meeting codes define potential meeting times for course sections, for example, “Period 1 Monday through Friday,” or “Periods 5 and 6 on Day A.” The Build option uses meeting codes to assign periods of the day to the course sections which it creates.

To add/update meeting codes:

1. Select **Scheduling Center > Master Schedule Builder > Meeting Codes**.
2. Click **New** to add a new meeting code or click **Search** to choose update an existing meeting code.
3. Add/Update the Meeting code header and detail information and click **Save** when finished.

Note: Each meeting code can be up to 30 characters, and does not allow spaces or special characters.

eSchoolPLUS+

 Favorites
  Help
  Print
  Home

<< Hide
Meeting Code Detail Information
(Next Year) 2007/08

Building:* 1

Building Description: Building 1

Meeting Code:* 5DAY

Meeting Code Description:

12/28/2006 3:08:20 PM ELLEN.HOSPADOR

Details, Cycles and Periods

Condition	Days Selected	Periods Selected	Delete
	Selected <input type="button" value="v"/> F,M,R,T, <input type="button" value="↓"/>	Selected <input type="button" value="v"/> 1 <input type="button" value="↓"/>	<input type="checkbox"/>
Or <input type="button" value="v"/>	Selected <input type="button" value="v"/> F,M,R,T, <input type="button" value="↓"/>	Selected <input type="button" value="v"/> 2 <input type="button" value="↓"/>	<input type="checkbox"/>
Or <input type="button" value="v"/>	Selected <input type="button" value="v"/> F,M,R,T, <input type="button" value="↓"/>	Selected <input type="button" value="v"/> 3 <input type="button" value="↓"/>	<input type="checkbox"/>
Or <input type="button" value="v"/>	Selected <input type="button" value="v"/> F,M,R,T, <input type="button" value="↓"/>	Selected <input type="button" value="v"/> 4 <input type="button" value="↓"/>	<input type="checkbox"/>
Or <input type="button" value="v"/>	Selected <input type="button" value="v"/> F,M,R,T, <input type="button" value="↓"/>	Selected <input type="button" value="v"/> 5 <input type="button" value="↓"/>	<input type="checkbox"/>
Or <input type="button" value="v"/>	Selected <input type="button" value="v"/> F,M,R,T, <input type="button" value="↓"/>	Selected <input type="button" value="v"/> 6 <input type="button" value="↓"/>	<input type="checkbox"/>
Or <input type="button" value="v"/>	Selected <input type="button" value="v"/> F,M,R,T, <input type="button" value="↓"/>	Selected <input type="button" value="v"/> 7 <input type="button" value="↓"/>	<input type="checkbox"/>
<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="button" value="v"/>	<input type="checkbox"/>

- Student Center
- Registration Center
- Scheduling Center
 - Course Setup
 - Master Schedule Builder
 - Meeting Codes
 - Resource Groups
 - Course Setup Utility
 - Course Setup
 - Save/Restore
 - Error Scan
 - Build Master Schedule
 - Student Scheduler
 - Master Schedule
 - Setup
 - Reports
- Attendance Center
- Mark Reporting Center
- Discipline Center
- Medical Center
- Test Score Center
- Fees Center
- State Center
- Utilities
- Administration
 - ReportNet
 - Upload File
 - Select Theme
 - Set Environment

SUNGARD® PUBLIC SECTOR

eSchoolPLUS Master Schedule Builder Procedures

Meeting Code Detail Information

Condition: Indicates how the entries on this row relate to other rows. The first row never has a condition. Choices include:

And – the conditions in this row of meeting information and the preceding row must both be met.

Or – this row is separate from the previous row; its conditions are unrelated.

Followed By – the conditions in this row and the previous row must both be met. This row only applies to a single period, which can occur any time after the period(s) listed in the previous row.

Contiguous – the conditions in this row and the previous row must both be met. This row only applies to a single period, which must be adjacent, either before or after the period(s) listed in the previous row.

Days/Periods Selected: Indicates on which cycle days/periods courses assigned to this meeting code will meet. Choices include:

All – the course must meet on every cycle day/every period.

Any – the course must meet on a single cycle day/period, but the system can select which day/period.

Selected – allows you to specify all the days/periods on which the course must meet. When you choose Selected, you can enter the cycle days/periods, separated by commas, in the next field. Selected means **all** of the selected days/periods, **not any**.

Resource Groups

Resource Groups allow the Master Schedule Builder option to choose a staff member or room from a group when assigning a room or staff resource to a course-section. Resource groups are optional. Frequently, building administrators will wish to designate specific staff members or rooms to course-sections instead. Specific staff and room assignments are designated in the Course Setup maintenance area.

To add/update resource groups:

1. Select **Scheduling Center > Master Schedule Builder > Resource Groups**.
2. Click **New** to add a new resource group or click **Search** to choose update an existing meeting code.
3. Add/Update the resource group header and detail information and click **Save** when finished. Only one group may be assigned to a teacher or to a room.

Note: Resource Groups may also be maintained for a specific room or staff member via the Room Information and Staff Information pages.

SUNGARD® PUBLIC SECTOR

eSchoolPLUS Master Schedule Builder Procedures

Resource Groups, continued:

(Next Year) 2007/08

Save Search List New Allocation Detail

Building:* 12 - Building 12
Group Code:* English
Group Type:* Staff
Description:* English Department
 12/28/2006 3:30:52 PM ELLEN.HOSPADOR.

Resource Members
 Number of Members Found: 3

Resource ID	Description	Delete
T1215MC	Ms. Cardona	<input type="checkbox"/>
T1266MM	Mr. Moore	<input type="checkbox"/>
T1288YM	Ms. Mitchell	<input type="checkbox"/>
		<input type="checkbox"/>

Save Search List New Allocation Detail

Room and Staff Allocations and Restrictions

The Build Master Schedule utility is designed to assign course-sections to appropriate periods, teachers and rooms to the best advantage of the students. However, there may be exceptional situations where rooms and teachers are not available. Building administrators may designate the maximum number of periods that can be assigned to a teacher in a single day, the maximum number of periods that may be assigned in a row (contiguous) before the teacher must have a prep period, and/or designate specific periods that a teacher may not teach a course-section (Allocation Detail.)

Note that designating room and staff allocations and restrictions may force the Build Master Schedule program to create a Master Schedule that is less effective for the students.

To update room information:

1. Select **Registration Center > Room Information**.
2. Click Search to search for existing rooms.
3. Click on the desired room.
4. Click the Allocations button and adjust the room allocations as necessary.
5. Click **Save** when finished.

SUNGARD® PUBLIC SECTOR

eSchoolPLUS Master Schedule Builder Procedures

To update staff information:

1. Select **Registration Center > Staff Information**.
2. Click Search to search for existing staff members.
3. Click on the desired staff member's building number.
4. Adjust the following fields as needed: *Maximum Contiguous, Maximum Per Day, Allow Override*.
5. Click the Allocations button and adjust the staff allocations as necessary.
6. Click **Save** when finished.

Sample Staff Information page:

Save	Search	List	District	New Staff	New Staff Building	Allocations
Staff ID:*	T0645BH					
Staff Name:	Brian Herda					
Building:*	6 - Building 6					
Display Name:*	<input type="text" value="Mr. Herda"/>					
General Information Class List						
Initials:	<input type="text" value="BH"/>					
Staff Flags:	<input checked="" type="checkbox"/> Teacher <input checked="" type="checkbox"/> Counselor					
Active:	<input checked="" type="checkbox"/>					
House/Team:	<input type="text" value="R"/>	<input type="button" value="↓"/>	Red Team			
Department:	<input type="text"/>	<input type="button" value="↓"/>				
Primary Homeroom:	<input type="text" value="107"/>	<input type="button" value="↓"/>	107			
Secondary Homeroom:	<input type="text"/>	<input type="button" value="↓"/>				
Default Course Room:	<input type="text" value="107"/>	<input type="button" value="↓"/>	107			
Phone Number:	<input type="text" value="(610)555-5555"/>	Ext.	<input type="text"/>			
Group Code:	<input type="text"/>	<input type="button" value="↓"/>				
Maximum Contiguous:*	<input type="text" value="4"/>					
Maximum Per Day:*	<input type="text" value="5"/>					
Allow Override:	<input type="checkbox"/>					
Staff Availability:	<input checked="" type="checkbox"/> Regular School Year					
	<input type="checkbox"/> Summer School					
Takes Lunch Counts:	<input type="checkbox"/>					

SUNGARD® PUBLIC SECTOR eSchoolPLUS Master Schedule Builder Procedures

Sample Staff Allocation Detail:

Resource Allocation
(Next Year) 2007/08

Building: 6 - Building 6 **Staff:** T0645BH - Mr. Herda

Marking Period: M1 Description: M1

Day	Period								
	0	1	2	3	4	5	6	7	AFT
M	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
T	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
W	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
R	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
F	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>

Copy to All Marking Periods

Marking Period: M2 Description: M2

Day	Period								
	0	1	2	3	4	5	6	7	AFT
M	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
T	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
W	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
R	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
F	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>

Marking Period: M3 Description: M3

Day	Period								
	0	1	2	3	4	5	6	7	AFT
M	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>

Course Setup Utility

The Course Setup utility will create course setup records for every active course in the Course Catalog. Building Administrators must then modify the records, as needed, with the Course Setup option.

To create course setup records:

1. Select **Scheduling Center > Master Schedule Builder > Course Setup Utility**.
2. Make sure the correct building has been entered.
3. Enter information at the prompts, described below.
4. Click **Run**.

The screenshot shows the eSchoolPLUS interface for the MSB Course Setup Utility. The top navigation bar includes 'eSchoolPLUS+', 'Favorites', 'Help', 'Print', and 'Home'. The main title bar reads 'MSB Course Setup Utility (Next Year) 2007/08'. On the left, a tree view shows the following structure:

- Student Center
- Registration Center
- Scheduling Center
 - Course Setup
 - Master Schedule Builder
 - Meeting Codes
 - Resource Groups
 - Course Setup Utility
 - Course Setup
 - Save/Restore
 - Error Scan
 - Build Master Schedule
 - Student Scheduler
 - Master Schedule
 - Setup
 - Reports
- Attendance Center

The main content area contains a 'Run' button at the top. Below it is a form with the following fields:

- Building:***: Text box containing '1', with a dropdown arrow and 'Building 1' to the right.
- Scheduling Interval:***: Text box containing 'Y', with a dropdown arrow.
- Submit as:**: Dropdown menu with 'Build' selected.
- Default Meeting Code:***: Text box containing '5DAY', with a dropdown arrow and 'Single Period MTWRF' to the right.
- Update Maximum Number Students:**
- Update Meeting Code:**
- Update Sections:**
- Delete Unneeded Sections:**

A second 'Run' button is located at the bottom of the form area.

Submit As:

Build - to create records for each active course. Sections are created based on the number of requests and the Default Max Seats value in the Scheduling Configuration. This option is only used when no Course Setup records exist.

Rebuild - to update the number of requests for old records, delete records for courses that are no longer active, and create records for new courses. The Rebuild option only changes data based on the prompts; it does not automatically remove existing information.

Erase - to remove all Course Setup records.

SUNGARD® PUBLIC SECTOR

eSchoolPLUS Master Schedule Builder Procedures

MSB Course Setup

Once the Course Setup Utility has been run, use the Course Setup page to specify the teacher, room, and meeting time requirements for course-sections. The Build Master Schedule option uses this information, along with student requests, to determine the best placement for the course.

To Access Course Setup information:

1. **Scheduling Center > Master Schedule Builder > Course Setup > click course link.**
2. Update header and detail information.
3. Click **Save** when finished.

Header and Detail Area of Course Setup Page:

Master Schedule Builder Course Setup
(Next Year) 2007/08

Building: 1 - Building 1
Course: 109 - English 1
Number of requests: 9
Average Class Size: 2.25
Block: N - This is not a block course
Course Length: S-This is for a specific number of semesters ▼
Duration Type: M-Marking Period ▼
Same Teacher:
Same Period:
All Sections Same:
Number of Sections:*

Teacher Qualification

Sections

Section	Meeting Code*	Staff Type	Staff Resource	Room Type	Room Resource	Maximum Seats*	Pattern
1	5DAY Single Period MTWRF	<input checked="" type="radio"/> Staff <input type="radio"/> Group	T0170RC Mr. Christopher	<input checked="" type="radio"/> Room <input type="radio"/> Group	204 204	25	1 2 <input checked="" type="checkbox"/> <input type="checkbox"/>
2	5DAY Single Period MTWRF	<input checked="" type="radio"/> Staff <input type="radio"/> Group	T0170RC Mr. Christopher	<input checked="" type="radio"/> Room <input type="radio"/> Group	204 204	25	1 2 <input type="checkbox"/> <input checked="" type="checkbox"/>
3	5DAY Single Period MTWRF	<input checked="" type="radio"/> Staff <input type="radio"/> Group	T0155ED Ms. Dawes	<input checked="" type="radio"/> Room <input type="radio"/> Group	300 300	25	1 2 <input checked="" type="checkbox"/> <input type="checkbox"/>
4	5DAY Single Period MTWRF	<input checked="" type="radio"/> Staff <input type="radio"/> Group	T0155ED Ms. Dawes	<input checked="" type="radio"/> Room <input type="radio"/> Group	300 300	25	1 2 <input type="checkbox"/> <input checked="" type="checkbox"/>

SUNGARD® PUBLIC SECTOR

eSchoolPLUS Master Schedule Builder Procedures

Block Information and Course Combinations for Course Setup Page:

Block Information				
Blockette Course	Course Name	Section Same	Mandatory	Delete
9610	Physical Education 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9611	Health 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: Blocks and Blockettes are set up in the Course Catalog.

Sections							
Section	Meeting Code*	Staff Type	Staff Resource	Room Type	Room Resource	Maximum Seats*	Pattern
ALL	<input type="text" value="5DAY"/> <input type="button" value="↓"/> Single Period MTWRF	<input checked="" type="radio"/> Staff <input type="radio"/> Group	<input type="text" value="T0181KT"/> <input type="button" value="↓"/> Ms. Tang	<input checked="" type="radio"/> Room <input type="radio"/> Group	<input type="text" value="101"/> <input type="button" value="↓"/> 101	<input type="text" value="25"/>	N/A

Block Information				
Blockette Course	Course Name	Section Same	Mandatory	Delete
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Combinations		
Combination Course	Course Name	Delete
<input type="text" value="220"/> <input type="button" value="↓"/>	AP History	<input type="checkbox"/>
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Combination Course: Courses entered here must be taught at the same time, period, and teacher as this course.

MSB Error Scan

Use this option to create a report that verifies course setup and student request information. Run the report before you run the Build Master Schedule option so you can make any necessary corrections before creating the Master Schedule. The Error Scan is also useful to identify changes that must be made by hand after the Master Schedule has been created.

To run the Error Scan:

1. Select **Scheduling Center > Master Schedule Builder > Error Scan** to display the Master Scheduler Builder Error Scan page.
2. Indicate how you want to run the error scan by completing the fields on the page.
3. Click **Run**.
4. When the report is done, click on the link for the log on My Home page. Print the report from the Adobe Viewer.

SUNGARD® PUBLIC SECTOR

eSchoolPLUS Master Schedule Builder Procedures

Build Master Schedule

Use this option to create the master schedule sections, based on your course setup records, conflict matrix, and meeting codes.

To run the builder:

1. Select **Scheduling Center > Master Schedule Builder > Build Master Schedule** to display the Master Scheduler Builder page.
2. Indicate how you want to run the build by completing the fields on the page.
3. Click **Run**.
4. When the process is done, click on the links for the logs on My Home page.
 - msb errors – Lists any errors encountered by the program.
 - msb report – Lists the time elapsed, in seconds.
 - msb warning log – Lists courses that could not be scheduled by the program.

Sample msb warning log file:

```
Cycle 'E' from schd_timetable does not exist in reg_cycle.
No sections defined in schd_crs_msb_det for course 600.
```

```
Blockette 9610-1 does not exist for block course 9650
Blockette 9611-1 does not exist for block course 9650
Block section 9650-1 has no valid blockettes.
Block section 9650-2 has no valid blockettes.
```

```
*** Unscheduled Sections ***
Was not able to schedule section 220-1.
*** End Unscheduled Sections ***
```

```
*** Unscheduled Blocks ***

*** End Unscheduled Blocks ***
```

```
*** Unscheduled Blockettes ***

*** End Unscheduled Blockettes ***
```

Master Schedule Reports

Run the following lists and reports to analyze the results of the Master Schedule build:

On the Scheduling Center > Master Schedule menu:

Master Schedule Listing

On the Scheduling Center > Reports > Pre-Scheduler menu:

Room Availability

Room Utilization

Teacher Availability

Teacher Utilization

Seat Availability

Save/Restore Master Schedule Builder Run

1. Select **Scheduling Center > Master Schedule Builder > Build Master Schedule**.
2. Click the **Save/Restore** button.
3. In the **Action** drop-down box, select Save Existing Data or Restore Saved Data.
4. In the Scheduling Run Label box, enter a descriptive name that will distinguish this saved run from other saved runs. Do not type the date and time, as that information will be saved automatically.
5. Click **Run**.
6. Check the log file **Save Scheduling Run**. This log file displays the tables that are backed up and the number of records saved for each table.