

Enrollment Management with Swap-If Options

Last Updated: October 27 2022

1. Summary

Starting in SP'22, CS graduate students will not be able to register for more than 12 credits, until the Friday before classes. Students will be able to use a new “swap-if” option that conditionally drops them from one class if and when they can get into another class. Moreover, wait-list capacities will be increased (reportedly in time for Spring 2022 registration).

2. Motivation

Historically, students were able to register for up to 18 credits, a cap set by the registrar. Many students, especially current students, rush to enroll in as many classes as possible. This is often to ensure a seat in a class they *may* want to take but are not entirely sure until classes actually start. Many popular classes fill up quickly, and even their waitlists fill up. After classes begin, and often fairly close to the drop deadline, students will drop the classes they don't want to take; at that late stage, it can be too late for others to register to take classes with seats that just opened up.

This process had caused many serious problems over the years:

1. When students over-register for classes that they don't have any intention to stay in, it takes away seats from students who actually want to get in. Those who can't get in are understandably very unhappy, especially if they cannot even get into a waitlist. Even existing students are frustrated because everyone rushes to “click as fast as they can” on Solar to register for as many classes as possible. This is particularly bad for students who require a certain class to graduate, or to satisfy breadth or qualifier requirements, but can't get into that class.
2. This problem often affects newer students or students who, for one reason or another, haven't been able to register as soon as early registration deadlines open up. The issue is most acute for new students starting in the Fall: new students' visas aren't ready until mid-summer, but early registration for Fall terms usually starts in April. It is very frustrating for new students to not be able to get into any of their preferred classes in their very first term at Stony Brook.
3. These issues meant that actual enrollments in classes tend to fluctuate a lot: initially they tend to be fairly high, but 2 weeks into the semester they drop somewhat and stabilize. Still, we often have a mismatch of classroom sizes and demand: if the room is too small, it is very hard to get a bigger room (without changing the date/time of the class, which is not allowed). Conversely, if the room is too large for the enrollment, the Registrar may take such a large room away from us.
4. Because class enrollments fluctuate a lot, we cannot assign actual TAs and graders to a class until we know how many students are actually taking the class. This delays paid TA/Grader assignments as well as approvals for MS students taking CSE-698 (Teaching Practicum) for credit. Delays in TA assignments and CSE-698 approvals also have indirect effects in delays and changes to RA/GA appointments, and students' commitments to CSE-698 while they are waiting to join a faculty's research labs.

5. Overall, it results in a long period of stress and unhappiness. Many students would email faculty instructors begging to get into certain classes, asking us Directors and Coordinators to increase class sizes, and asking staff members to let them in. Every semester, this results in hundreds of largely repetitive emails, consuming everyone's time unnecessarily, and thus reducing our average response time to other, perhaps more urgent matters.

In the past few years, we tried to address this by periodically checking who enrolls for how many credits, then pleading with students to drop to no more than the classes they actually need. We often found that 100-200 seats could be taken by students who are over-registered. At times we also warned students who enrolled in 15-18 credits that we will lock down their registration, meaning they will be forced to take the classes they (over)-registered for. These efforts have been cumbersome, time-consuming, and not terribly effective. For example, as soon as we check that students have reduced their class enrollments, they or other students can try and [re]register for any class. Still, many students expressed concerns about dropping any class because they didn't know if they could register into that class again, or any other class they wanted to take.

In other words, the way the system was designed incentivized most students to register for as many classes as possible as quickly as possible, and to not drop any class until the very last minute.

3. New Enrollment Management Processes

Starting the Spring 2022 semester, we will experiment with a new process for enrollment management that would hopefully address as many of the aforementioned concerns.

First, before registrations for the next semester are open, we will lower the maximum number of credits that students can register into, from a maximum of 18 to just 12 credits. This cap will be implemented for *all* CSE graduate students. Twelve credits is enough for every student to maintain their full-time status, important for visa, housing, and more. Setting a cap of 12 credits will ensure that all students have an opportunity to enroll in classes that will assist them in making degree progress. Note that the lowering and re-raising of registration caps will be done automatically and we in CS have no control over the actual caps and their timelines.

Second, the Friday before classes start, the Registrar *automatically* raises the credits cap up to 18 credits. The registrar does this and we have no control over it. Hopefully by this time, months after early registrations opened up, students will have registered for most of their preferred classes. But now, with the cap raised to 18, students will be able to register for additional classes including 1-credit seminars, CSE-698 (TA credits), and more.

Third, we will advise students of the option called *swap-if*. The option allows you to do an automatic (and atomic) swap of one class you are already registered into (but want to drop), *if and only if* you can get registered into another closed class you want to take instead. Consider the function `swapif(X,Y)`: you can configure your registration in Solar such that you will be dropped from class X, if you're registered for X already, only if you can get into class Y. Moreover, you can place yourself on a waitlist for class Y with this "swap-if" option.

Stony Brook has a short video to demonstrate the process here:

<https://www.youtube.com/watch?v=66nvFIRBVI4>. You can also learn how to add yourself to a waitlist here: <https://you.stonybrook.edu/uaamedia/add-yourself-to-a-waitlist>.

Note: we are told that one can be on multiple waitlists for multiple classes, and set up this `swapif(X,Y)` for one X but multiple Y's. This is a one-to-many relationship. In that case, if any of those Y classes open up, the first one that opens up will be the one you'll be swapped into with X. (The remaining entries, we're told, are left behind but are now considered stale because there is no way to satisfy them once you've been de-registered from class X.)

Reminder: Solar lets students get into many waitlists (up to 11 credits), but you will *not* be allowed to register into a class you're waiting on, if there is any problem—for example a time conflict with any other class you have, exceeding registration cap, or any hold on your record. In that case, Solar will often *skip* the student in the waitlist and register the next person on the list. So please be sure that you avoid any such issues that could prevent you from registering to a waitlisted class.

Fourth, we will increase the default waitlist sizes from 30-33% of the class capacity to 100%. This is reportedly being planned in time for Spring 2022 registration (but definitely by the Fall 2022 registration). For a class with a capacity of, say, 100 seats, in the past the waitlist could only have 30-33 seats; now it will have an additional 100 seats. Coupled with the reduced registration cap of 12 credits, this increase in waitlist size will permit more students to get into waitlists and leverage the `swapif()` function. This change will take time and likely won't be ready until FA'22.

Fifth and finally, we will continue to reserve a small number of seats for emergencies. For example, in a class of 100 seats, we usually will keep 3-5 seats reserved for emergency needs. We reserve these seats well in advance, but we release them in the first week of classes. Note that this reservation can sometimes be confusing: a student at position #1 on a waitlist wonders why they can't get into a class that appears to have available seats. It's because of these reservations, but once released, those at the head of the waitlist could get in.

If you have any questions or concerns, ideally please post them to the GRAD piazza forum.

Appendix

Internal information mostly for faculty, less relevant to students

The issues with our current system mean that actual enrollments in classes tend to fluctuate a lot: initially they tend to be fairly high, but 2 weeks into the semester they drop somewhat and stabilize. Still, we often have a mismatch of classroom sizes and demand: if the room is too small, it is very hard to get a bigger room (without changing the date/time of the class, which is not allowed). Conversely, if the room is too large for the enrollment, the Registrar may take such a large room away from us.

Because class enrollments fluctuate a lot, we also cannot assign actual TAs and graders to a class until we know how many students are actually taking the class. This delays paid TA/Grader assignments as well as approvals for MS students taking CSE-698 (Teaching Practicum) for credit. Delays in TA assignments and CSE-698 approvals also have indirect effects in delays and changes to RA/GA appointments, and students' commitments to CSE-698 while they are waiting to join a faculty's research labs.

We hope that the new enrollment management plan will help reduce these fluctuations because people will settle into their desired classes early on, and we'll see fewer adds/drops/swaps in the first two weeks of classes. But it is still possible that a lot of fluctuations will happen as soon as the registrar raises the registration cap from 12 to 18 a week before classes begin. We will have to measure fluctuation levels before and after we implement this new enrollment management system.