

Course Waitlist Power BI Guide

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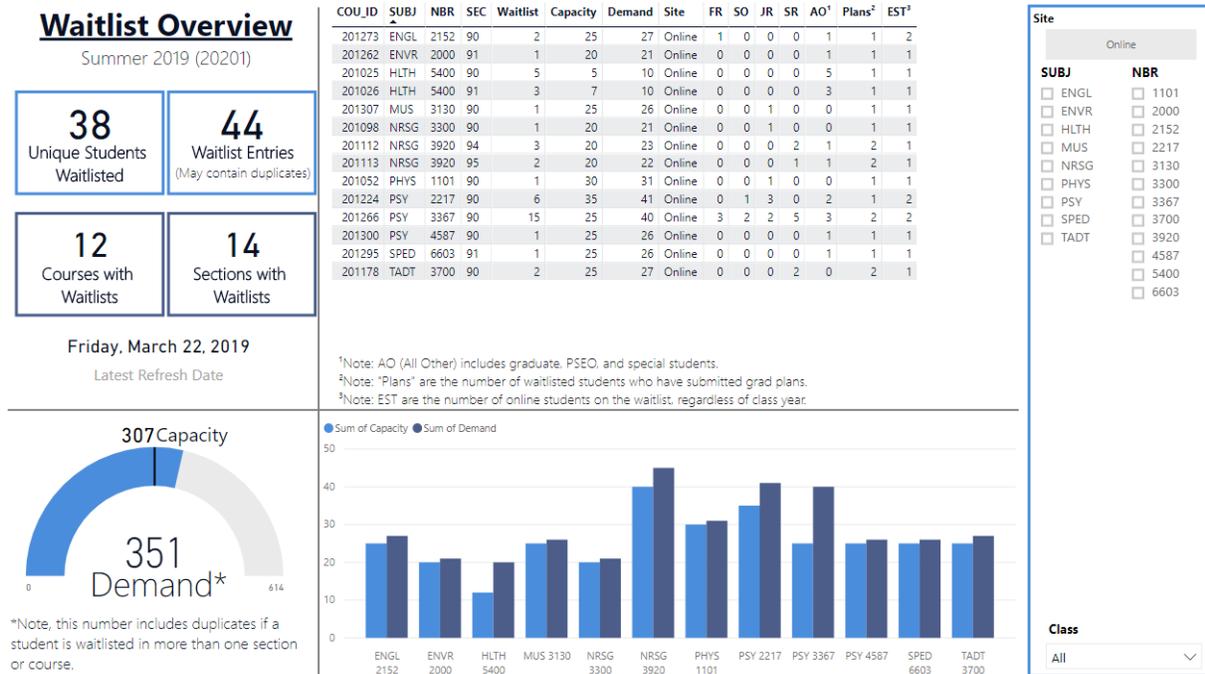
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Introduction

Information on course waitlists is in an interactive Power BI dashboard. The dashboard offers expanded levels of detail, visualizations, and the ability to drill-down and apply filters.

The course waitlist dashboard is hosted online and may be accessed from via the Power BI Reports in MyBSU. It looks like this:



While this dashboard contains no identifiable information about students, it contains biographical data about student's classes and therefore should not be shared with people outside of Bemidji State University.

Summary Data

The left side of the dashboard contains summary data on all the waitlisted courses. Initially, it spans the whole institution, but when filters are applied the numbers dynamically change to include only the filtered courses. Click here for more information on [Filters](#).

This part of the dashboard contains the following sections:

- A. **Term Information** – The course term of the waitlist with the YRTR code.
- B. **Unique Students Waitlisted** – The total count of unique students that are waitlisted.
- C. **Waitlist Entries** – The total count of entries on the waitlist. It counts every time a student is on a waitlist for any course or section. It will be higher than (B) if any student is on multiple waitlists for different courses or sections.
- D. **Courses with Waitlists** – The count of courses with waitlisted students. It counts courses with multiple sections only once.
- E. **Sections with Waitlists** – The count of sections with waitlisted students. It counts courses for each section they have.
- F. **Latest Refresh Date** – The date the waitlist information was last updated.
- G. **Capacity and Demand Gauge** – This visualizes the total capacity of the filtered courses and the total demand for those courses. It is defined as follows:
 - *Capacity* – The total number of seats in the waitlisted courses. Since the courses are full, it is also the total number of students currently registered.
 - *Demand* – This is a measure of student demand for the courses. It includes the number of students currently registered plus the number of Waitlist Entries (C). This is a duplicated count if students are waitlisted on more than one course or section.

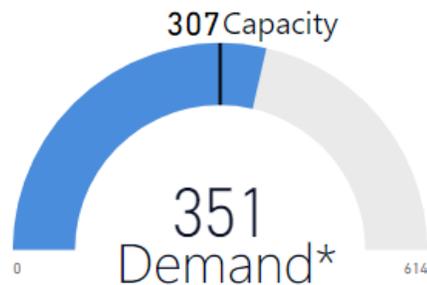
Waitlist Overview

Summer 2019 (20201)



Friday, March 22, 2019

Latest Refresh Date



*Note, this number includes duplicates if a student is waitlisted in more than one section or course.

Course List

The upper mid-section of the dashboard contains a list of all courses and sections with a waitlist. It does not include open sections of specific courses, so if one section of a specific course has waitlisted students, and another section of that same course has space available, the section with space will not be listed.

COU_ID	SUBJ	NBR	SEC	Waitlist	Capacity	Demand	Site	FR	SO	JR	SR	AO ¹	Plans ²	EST ³
201273	ENGL	2152	90	2	25	27	Online	1	0	0	0	1	1	2
201262	ENVR	2000	91	1	20	21	Online	0	0	0	0	1	1	1
201025	HLTH	5400	90	5	5	10	Online	0	0	0	0	5	1	1
201026	HLTH	5400	91	3	7	10	Online	0	0	0	0	3	1	1
201307	MUS	3130	90	1	25	26	Online	0	0	1	0	0	1	1
201098	NRSR	3300	90	1	20	21	Online	0	0	1	0	0	1	1
201112	NRSR	3920	94	3	20	23	Online	0	0	0	2	1	2	1
201113	NRSR	3920	95	2	20	22	Online	0	0	0	1	1	2	1
201052	PHYS	1101	90	1	30	31	Online	0	0	1	0	0	1	1
201224	PSY	2217	90	6	35	41	Online	0	1	3	0	2	1	2
201266	PSY	3367	90	15	25	40	Online	3	2	2	5	3	2	2
201300	PSY	4587	90	1	25	26	Online	0	0	0	0	1	1	1
201295	SPED	6603	91	1	25	26	Online	0	0	0	0	1	1	1
201178	TADT	3700	90	2	25	27	Online	0	0	0	2	0	2	1

The course list includes the following information (from left to right):

- **COU_ID** – The course ID for each specific course/section.
- **SUBJ & NBR** – The subject and number of the course.
- **SEC** – The section number of the course.
- **Waitlist** – The number of students waitlisted in each specific course and section.
- **Capacity** – The total capacity (course cap) for each course and section. It also represents the number of students currently registered in each course/section given that they are full.
- **Demand** – This is a measure of the total number of students registered for each course/section plus the number of students on that specific course/section’s waitlist. It is the sum of Capacity and Demand above.
- **Site** – This will either be “On-Campus”, “Online”, or “Other” (for off-campus courses and other forms of enrollment).
- **FR** – The total number of freshmen on the waitlist.
- **SO** – The total number of sophomores on the waitlist.
- **JR** – The total number of juniors on the waitlist.

- **SR** – The total number of seniors on the waitlist.
- **AO (All Others)** – The total number of students that have a status other than FR, SO, JR, or SR that are on the waitlist. This includes graduate students, PSEO students, and special students.
- **Plans** – The total number of students on the waitlist (regardless of class year) who have submitted grad plans.
- **EST** – The total number of online students on the waitlist (regardless of class year).

These categories can be sorted alphabetically or numerically in ascending or descending order by clicking the bolded category name in the title row of the table. By default, the table is sorted by subject, though sorting by other categories may be useful depending on the need. For example, sorting by the size of the Waitlist shows the following:

COU_ID	SUBJ	NBR	SEC	Waitlist	Capacity	Demand	Site	FR	SO	JR	SR	AO¹	Plans²	EST³
201266	PSY	3367	90	15	25	40	Online	3	2	2	5	3	2	2
201224	PSY	2217	90	6	35	41	Online	0	1	3	0	2	1	2
201025	HLTH	5400	90	5	5	10	Online	0	0	0	0	5	1	1
201026	HLTH	5400	91	3	7	10	Online	0	0	0	0	3	1	1
201112	NRSRG	3920	94	3	20	23	Online	0	0	0	2	1	2	1
201113	NRSRG	3920	95	2	20	22	Online	0	0	0	1	1	2	1
201273	ENGL	2152	90	2	25	27	Online	1	0	0	0	1	1	2
201098	NRSRG	3300	90	1	20	21	Online	0	0	1	0	0	1	1
201300	PSY	4587	90	1	25	26	Online	0	0	0	0	1	1	1

Below the table is a visualization showing the Demand and Capacity for waitlisted courses. Initially, all course sections are aggregated together, but by using the Drill Down feature (see [Advanced Features](#) section) the view can be changed to section-by-section. Applying filters will also automatically update the table and visual (see [Filters](#) section).



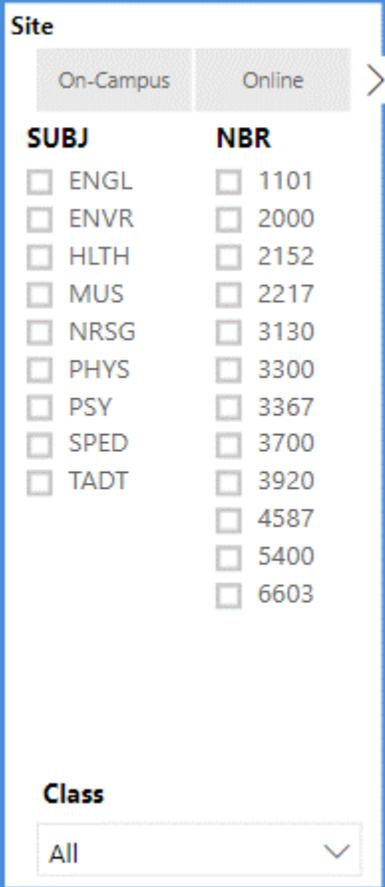
Filters

The filters section is on the right side of the dashboard and is where the true power and functionality of the dashboard lies. This section does what the name suggests and updates the dashboard to show only the selected criteria.

Clicking a filter enables it; multiple filters (and subfilters) can be selected and applied at the same time. Filters can be removed by either re-clicking it or hovering over the name of the filter category and clicking the eraser button . To clear all filters simply reload the page.

The following filters are available:

- **Site** – Filter courses by whether they are On-Campus, Online, or Other (such as off-site courses). The side arrows   will scroll between the options in the event more than two sites are listed.
- **SUBJ** – Filter courses by subject. Most departments should filter to the subjects in their department as a matter of habit unless wishing to compare their waitlists to the rest of the institution.
- **NBR** – Filter courses by number. While relatively useless by itself, when used with the SUBJ filter it will show sections of specific courses.
- **Class** – Filter by student class (FR, SO, JR, SR, etc). This is useful to view all courses that have seniors or upperclassmen waitlisted for instance.



Site	
On-Campus	Online

SUBJ	NBR
<input type="checkbox"/> ENGL	<input type="checkbox"/> 1101
<input type="checkbox"/> ENVR	<input type="checkbox"/> 2000
<input type="checkbox"/> HLTH	<input type="checkbox"/> 2152
<input type="checkbox"/> MUS	<input type="checkbox"/> 2217
<input type="checkbox"/> NRSRG	<input type="checkbox"/> 3130
<input type="checkbox"/> PHYS	<input type="checkbox"/> 3300
<input type="checkbox"/> PSY	<input type="checkbox"/> 3367
<input type="checkbox"/> SPED	<input type="checkbox"/> 3700
<input type="checkbox"/> TADT	<input type="checkbox"/> 3920
	<input type="checkbox"/> 4587
	<input type="checkbox"/> 5400
	<input type="checkbox"/> 6603

Class
All

Advanced Features

Power BI has several advanced features built into their dashboards. While filtering is already a robust tool and will meet most users' needs, three additional features will be elaborated upon here: [Focus Mode](#), [Visual Selection](#), and [Drill Down](#).

Focus Mode

This feature lets you expand a dashboard element to full screen. Simply click on the white space of the element of interest and click the full screen icon  when it appears (in the top or bottom right of the element). This is most useful to expand the course list (in the event there is a scroll bar) or to make any element easier to print.

Visual Selection

This feature lets you filter to specific courses by selecting visual elements without the need to the filter menu. It is useful for looking at more specific detail but is not as flexible or as generally-applicable as the filter menu. Visual Selection can be used by clicking on any specific course in the course list or by clicking on a bar graph in the course visualization.

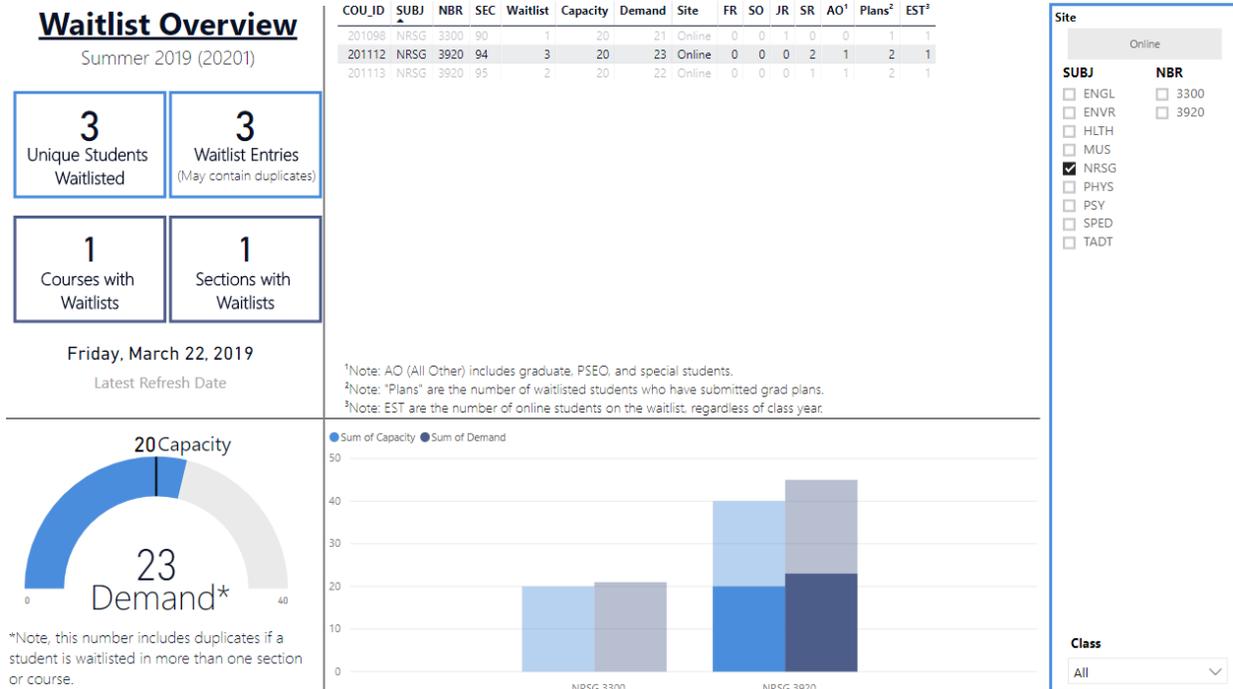
For example, visually you notice the Demand bar for PSY 3367 is considerably higher than the Capacity bar. If you click this specific course in the visualization it filters to this specific course. If there are multiple sections of this course, all sections will also be listed. Notice how none of the filters on the right have been selected.



Visual Selection also works the opposite direction. If you instead click on a specific section of a course in the course list it will filter to the selected section. If a course has multiple sections, then the visualization will show the proportion of Capacity and Demand that particular section contributes to the overall course’s total Capacity and Demand.

For example (screenshot on the next page), you notice NRSRG 3920 has two sections with waitlisted students and section 94 has a larger waitlist than section 95. If you click on section 94 in the class list it filters the dashboard to this specific section, greying out any other sections.

In this example, the waitlists and section capacities are of similar sizes, but when the differences are larger (or there are more than two sections) then it's a good way to visually gauge which sections have highest demand. You can also Ctrl + Click to select multiple sections from the course list at once.



Notice that filters can also be used with Visual Selection as NRSG is selected on the right to show only nursing courses.

Drill Down

This feature is part of the course visualization element below the course list. It enables you to move down or up levels of the course hierarchy and can be paired with Visual Selection and filters for additional flexibility. The hierarchy in this dashboard goes (from top to bottom): Subject Level, Course Level, Section Level. Course Level is the default level of the hierarchy.

To use Drill Down, click on the white space of the visualization. The following menu will appear in the upper-right corner: . These buttons are as follows (ignoring the [Focus Mode](#) button on the far right):

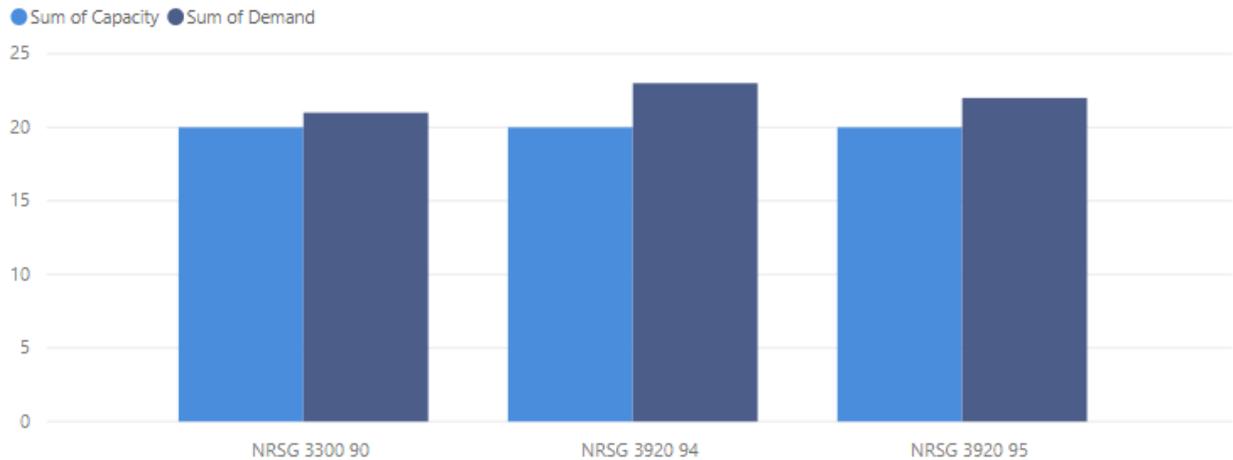
- Drill Up** – Click this to move up one level up in the hierarchy.
- Activate Drill Down*** – This button modifies [Visual Selection](#) to use drill down instead of selection. While this is useful in many different dashboards, for this dashboard there are better methods and this button should not be used.

⇓ **Drill Down*** – Click this to move up one level down in the hierarchy. Do not use this; use Expand Down instead.

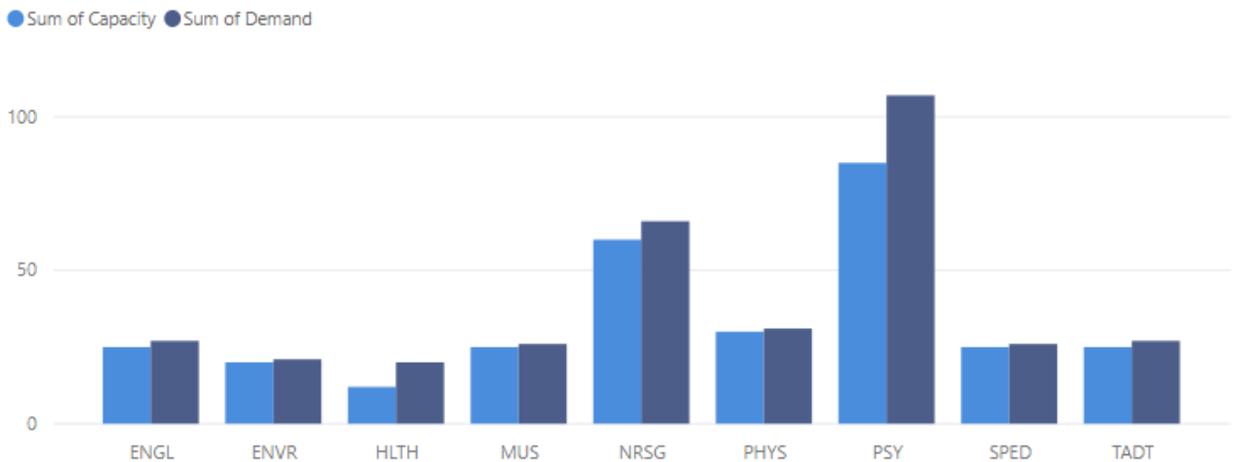
⇓ **Expand Down** – This button expands the current hierarchy down to the next level in the hierarchy. Use this button instead of Drill Down.

*Do not use these. Drill Up and Expand Down should be used instead.

Using the Drill Down feature is a useful way to see a side-by-side comparison of course sections (Section Level). Continuing from the example in [Visual Selection](#), the Section Level offers another way to visually compare Capacity and Demand for sections of NRSG 3920.



Additionally, Drill Down can be used for a subject-by-subject comparison (Subject Level). This is useful for departments that teach multiple subjects or to make comparisons across the university.



Note that this dashboard only includes courses and sections that have at least one waitlisted student. As such, it should not be used to gauge overall interest in specific majors or courses and is solely intended as a measure for waitlists.