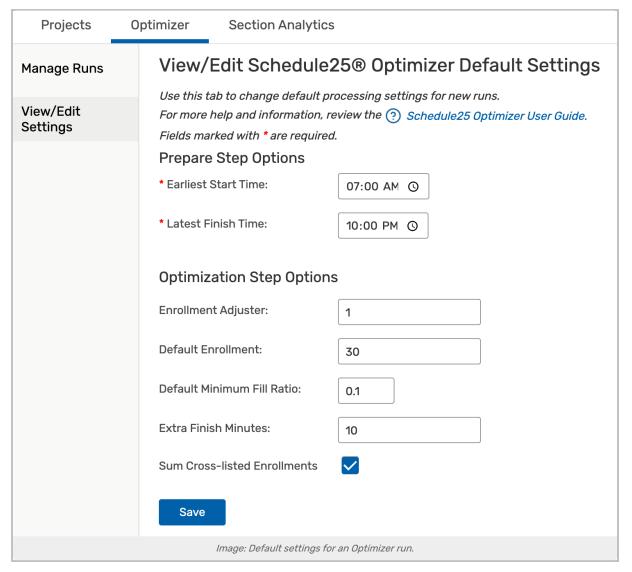# Schedule25 Optimizer Settings

Each Optimizer run includes several settings which control its behavior, including:

- What events and locations to include in the run
- How to calculate section headcounts and classroom capacities
- Whether to account for pre-assignments and other conflicts such as blackout dates
- Other small adjustments to smooth out the data

Read on for a full account of these settings and how they are used.

Where to Edit Settings

When a new run is created, it automatically starts out with some default settings. You can edit these defaults in the **View/Edit Settings** area of the Optimizer tab.

Image: Default settings for an Optimizer run.

When creating a new run or editing its details, you'll have the option to change all of its settings in the window that appears.

Setting Descriptions

Some settings are relevant to the Prepare step of Schedule25, while others are important to the Optimize step. The settings are listed below.

Settings that reset to a default value for each new run are marked with an asterisk.

Prepare Step

These options affect the snapshot of data that the Optimizer captures from 25Live in preparation for its calculations. You must run the Prepare step again after changing any of these on a run.

- **Location/Event Search:** The searches you select determine the events (course sections) that will be placed by the Optimizer and the possible locations where they can be placed.
- **Preassignments:** If any sections in the event search have already been assigned a location, this setting

determines whether those pre-assignments will be honored. If you select "Mark as preferred," the Optimizer will convert the assignments to first choice location preferences and place them in their currently assigned locations, if possible.

> ✓ **Best Practice: Don't Include Pre-assigned Sections in Your Event Search**
>
> For best Schedule25 processing results, craft your event search so that sections that already have a location assignment are not returned by the search. This will improve processing speed by allowing Schedule25 to ignore all the sections that it wasn't going to affect anyway.
>
> _Schedule25 still honors pre-assignments regardless of your selection._ If you select "Mark as preferred" or "Ignore pre-assignments", then the Optimizer will be able to make placements into rooms that currently have another event assigned to them. Accepting these results will generate a conflict warning because 25Live will not accept a double booking.
>
> These settings are more appropriate for hypothetical "what if" runs than for actual scheduling purposes. For best results, it's always recommended to ensure that the Optimizer is placing classes in empty locations without a conflict.

- **Use HeadCount:** This setting determines whether Schedule25 will use expected or registered headcount data when considering location capacity. For cross-listed or combined sections, be sure that the "sum cross-listed enrollments" setting is correct in your default processing settings.

- **Use Capacity:** This option lets you choose whether to make placements based on a location's maximum capacity or the capacity of its default layout.

- **Start/End Date/Time*:** Schedule25 takes a snapshot of 25Live data according to these settings, which should totally encompass the dates and times of the sections in the term you're processing. It is safe to "overshoot" and have a few days or hours of pad time.

- **Ignore Blackouts and Closed Hours:** If selected, Schedule25 will not account for blackouts and open/close times when creating its snapshot. This means that it will make placements during times when these conflicts would otherwise make the location unavailable. The user running the Optimizer must have sufficient override permission to make these assignments.

Optimization Step

These settings affect the calculations performed on the data prepared during the previous step. Most of them appear in the default settings area, meaning you can easily re-use them from run to run.

- **Enrollment Adjuster*:** This is the factor by which a section's headcount will be temporarily adjusted for purposes of the run. (No actual event data is changed.) A value of 1.0 represents 100% or no adjustment. For example, if you enter 1.10, Schedule25 will treat the sections included in the run as if the headcount of each were 10% larger than it actually is and place each accordingly. If you enter 0.90, Schedule25 will treat the sections as if the headcount were 10% smaller, and so on.

- **Default Enrollment*:** When you prepare a run, you specify whether you want to use the Expected or Registered Headcount value of each section. If a section doesn't have a value for that field, or the value is zero, the Default Enrollment will be substituted for purposes of the run. If you don't want to enter a default enrollment value, set this to "1".

- **Minimum Fill Ratio*:** This value indicates the minimum fill ratio required for the Optimizer to place a section in a location. For example, if you set the value to 0.4 (40%), a class would have to have a minimum headcount of 40

before the Optimizer would place it in a location with a capacity of 100. If a location has its own fill ratio, that number overrides the default specified here.

- **Extra Finish Minutes*:** This is the number of minutes you want the Optimizer to "virtually" add to the finish time of each section when making placements. You can use this automatic "pad" time to provide enough time between sections placed in the same location. If your institution already takes pad times into account when creating meeting patterns in your SIS, enter 0 (zero).

- **Sum Cross-Listed Enrollments*:** There are two ways to represent the enrollment of cross-listed or combined sections – by having independent enrollments for each class or by having the enrollment of each class be equal to the total enrollment of all classes.

    - Example: ANTH 211 and LING 211 are cross-listed classes (they are occurring at the same time and must be assigned the same location) and each has an expected headcount of 20 students. If this means 40 students total will be attending the class, you should have Schedule25 sum the cross-listed enrollments. On the other hand, if this means only 20 students total will be attending the class, you should not.

- **Optimize Results For:** This allows you to indicate whether you want the Optimizer algorithm to optimize for utilization (the default), better overall placement with lower utilization, or best overall placement with lower utilization and lower preferred partition placement.