



Course Demand Report Using Power BI User Guide

Version 1.0
Created: June 5, 2021

Course Demand Report

The purpose of this report is to address questions concerning 1) course registration rate and the composition in courses of interest based on students' cohesive cohort group, and 2) course requirement fulfillment for both incoming and continuing students. There is continuing work on the projection of seats needed for future terms/years, which is expected to be a part of this report in the next updates.

Data overview

Data available in this report extends back to 2008-2009 academic year to the current academic year, and is available for every term, including summer. By-academic level/school/department/major program information is also available for this period of time, also per term or for a series of years/terms. These enrollment data used in the report come from Institutional Research's 10th day census data snapshots. In addition, active students (current students with active programs) data, course registration information, and admission data in the second part of report are displayed and refreshed every day.

Methodology

The first two report pages present data based on selection of **Cohesive Cohort Group**, which is defined as a group of students enrolled in the same term of their Nth year of studies at SU. For example, students are considered in their year one (cohesive cohort year) if they are enrolled in their entry year, say 2019-2020. However, if students skip 2020-2021 and come back in 2021-2022, they are considered in their year three. Hence, this is different from class level (Freshman, Junior, Sophomore, etc.).

The third report page focuses on students' **Course Requirement Fulfillment** (currently registered/received credits/did not pass/have not received credits), which informs whether students have completed their course requirement. With the help of admission data (deposited students), users can identify incoming students who have or have not received credits based on course selection.

Notes on Data

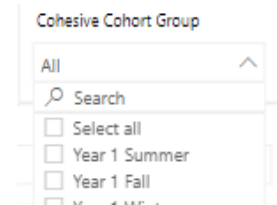
The counts of students in these reports are distinct. To illustrate: students affiliated with more than major or program within a particular school would only be counted once **at the school level**. If that same student has a major in two different schools, that student would be counted in both – if the counts are per school. For counts at the department level, students who have a major in two separate departments but in the same school will be counted twice.

Overview

Slicers, Visualizations, and Interactions

Slicers

Users can make selections in slicer to filter data. Categorical slicers in this report are organized into drop down lists on top rows of each page. When the dropdown list is long, users can enter search text in the search bar and then click on elsewhere or press the Enter key to make the selection work. Make sure to erase the search text to get back full list of selections in the slicer.



Slicers are synced across first two tabs in this report. **Synced slicers** are connected to one another so, regardless of which report page a user selects, the same slicer selection will appear. Slicers in Course Requirement Fulfillment page are grouped to filter different datasets.

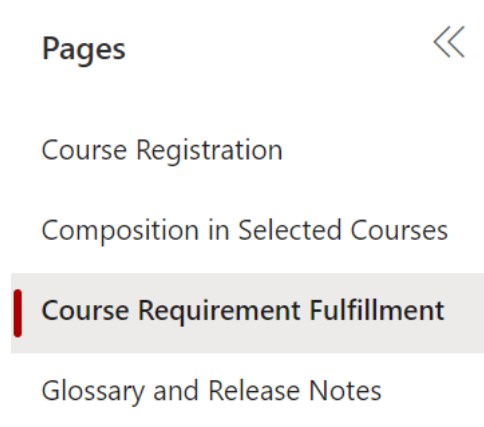
Highlighting and Interactions

Visualization tiles (non-slicers) cross-highlight the data. Selecting an element within a visualization will highlight the associated records with data on the adjacent fields. Users can select anywhere within the visual element on most tiles to highlight data. This includes fields on the axes. Clicking on the white part of the tile to un-select any category/characteristic that has been selected in a tile or any other visualization. For example, if the number of total students 2677 is highlighted (as shown below) in the lookup table at the bottom of first two report pages, data in other visualizations will be filtered to show students entered and enrolled in 2020-2021only.

Academic Start Year	2020-2021	2019-2020	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015	2013-2014	2012-2013	2011-2012	2010-2011	2009-2010	2008-2009	Total
2020-2021	2,677													2,677
2019-2020	2,340	2,895												2,716
2018-2019	1,830	2,400	2,839											2,855
2017-2018	946	1,655	2,344	2,790										2,807
2016-2017	159	949	1,779	2,383	2,792									2,809
2015-2016	46	179	868	1,830	2,501	2,865								2,889
2014-2015		45	107	670	1,843	2,431	3,871							3,883
Total	7,882	7,953	8,155	8,216	8,360	8,289	8,244	8,282	8,395	8,639	8,785	8,661	8,548	40,926

Navigating between report pages

Users can navigate using the report tabs to the left of the report.



Additional Options

Selecting the ellipsis opens a dropdown with additional options.

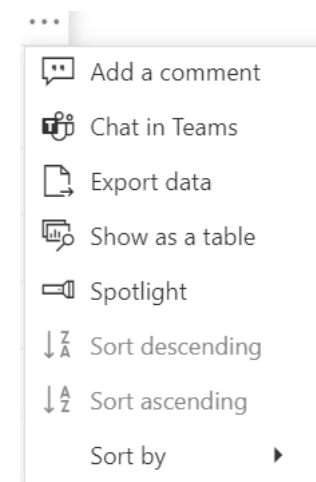


Add a comment: This allows users comment and share on any part of the report. This feature is still under evaluation.

Export data: Export data within a visual is a quick way to extract the underlying, summarized data used to create a visual. The data are exported into either an Excel file along with the slicers applied or a Comma Separated Value (CSV) file.

Show data (as a table): Opens a visual in focus mode and includes the data table.

Sorting Data: User can sort the visuals by variable using the Sort by option and then select descending or ascending order for the data.



Report Views

- **Course Registration (Page 1):**
This page can help users answer the following question: among all the students enrolled in their year X and term Y (Summer/Fall/Winter/Spring), how many of them registered for the selected courses and how many did not?

Two main tables in the center of the page list the % registered students as well as the complement, % not registered students, among total students by cohesive cohort group and selected courses. There is a reference/lookup table at the bottom that shows the total students by academic start year and academic enrollment year. Another use of this reference table is for registration rate quick lookup (see section Highlighting and Interactions above for details).

- **Composition in Selected Courses (Page 2):**
The focus of this page is on the composition in courses in history based on users' selections. Instead of total enrolled students in the previous page, now the base population (the denominator) becomes all the students who registered for selected courses on 10th day. The type of questions this can help answer is that among all the students registered for a course in the history, what is the average % registered students took the course in their year one or year two and so forth. Note that both the table and the bar chart in the center are limited to show data from Year 1 through Year 6, so if you notice less than 100% total average % registered then some data beyond Year 6 have been excluded.

- **Course Requirement Fulfillment (Page 3)**
This page provides a narrative for students' course fulfillment, as well as a main table with a list of active students (current students with active programs) along with their current information (school/department/program), to help users understand who still need to take selected courses among all active students. Note that Course Requirement Fulfillment in the main table can be filtered in the Filter Pane on the far right of the report as shown. Students who registered in current term or registration term(s) are considered currently registered. Students ever received credits for selected courses are considered "received credits" regardless if they retook same courses in later terms. If students did not receive credits, their most recent record will be pulled if they took same course multiple times.

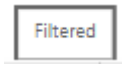
Report Filter Pane:

- Class is (All)
- Colleague ID is (All)
- Course Requirement... contains 'have not received'
Show items when the value contains have not received
And Or
Apply filter
- Department is (All)
- Enrollment Status is (All)

Application data are also integrated to allow users to check whether incoming students have fulfilled their course requirement. Note that Class, Enrollment Status, and Admit Status columns in the table might be blank for incoming students due to late updates in the dataset.

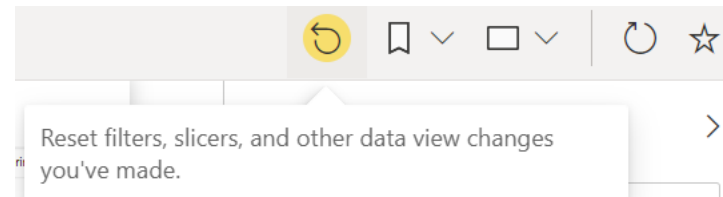
Filtered Views

One of the challenges in Power BI is understanding if a visual is filtered. From slicers, cross-highlighting data from another visual, and drill downs, it is easy to lose track of exactly what is being presented on a report. To address this issue the report has a small tile at the bottom of each page indicating if the data is unfiltered or filtered.



Resetting Visuals

To reset to the default view, select Reset to default in the ribbon.



Resources

Glossary and Release Notes

The Glossary and Release Notes page comprises a table with the variable definitions for all the fields contained within the data model. There may be some measures created within Power BI that do not get directly included in the report.

The release notes allow users to see when the last release of data was as well as some brief notes on changes made on the report.

InformSU Resources

InformSU: <https://www.seattleu.edu/ir/informsu/>

Training Resources: <https://www.seattleu.edu/ir/informsu/about-power-bi/training-resources/>

Power BI Seattle University FAQ: <https://www.seattleu.edu/ir/informsu/about-power-bi/faq/>

Project Updates: <https://www.seattleu.edu/ir/informsu/informsu-updates/>

Microsoft Resources

Learn Power BI: <https://powerbi.microsoft.com/en-us/learning/> or <https://docs.microsoft.com/en-us/power-bi/guided-learning/>

Power BI Documentation: <https://docs.microsoft.com/en-us/power-bi/#pivot=home&panel=home-all>