Create the Master Schedule

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The Master Schedule Generator does the following.

- Courses are scheduled into the default periods from Maintenance > Master Schedule Generator > Resource Allocator > Meeting Time Parameters. If the periods are not the same as in the campus options, a warning message is displayed.

- Instructors, rooms, and free times resource tables are built.

- Information about the course such as section conflicts (total conflicts per course), fixed room and fixed instructor indicators, total requests for the course (number of requests/number of course sections), and number of periods available are calculated.
    - If a course is assigned to a specific period, the number of periods available is 1.
    - If a period is not specified, the number of periods available equals number of periods in the day.
    - If a period condition for a period range is specified, the number of periods available equals the number of periods in the condition divided by number of periods for the course.
    - If a course has a period condition of N and a value in the period, the number of periods available is the number of periods specified in the period pattern (i.e., periods not to schedule into) subtracted from the number of periods in the day.

- The adjusted number of conflicts is also calculated, which is the total conflicts for course divided by the number of sections for course. The number is rounded.

- When assigning periods, rooms, and instructors, any sections for courses that have been created but are not in the Resource Allocator are considered. It is recommended that you create all sections of the same course in either the campus master schedule or on Maintenance > Master Schedule Generator > Resource Allocator > Section Info for accuracy. Do not create some sections of a course in the campus master schedule and different sections of the same course in the Resource Allocator.

- The courses are sorted in the following order:
    - Fixed periods descending
    - User priority ascending
    - Singletons descending
    - Requests per section descending
    - Available periods ascending
    - Total course sections descending
    - Semesters for course descending
    - Fixed semesters descending
    - Fixed resources descending
    - Partial week descending
    - Proxy courses descending
    - Semester pattern ascending
    - Conflicts per course-section descending
    - Instructors and rooms available ascending
    - Course number ascending
    - From section ascending

- Fixed-period courses are scheduled first, and then all other courses are scheduled.
  - The Master Schedule Generator attempts to place each section in the period and semester with the least conflicts. It attempts to balance periods and semesters. If two or more periods have the same number of fewest conflicts for a one-semester course, the course is placed in the semester with the least courses already scheduled.
  - The Master Schedule Generator searches for qualifying instructors sorted in ascending order of total classes scheduled.
  - If **Assign Teachers** and **Generate if Unable to Assign Tchr** are selected on the Options tab, and there are no instructors available for the course, the section is still created, and a message is listed on the error report.
  - If **Assign Teachers** is selected but not **Generate if Unable to Assign Tchr**, and there are no instructors available for the course, the sections are not generated. A message is listed on the error report.

- Rooms are assigned in the same way as fixed-period courses.

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