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# Student Scheduling 

By Nathan T. Hardee, William A. Owings, Ed.D. and Wayne Wright

Developing the master schedule and subsequent student schedules is one of the most important administrative tasks of the principal. Ensuring that appropriate courses are offered and that teachers are teaching courses they want to teach can go a long way toward creating a positive climate and an atmosphere where learning occurs. There are three ways in which student schedules can be developed: computer, arena, and manual. Each approach has its own strengths and weaknesses. Principals must decide which approach is best for the school based on philosophy and available resources.

## Common Elements

There are some common steps which must be followed regardless of the scheduling plan:

- Determine enrollment projections for following year.
- Determine staff size using enrollment projections.
- Allow students to preregister for courses.
- Tally number of student requests for each course offered.
- Determine which courses can be offered and which cannot.
- Review a conflict matrix. If scheduling by hand, the matrix can be developed by listing all courses offered in columns and rows on a blackboard or paper; each student's schedule can be reviewed and tallies recorded for each combination of courses offered.
- Establish class load maximums.
- Determine the number of sections per course based on maximum class loads and student requests.
- Compare the number of sections required with current available staff to determine if staff changes or adjustments need to be made.
- Pair semester electives if scheduling semester courses.
- Determine sections and periods to be taught by itinerant or part-time staff and place these courses on the schedule during the time when personnel are available.

[^0]- Generate teacher input concerning teaching preferences.
- Determine teacher assignments based on courses offered and number of sections for each course.
- Make certain there are enough seats available each period to accommodate all students in each grade level.


## Components of Software Package

After the generic requirements have been completed, scheduling can be accomplished through the use of one of the numerous computer software programs available today. These program need to be evaluated by the building principal, but no matter which program is selected, it should have the following capacities:

- providing a total software package which allows discipline records to be developed, individual student schedules to be pulled up, and word processing to be done
- allowing a schedule for the next semester or the next year to be developed without affecting the current semester or year schedule
- generating a conflict matrix
- printing schedules of students who have a conflict
- printing student schedules in an acceptable format
- printing a room utilization chart
- utilizing a maximizing feature
- printing a hard copy of the master schedule
- printing class rolls.


## Scheduling by Computer

With a good software program, the master schedule can be developed quickly. With almost any program, the following steps should be accomplished once all the common elements have been completed.

- Review the conflict matrix and place classes during periods which create the least conflicts.
- Set parameters (identify multi-period classes, maximum class sizes, room numbers, teaching assignments) and enter data into computer.
- Run the program to determine the percentage of students that can be successfully scheduled.
- Run the schedules of students who cannot be successfully scheduled.
- Review the conflicts and look for patterns.


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- Look for course selection problems such as too many classes or an incorrect course number.
- Make adjustments in the master schedule and enter changes.
- Make adjustments in student course selections if incorrect numbers have been used or if too many courses were coded in.
- Run the program again to determine percentage of students that can be successfully scheduled.
- Continue running copies of schedules of students who cannot be successfully scheduled and making adjustments in the master schedule.
- Once $90.95 \%$ of the students can be scheduled success. fully, run the maximizing feature of the program which should increase the percentage of successfully scheduled students.
- Run the schedules of students who cannot be successfully scheduled and provide to guidance.
- Have counselors and/or administrators contact students to make schedule adjustments.
- Enter changes to student requests into computer.
- Run copies of all student schedules.


## Arena Scheduling

With arena scheduling the master schedule and student schedules are completed before school ends. Students have an opportunity to select their teachers within certain parameters. For arena scheduling to occur, the common elements noted above should be met and a master schedule prepared.

Suggestions for arena scheduling are noted below:

- Name cards and course cards which will be exchanged during the arena scheduling should be developed.
- Copies of the master schedule should be given to students.
- Counselors and/or administrators should go to classrooms to assist students in preparing a trial schedule.
- Course cards should be sorted.
- Boxes should be created for each course, and department heads should prepare a set of dividers which indicate course name, period, and maximum class size.
- Arrangements should be made for students at the feeder schools to get to the arena.
- The arena should be large enough so that stations can be established around the perimeter. (The gym is probably best.)
- A conflict station, manned by a counselor, should be established in the middle of the arena.
- Stop cards may be placed for certain sections to ensure that all seats in a particular section are not taken by the first group of students to enter the arena; this, in effect, closes a section until the next group enters.
- A system should be developed to notify students of closed sections.
- An alphabetical drawing should be held to determine the order of entrance into the arena; however, students who have special programs (single sections, half-day magnet school programs, etc.) should be identified and allowed to register first.
- Students should be given a packet of name cards (number dependent upon number of periods) and a blank schedule form as they enter the arena.
- Students should turn in one of their name cards at the stations and receive a course card in return.
- Students should write their schedule on to a blank schedule form.
- Students should turn in their completed schedule and course cards at a check-out station located at the exit.
- Counselors/administrators should alphabetize the schedul. ing sheets by grade level.
- Counselors/administrators should make a final check of class sizes and make adjustments as necessary to ensure that all classes contain relatively the same number of students in each section.


## Manual Scheduling

Manual scheduling is the least cost-effective approach and requires much time and patience. Although schedules will be done by hand, the common elements noted earlier must be completed. Once the common elements are addressed, the following procedures can be followed:

- preparation of a class sheet for each section offered on the master schedule
- placement of student names on these sheets while simultaneously recording the time and location of the class on the student's schedule


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- changing listings on class sheets and student schedules as students are rescheduled to adjust class sizes.


## Summary

Regardless of the method of scheduling, there are common elements which need to be considered. Scheduling by computer, arena, or hand each have some unique situations which need to be addressed. By addressing both the common and unique elements, the principal should be able to develop an effective master schedule regardless of the approach.

## RESOURCE

Dempsey, R. \& Traverso, H. (1983). Scheduling the secondary school. NASSP.


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