High School
Scheduling Worksheet
eSIS v 11.1
Version 1

Updated on:
May 14, 2009

STARS
Student Tracking and Reporting System

High School Scheduling Worksheet

High School Scheduling Worksheet				
	Completed ✓	**Action and/or decision you need to make before proceeding**	**Path to screen**	**Notes**
PART 1 PREPARATION				
Step 1		**Verify that the appropriate Pre-Scheduling Steps have been completed.**	References: Pre-Scheduling Guide	
Step 2		**Analyze Course Selections for next year** **Suggested Reports:**	Look for obvious cancellations, combinations, growth areas, areas to be watched, etc.	
2a		• **Course Request Tally**	***(Reports > Group 17)*** Shows current year actual students as well as requests for next year. Look for low enrollments, trends, etc. *(sort by course code)*	
2b		• **4 or Less Course Selections**	***(Reports > Group 17)*** Identify students with less than the indicated number of course selections entered. (Remember you can change the number of Course Selections you are looking for.)	
2c		• **Pre-Requisite/Co-Requisite Combinations**	After copying over courses to next year during the pre-scheduling process, run this report to verify how the pre-requisites and co-requisites are set up for your school.	
Step 3		**Make changes to course selections as necessary based on analysis in step 2.**	The goal is to begin working with the Master Timetable Builder with as complete student and course information as possible**.**	

Step 4		**Run Final Course Request Tally**	***(Reports > Group 17)*** Make note of any special considerations needed in the builder. For example, if your school traditionally gets an influx of students at school opening, you might want to create extra sections of certain courses.	
Step 5		**Determine your scheduling strategies do you have them written out?** **Remember:** **More Constraints =** **More Conflicts**	There are normally two ways to approach building the Master Timetable: 1 Timetable all courses at once (no restrictions) and then examine and resolve conflicts. 2 Timetable cumulatively based on some considerations: a. sections with definite restrictions (e.g., can only be taught by this person at this time) b. number of sections (e.g., singletons, etc) c. level of difficulty (e.g., AP or honors before standard) d. other restrictions based on a particular school need.	
PART 2 MASTER TIMETABLE BUILDER School > Master Timetable Builder				
Step 6		**Delete old Timetable Builder versions**	***School > Timetable > File > Delete*** > place a check in the box next to the old version > Delete Checked > ok	
Step 7		**Initiate a Timetable Builder Session**	***School > Master Timetable Builder > New>*** Path Note**:** As you create more sessions, <u>delete any old sessions that are no longer needed</u>. An accumulation of sessions may affect system performance.	
7a		**Enter a version, title, and description**	Use enough detail that you will be able to identify the differences in sessions.	
7b		**Optional: Set Courses Unavailable for these periods to designate periods that meet outside the normal day time.**	Appropriate for use for before or after school periods where only certain courses run. Remove the constraint in individual courses which may run in these periods using Update Course Availability.	

7c		**Optional: Do Not Start Courses in These Periods-set to identify periods that should not be designated as the starting periods.**	Example: A modified 4X4 schedule. Most courses should begin in periods 1,3,5,7 and run through 2 periods. However, some courses run through only one period (AP). Those courses are individually set in Update Course Availability.	
Step 8		**For Spring 2009 you will have a current year timetable you may copy. Choose from steps 8a, 8c, and 8d.**		
8a		**Copy Teachers and Rooms (from current year)**	Does not match up by section. Allows for all teacher and rooms currently found attached to a course as a choice. May add or delete other teachers or rooms in Section Details.	
8b		**Copy a Saved Session**	Allows you to try a new strategy or build on a previous strategy without changing the original version.	
8c		**Use Current School Year Timetable Model** Copies current year's Course Section Maintenance into the Builder.	Allocate Sections and Course Section Detail forms display the actual number of students requesting the course for next year, however, the copy function does not adjust the number of necessary sections based on Next Year's requests. Run the Courses with Not Enough Sections to identify where extra sections are needed and add sections in Section Detail.	
8d		**Copy either Scheduled or Unscheduled**	Determines whether sections should be copied in as Scheduled or Unscheduled. Scheduled sections will be copied in with last year's STDP. If Unscheduled is selected, sections will be brought in with no STDP	
8e		**Create Conflict Matrix**	Must be created on first run. It is useful to create on every run, as well.	
8f		**Create**	Builds all the tables required by MTB. Section Summary is populated on Scheduler Main Window.	

PART 3 WORKING WITH A NEW MTB SESSION				
Step 9		**Select the session you wish to work with.**		
Step 10		**Update Builder Constraints if needed.**	Changes to the Builder Constraints made here only affect this session. Builder constraints on number of classes a teacher may teach in a row, etc. default from school details. You may wish to try various constraints in different builder runs.	
Step 11		**Place all known constraints on teachers, rooms and courses.**	Note: Place only real constraints (i.e. those that 'must be', and not just preferences). **Remember: More Constraints = More Conflicts.**	
11a		**Teachers** Record any times that a teacher is unavailable to be scheduled. Be sure to include all S, T, D, P's	Teacher Constraints that should only apply to this session should be made in the Builder ***(MTBstart >More Info> Update Teacher Timetable or Teachers)***. Constraints that should apply to all sessions should be made in Staff Maintenance Detail. ***MTBstart > Teachers > Details > Timetabling***	
11b		**Rooms** Record any times that a room is unavailable to be scheduled. Be sure to include all S, T, D, P's	Room Constraints are added to rooms in the Builder ***(MTBstart > More Info > Update Room Use or Rooms).*** As the scheduling process continues, this form is populated with courses and teachers scheduled into each room.	
11c		**Courses** Record any times that a course cannot be offered. Be sure to include all S, T, D, and P's.	Course Constraints added in the Builder ***(MTBstart > More Info> Update Course Availability).*** Time slots may be marked as Unavailable or Do Not Start In. Courses previously marked as Unavailable because of choices made in the initial build may be modified here.	

11d		**Combining Courses** Flag courses which should be combined (same teacher, room, & time due to low enrollment)	Combine Courses in Builder ***MTBstart >More Info > Update Combined Courses Select Parent Course > Timetable With > Select Child Courses*** Notes: 1. Maintains separate class lists. 2. First course in combination is Parent course (usually the course with the highest number of requests.) Associated courses are Child Courses. 3. There must be sections associated with each course to combine them. 4. Only sections that are not scheduled may be combined. 5. Cannot combine sections of the Same Course. 6. Child sections cannot be scheduled. They are scheduled when the Parent course is scheduled. 7. Maximum class size of the Parent sections is used to determine the maximum class size for the entire class.	
PART 4 WORKING WITH SECTIONS				
Step 12		**Course Section Allocations**	***MTBstart > Allocate Sections >*** Select All courses to view the calculated number of sections automatically set by the system. The C in the column to the right of the number of sections indicates a calculated number of sections. As sections are added or deleted, the C disappears.	
Step 13		**Adding a Course Section**	Select the course to be adjusted and click Section Details. Select the last section shown and click Add Section and Save.	
Step 14		**Deleting a Course Section**	Select the course to be adjusted and click Section Details. Select the section to be deleted and click Delete Section and Save. Note – Scheduled sections must be unscheduled before they can be deleted.	

Step 15		**Enter Specific Course Section Details**	Enter required constraints for specific course sections. Example: A specific teacher must teach a specific section of a class, or a specific room must be scheduled for a specific class, or a section must be scheduled into a specific semester, term, day, and period.	
15a		**Enter a Specific Teacher**	Highlight the desired section. Select the desired teacher from the Teachers pull-down list in the lower portion of the screen. (If teacher has an assigned room, it will display) Save.	
15b		**Enter a Specific Room**	Highlight the desired sections. Select the desired room from the Rooms Pull down in the lower portion of the screen. Save.	
15c		**More than one teacher who can teach a course.**	Highlight the desired section or the first section if either teacher could teach any of the sections. In the lower portion of the screen, add all the teachers who could teach this course. Copy those possibilities to all appropriate sections.	
15d		**Enter Specific S,T,D or P's**	Highlight the desired section. In the lower portion of the screen, enter the specific S, T, D or P. For multiple periods use the more button to enter the additional S, T, D or P.	
PART 5 SCHEDULING COURSES				

Step 16		**Scheduling Individual Sections with Constraints**	***(Course Section Allocations > Section Detail)*** Once all constraints for a course or section have been entered, place an X in the first column on each section to be scheduled. Click on the Schedule Button.	
Step 17		**Scheduling Remaining Courses and or Sections**	Typically, you do not schedule all classes for a school all at once. Look back at the strategies mentioned on page one.	
17a		**Scheduling All Sections of a Course**	On the Allocate Sections Screen, place an X in the first column next to the course number for all courses where all sections should be scheduled. Save.	
17b		**Scheduling Only Certain Sections of a Course**	From the Allocate Sections Screen, select the course, and Click on Section Detail. Place an X in the first column next to each section that should be scheduled. Save.	
Step18		**Schedule Courses / Sections**	Once all courses to be Scheduled have been flagged with an X, click the Schedule button.	
18a		**Review Messages from Scheduler**	Review messages which may be printed.	
18b		**Schedule Remaining**	***MTB start > More Info>Schedule Remaining***. All courses not marked with an S will be scheduled. The MTB uses the Conflict Matrix to determine the best placement for a class. If teachers and rooms have been assigned to sections, those constraints are processed also.	

Step 19		**Unscheduling a Scheduled Section**	Sections must be unscheduled before you can make changes to STDP assignments.	
19a		**Unscheduling all Sections of a Course**	On the Allocate Sections Screen, place a U in the left column beside the Course to be Unscheduled. Click on the Unschedule button.	
19b		**Unscheduling Specific Sections of a Course**	In Section Detail for the Selected Course, place a U in the left column beside the course section to the Unscheduled.	
Step 20		**Refreshing Information**	You may need to refresh information as a result of more course options being added, or courses being added after the creation of the MTB	
21a		**Click Refresh on the Main Scheduler Window**	Refresh may be run as many times as needed. Note: Refresh does not adjust the number of sections. (Run the Courses Without Enough Sections or the Course Request Tally reports to verify number of sections.)	
Step 22		**Review Schedule**	Review the scheduled courses and sections using available reports Section of the Builder.	
PART 6 GENERATING NEXT YEARS COURSE SECTION MAINTENANCE				
Step 23		**Copy Scheduled Course Sections from MTB to Next Year's Course Section Maintenance.**	From the ***MTB Main menu, select File > Create Course Section Maintenance.*** Make sure you are using the desired version of the MTB. Continue and Create.	
Important Note: After copying Course Sections from the MTB to Course Section Maintenance Next Year, you should decide where changes to course sections will be made. If changes are made in Course Section Maintenance and then the Master Timetable is copied again, those changes will be lost. It is recommended that changes be made in the MTB and then re-copied to Next Year Course Section Maintenance by repeating Step 23.				
PART 7 SIMULATION				
		Simulate students into Course	Select ***Simulation*** from the MTB main window, or ***School > Mass***	

Step 24		**Sections**	***Simulation.***	
24a	**SIMULATION LOGIC**			
	Simulation Logic assigns students to course sections in the follow manner: ▪ Every student is evaluated to determine their place in the Simulation process. ▪ Students are sorted based on a weight calculated using number of number of singles, doubles, triples, etc. 1. The application then determines which of the options are selected on the Simulation form: 2. Required first - Schedules courses with a diploma category first 3. Screen order - Schedules in order that options were entered on screen. 4. Use alternates – Schedules alternates if other courses cannot be scheduled. Note: Should not be used until late in the simulation process to ensure that conflicts are recognized. ▪ If neither 1, 2, or 3 or selected, then: A. Courses that are identified as "Before Singles" are ordered with the lowest number of sections, then by the lowest percentage of open seats. B. Singles, based on lowest percentage of open seats. C. Courses identified as "Before Double" with same logic as "Before Singles". D. Doubles E. Courses flagged as "After Doubles" F. All others in ascending order, triples, quads etc.			
Step 25	**SIMULATION SET UP**			
25a		**School Year**	Make sure School Year is set to ***next year***.	
25b		**Only Grades**	Default is blank to simulate all grades at once. This runs in student order based on weight calculated for student.	
25c		**Capping Required**	Yes, enforces maximum seat counts. No allows courses to overfill. Generally, click No on first runs.	
25d		**Simulate Only Incomplete**	Click ***"Yes"*** in order to simulate only unscheduled students or "No" in	

			order to simulate all students. Only students who do not have full schedules will be touched in this simulation run.	
25e		**Exclude Alternates**	Check if you wish to exclude alternates. Generally, exclude alternates until near a final run so that you can clearly see conflicts for requested courses.	
25f		**Remove Blocking**	Click ***"Yes"*** to remove any scheduled sections for a student. This does not include those section numbers manually placed on a student's schedule. Remove Blocking places all students back into the simulation pool (unless section numbers have been manually places via the Student Course Selections Next Year or Class Transfer screens.)	
25g		**Required First**	If selected, courses with a diploma category get scheduled before electives. The intent is to get students into their required courses before possibly filling their schedule with electives.	
25h		**Screen Order**	Do not Use.	
25i		**Use Alternates**	Schedule alternates if another course cannot be scheduled. Again, only use this near the end of your simulation runs.	
25j		**Overload Percent Allowed**	When using capping, allows courses to be overloaded by the specified percentage.	
25k		**Place Sections Randomly**	Use random assignment of sections instead of Least-Seats-Used logic.	

25l		**Keep Details**	Recommend "On Unsuccessful" in order to see details on only students with conflicts. Keeping all details will slow down the simulation process. Only the person executing the simulation can view or print these reports.	
	Warning: **Make sure that no one else accesses the Course Section Maintenance or Student Course Selections during the Simulation Run as any changes made while Simulation is running may cause conflicts and application errors.**			
25m		**Start Simulation**	The user may view simulation progress on the screen showing number of students and percentages: Successful-Primary (student fully scheduled in core courses), Successful with Alternates (student fully scheduled but some are alternates), Partially Successful (fully scheduled but one or more classes may be overloaded) and Unsuccessful (at least one class not scheduled).	
25n		**View Exception Report**	Click Print Exception Report to view or print the report for details of students who were not fully scheduled.	
Step 26		**Review Simulation** Suggested Reports: ▪ Enrollment Summary by Section ▪ Low Class Enrollment Report ▪ Students Missing Sections ▪ Course Not Scheduled Yet	Run reports from the School Reports Menu Enrollment Reporting folder to help in analyzing simulation results. ***Reports > Enrollment Reporting >*** ▪ Enrollment Summary by Section ▪ Low Class Enrollment Report ▪ Students Missing Sections ▪ Courses Not Scheduled Yet	
26a		**"Tweaking"**	Return to the MTB to make changes to course sections as needed. Copy the Master Timetable into Course Section Maintenance (Step19) and run the Simulation Process again. This can be done as many times as	

			necessary. It is recommended that before YET, changes are made in the MTB and copied to Course Section Maintenance.	
Step 27		**Live Schedules –once satisfied with the results of simulation student schedules are ready for printing and distribution**	***Reports > General School Reporting (folder 10) > Specify Extract Criteria >Select the Next Year radio button > Student Timetable (BV)***	