

Ad Astra User Guide – Align (Jan. 2021 Update)

Purpose of this document: To provide a guide to use the Align app in Ad Astra to plan an upcoming class schedule. Align presents an analysis of the class schedule for a given term, using historical enrollments and student academic history and degree roadmaps, to provide a forecast of the number of sections and seats needed for a given course.

Technical Note: Chrome is the preferred browser. Not all features are available in Firefox or Safari.

Timeline of Ad Astra Analyses and Building the Schedule

Planning for....	Historical analysis available*	Predict analysis available	Dept access to build schedule	Class Schedule Live	First round of Registration
Fall	January	2 weeks later	Jan - Mar	April	late April, early May
Spring	March	2 weeks later	Apr - Oct	November	late Nov, early Dec

*available once Academic Resources rolls the schedule forward

Introduction. Ad Astra’s platform is organized around several different applications.

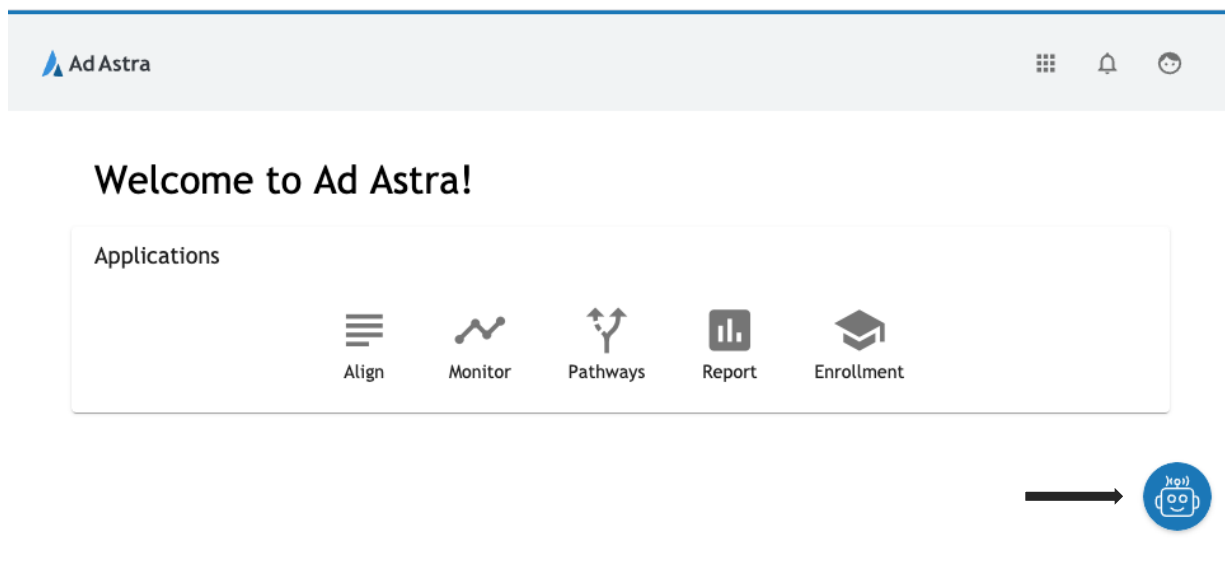
Align - provides a forecast of expected demand in classes based on historical enrollment trends and current student progress towards degree.

Monitor – information about enrollments in courses during the registration period highlighting high and low enrollment trends. Monitor reports enrollment once in a 24 hour period. **The Monitor User Guide can be found on the Ad Astra page through the DUEAP site (ueap.sfsu.edu/adastra)**

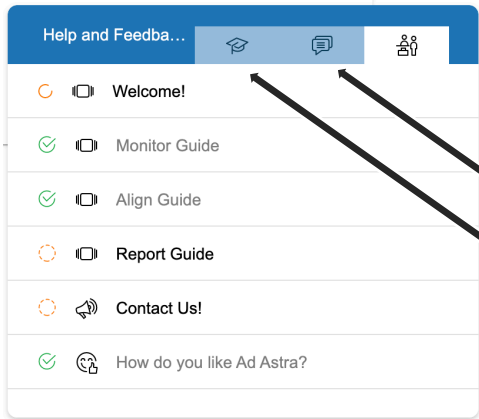
Report – a variety of reports are available through the report site.

Pathways – displays degree roadmaps for undergraduate baccalaureate degrees. When Degree Planner is fully rolled out in CS, this app will import pathway information from that platform.

Enrollment – displays enrollment information for the university or individual undergraduate BA/BS/BM programs.



The blue robot icon is a help center. Within this center, there is a tab with welcome guides, a tab with information about the applications and a tab in which you can submit comments, problems or requests for features to the Ad Astra development team.



Submit comments, request features, notify about issues

Select this tab for access to the support center which provides detailed information about various aspects of the application and platform.



Using **Align**

Align imports the schedule from CS **once per day** and provides an analysis of seats needed for each course in the schedule based on **historical enrollment trends**. As changes are made to the schedule during the schedule build, the information in Align will update. **Predict** is another analysis algorithm that operates within Align to provide a complementary analysis of demand for a course based on degree requirements and where a student is on their path to the degree. Once data is imported for Predict, the analysis updates every three days reflecting any changes in students' schedules that impact demand for a course in the term being planned.

Please see **Appendix 1** for definitions of the terms used for Align.

1. **Login.** Go to: <https://app.adastra.live/login>

First time logging in: To log in, click the link above and select "Forgot Password". Enter your email address and hit "reset code." You will receive an email from no-reply@verificationemail.com - **make sure to check your junk folder**. You will receive a temporary reset code that will allow you to reset your password. Ensure you are ready to reset your password at this time as the temporary reset code won't last long.

Once you are logged in successfully with your new password, you will be able to navigate to Monitor or Align. Please remember the blue robot icon in the corner is there to help guide your navigation.

2. **Select Align on the main screen.**

3. **Select term and Quick Filter** Type in the term and year of interest in the *Term* window. Click on the term in the menu that pops up. *A number of future terms are listed in the term menu. It is easier to simply start typing Fall, Spring, or Summer and the full year than to scroll through future terms.*

Permanent filters for searches can be created and saved using the filter feature. A filter for your department/school or college has been shared with you. Click on the Quick Filter drop down menu to select that filter. To remove the filter, click on the X by the filter name (this does not delete the filter).

The screenshot shows the Ad Astra interface. At the top, there are filters for 'Fall 2021' and 'Campus...'. Below the filters, there is a 'Sort' dropdown and a search bar. The main content is a table with the following columns: COURSE, OFFERED, NEEDED, PLANNED, and STATUS. The table lists two courses: 'A U 301 - BAY AREA ENVIRONMENTS' and 'AA S 101 - FIRST-YEAR EXPERIENCE'. The 'A U 301' row shows 1 section (1 seat) offered and 5 sections (5 seats) needed. The 'AA S 101' row shows 1 section (49 seats) offered and 3 sections (142 seats) needed. There are also 'Evaluate...' buttons and a 'Not Offered' toggle.

You should now see a list of courses from your school or department or college for the term of interest.

Please see the Quick Filter guide on ueap.sfsu.edu/adastra for information about how to create or modify a filter.

4. What am I looking at? You should now see a list of courses for the term of interest.

The annotated screenshot includes several callout boxes:

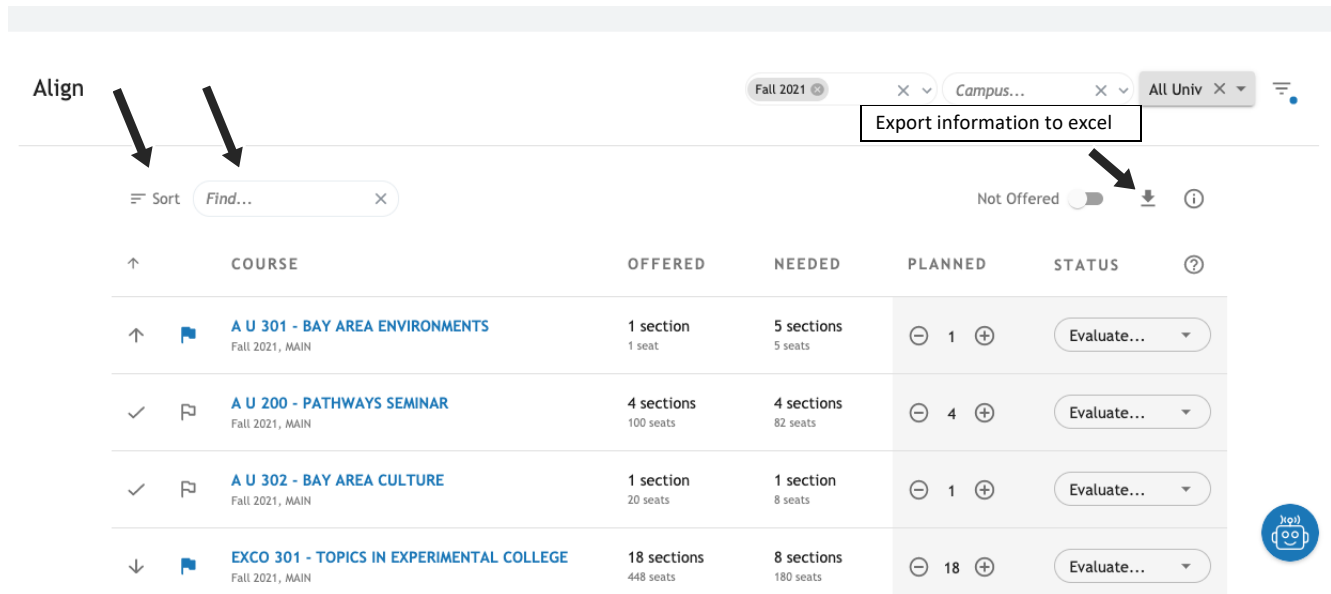
- Arrows and checkmarks indicate type of candidate.**
 - ↑ : addition candidate
 - ↓ : reduction candidate
 - ✓ : No action candidate
- Flag indicates priority. A filled flag is a top candidate.** (Points to the filled flag icon for EXCO 301)
- Number of sections and seats scheduled for the term of interest.** (Points to the 'OFFERED' column for EXCO 301)
- Number of sections and seats needed for the upcoming term based on analysis.** (Points to the 'NEEDED' column for EXCO 301)
- If blue, courses with demand in the upcoming term that aren't in the schedule will be displayed.** (Points to the blue text of EXCO 301)
- Planned and Status are part of a workflow/review process for scheduling that SFSU does not use.**
- You can track decisions made or the status of review here or just ignore this section.**

The table in the screenshot is as follows:

COURSE	OFFERED	NEEDED	PLANNED	STATUS
↑ A U 301 - BAY AREA ENVIRONMENTS Fall 2021, MAIN	1 section 1 seat	5 sections 5 seats	1	Evaluate...
✓ A U 200 - PATHWAYS SEMINAR Fall 2021, MAIN	4 sections 100 seats	4 sections 82 seats		Evaluate...
✓ A U 302 - BAY AREA CULTURE Fall 2021, MAIN	1 section 20 seats	1 section 8 seats		Evaluate...
↓ EXCO 301 - TOPICS IN EXPERIMENTAL COLLEGE Fall 2021, MAIN	18 sections 448 seats	8 sections 180 seats		Evaluate...

In the screen shot above, EXCO 301 is identified as a top (filled flag) reduction (↓) candidate. 18 sections and 448 seats are in the Fall 2021 schedule (in Offered column, rolled forward from previous Fall term) – Ad Astra suggests offering 8 sections and 180 seats in Fall 2021 (in Needed column).

5. **Sort, Find, and Export.** Sort provides a number of fields which can be used to sort the data. Only one Sort field can be selected at a time.



Sort by top candidate to group all top candidates together (marked by the filled-in flags). Sort by candidate type to group all addition, no action and reduction candidates together (see Appendix 1 for definitions). Mouse over the arrows and flags for definitions of the symbols. Click on the column headings to sort by the information in that column

The **Find** window can be used to find specific course subjects, course titles, words in course titles, numbers, etc. It is strictly a text search, so if ENG is entered, it will return any courses with an ENG subject, ENGR subject, and any courses with the words English, England, or engineering, penguin, strength, etc in their titles.

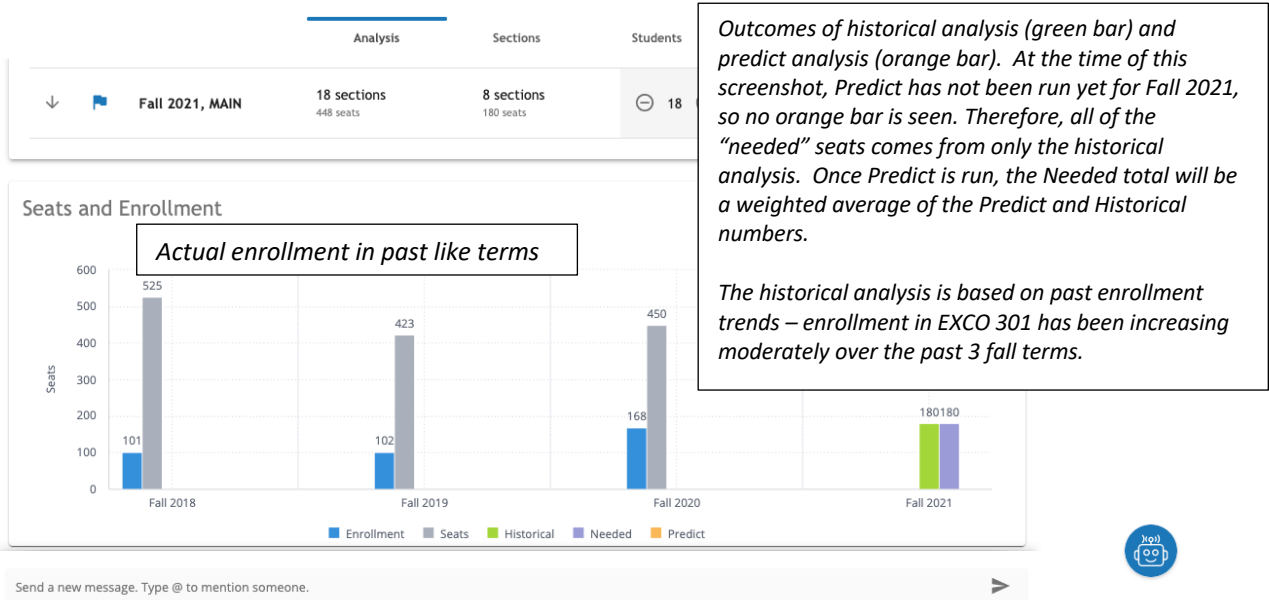
You can also export the list of courses to an excel file which will provide information about sections and seats needed based on the historical analysis (historical), on the degree planner analysis (predict) and the recommended sections and seats to offer (blended, displayed in Needed column) based on a weighted average of historical and predict need.

6. **Understanding where the numbers for Needed come from.** Click on the blue course title to see historical enrollment trends, the demand forecast based on the historical analysis and the demand forecast based on the Predict analysis (available only after Predict has run). This data helps explain the origin of a recommendation to add or reduce sections or seats.

Details of demand based on historical trends (Historical) and student-informed demand (Predict):

Scroll down to see all of the following information for a course.

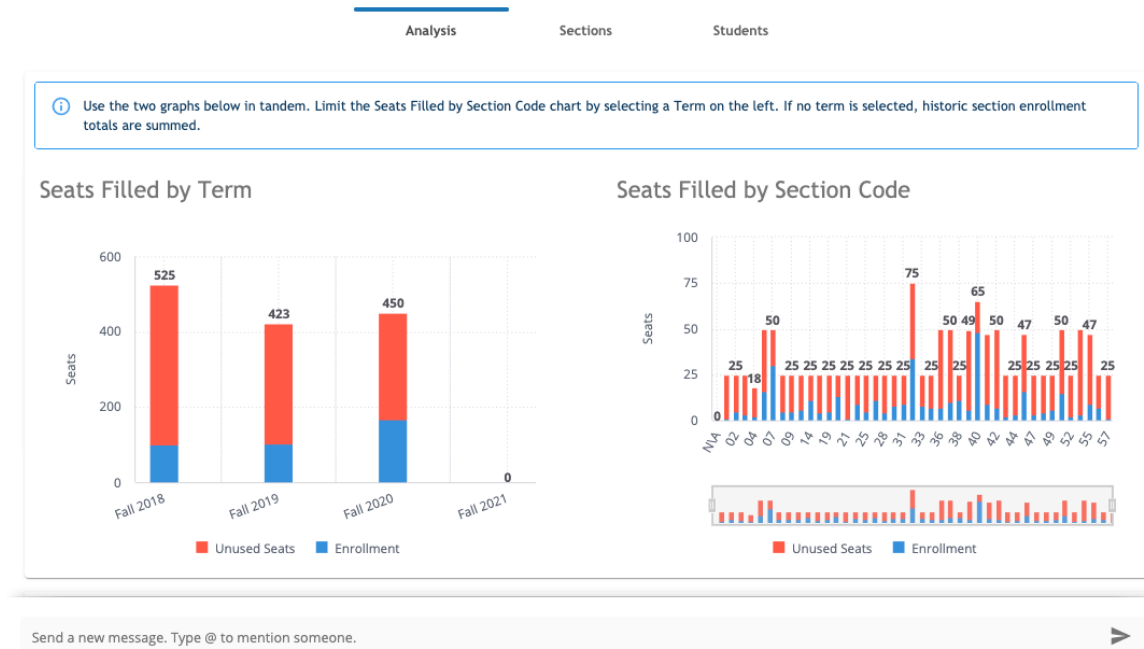
a



a. Seats and Enrollment: A comparison of total seats offered (seats, grey bar) to total seats enrolled (blue bar) for up to the past 5 like terms (if available). When student data is imported for the Predict analysis, the number of seats needed based on that analysis Predict will be displayed in the rightmost window for the term of interest (at the time of the creation of this document, predict has not yet run for Fall 2021). **The seats needed value (purple) is a weighted average of the historical analysis (green) and of the predict analysis (orange).** The weighting is currently set at 80% Historical and 20% Predict.

Keep scrolling for a breakdown of enrollment history by sections.

b

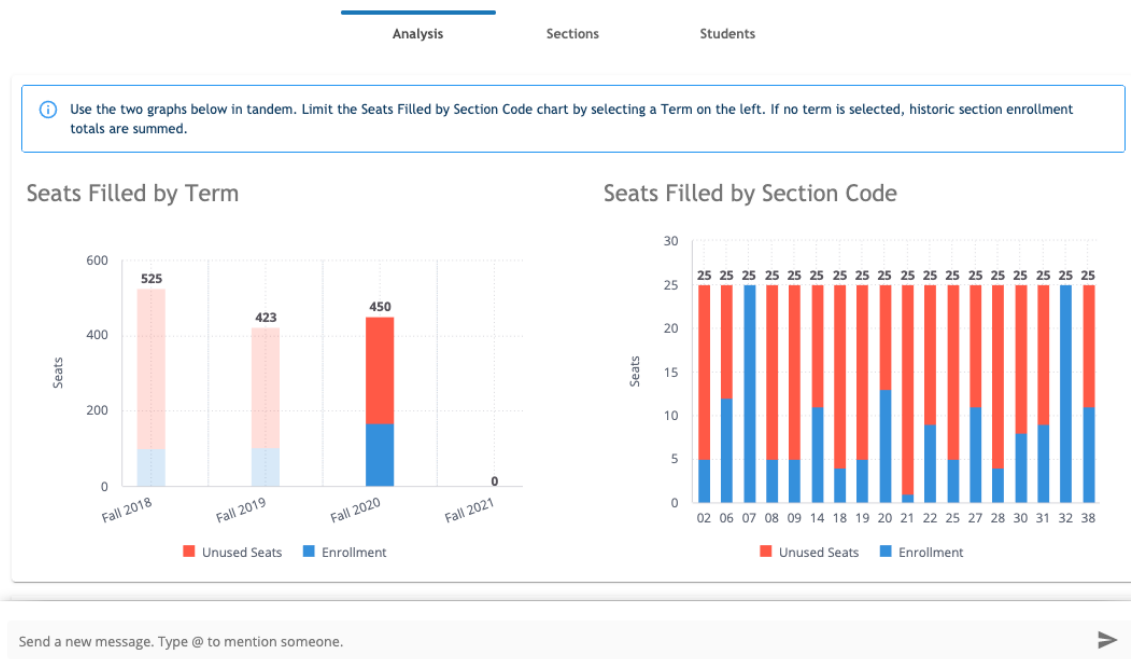


b. The **Seats Filled by Term** window provides a summary of total enrolled and unused seats for each past term.

Click on a term in the Seats Filled by Term window to see the enrolled and unused seats for each section of the course offered in that term in the **Seats Filled by Section Code** window.

Visualization with Fall 2020 term selected:

Align > EXCO 301 / TOPICS IN EXPERIMENTAL COLLEGE



This allows you to see if sections tend to enroll evenly or not, which could be impacted by the schedules of different sections or by when sections were added to the schedule.

Keep scrolling for summaries of historical enrollments and past recommendations.

Align > EXCO 301 / TOPICS IN EXPERIMENTAL COLLEGE

c

TERM	OFFERED	ENROLLMENT	RATIO	SOURCE
Fall 2020, MAIN	18 sections 450 seats	168 students	37 %	EXCO 301 (168)
Fall 2019, MAIN	17 sections 423 seats	102 students	24 %	EXCO 301 (102)
Fall 2018, MAIN	21 sections 525 seats	101 students	19 %	EXCO 301 (101)

d

TERM	HISTORICAL	PREDICT	NEEDED
Spring 2020, MAIN	7 sections 166 seats	N/A	7 sections 166 seats
Fall 2020, MAIN	5 sections 103 seats	N/A	5 sections 103 seats
Spring 2021, MAIN	13 sections 321 seats	0 sections 0 seats	13 sections 321 seats
Fall 2021, MAIN	8 sections 190 seats	N/A	8 sections 190 seats

c. **Historical Terms** summarizes number of sections and seats offered, the total seats enrolled and the enrollment ratio for the course in each past like term (up to 5 semesters). This provides an indication of the trend in course demand term over term.

d. **Recommendations** summarizes Ad Astra recommendations for the past 3 terms (Fall and Spring) compared to what was actually offered. Numbers in the predict column will populate once student data is imported into the system and Predict is run. The numbers in the Needed column will then change to reflect a weighting of demand based on 80% Historical demand and 20% Predict demand.

e. **Sections and Students Tab**

At the top of the window, there are two other tabs. Click on the Sections Tab for details of the class schedule for the upcoming term. Because we roll the previous like term schedule forward for the next term, the previous term schedule (days, times, enrollment caps, instructors) will be displayed until the department modifies that information for the new term.

Align > EXCO 301 / TOPICS IN EXPERIMENTAL COLLEGE ⓘ

Analysis
Sections
Students

Analysis Term

	TERM	OFFERED	NEEDED	PLANNED	STATUS
↓	Spring 2021, MAIN	40 sections <small>967 seats</small>	14 sections <small>321 seats</small>	- 40 +	Evaluate... ▾

The Students tab will display actual and simulated students who need the course in the upcoming term based on the analysis of student data and the degree pathway/roadmap. This information will be available once student data is imported and Predict is run.

Please go to the document called Using Align to Plan your Schedule on ueap.sfsu.edu/adastra for tips and recommendations about how to use the data to help with planning.

Appendix 1: Terms and Definitions for Align

Enrollment ratio: seats enrolled/enrollment cap

- Enrollment ratios of 95% or higher are classified as high demand courses. These courses represent potential bottlenecks to student progress towards degree because the number of seats offered has consistently been lower than seats needed by students.
- Enrollment ratios of 50% or less are classified as potentially underutilized courses. Demand or need for these courses appear to be low. Low demand could be caused by too large of a selection of courses that meet the same requirement for students, or too frequent offering of a course.
- Enrollment ratios of 70-95% are classified as balanced courses. Enrollments are high enough for efficiency, but seats are available to allow students to change their schedule as needed.
- Target enrollment ratios: 85% on average for all undergraduate courses, with no more than 10% of courses enrolling at 95% or greater, and no more than 30% of courses enrolling at less than 70%.

Align terms

- Offered – sections and seats currently offered in the term of interest.
- Needed – the total number of sections and seats needed based on analysis.
- Planned – can be used to model the addition or reduction of sections of a course
- Status – can be used to track schedule review and approval (not in place on our campus)
- Candidate types
 - ↑ : addition candidate. Courses where the demand indicates that at least half of an additional section of the course (based on average section size) would fill.
 - ↓ : reduction candidate. Sections of a course that could potentially be removed from the schedule without having a negative impact on students.
 - ✓ : No action candidate. Sections offered seem to meet predicted demand.
 - ■ : filled in flag means top candidate. These are recommendations that the system has the most confidence in and that potentially have the highest impact.
 - Addition criteria: historical enrollment ratio of 95% or higher **or** the course has enrolled more students than current seats offered by at least 70% of the average section size in a past term.
 - Reduction criteria: historical enrollment ratio of less than 70% **and** seats offered exceed demand by at least the average section size.
- Candidate details. Place the cursor over the arrow or check mark for more details about the candidate.
 - Standard addition: Analysis indicates that more sections of a course are needed than currently offered in the schedule.
 - Potential addition: Analysis indicates that the numbers of sections offered is equal to the predicted number of sections needed, but there is evidence that additional capacity may be needed. Evidence includes high enrollment ratios or an upward enrollment trend over past terms.
 - Standard reduction: Analysis indicates that fewer sections of a course are needed than currently offered in the schedule **and** the most recent enrollment ratio is less than 95%.
 - Low demand: Analysis indicates little demand for the course **and** the historical enrollment ratio is less than 50%.
 - Standard no action: Analysis indicates that what is being offered should satisfy demand.
 - New course: a course for which there is no prior history
 - Never been taught on this campus: a course for which there is no prior history
 - Overloaded no action: More sections are being offered than needed, but the most recent enrollment ratio is 95% or greater, supporting the additional section(s).