

Final Report of the Committee on Course Registration



HARVARD

Faculty of Arts and Sciences

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1. Executive Summary

In the Spring of 2019, the Faculty of Arts and Sciences voted to create a Committee on Course Registration to study the current system of course registration and offer recommendations for improvement, including recommending that the FAS adopt a different system of course registration, if warranted. The committee has now completed its three-year term.

This report considers three different approaches to course registration: the pre-pandemic system of In-Term Registration, the Pre-Term Registration system used during the pandemic, and a system of Previous-Term Registration.

The pre-pandemic system of In-Term Registration provided some members of our community with significant benefits while imposing serious burdens on others.

The system was very popular with undergraduate students who appreciated the opportunity to have a real experience with a class and its teaching staff before enrolling. It also allowed faculty to put off many decisions about their courses until the beginning of term in which they taught their courses.

At the same time, the system created a high degree of uncertainty for faculty, graduate students, administrators, and many students at the beginning of each term. This uncertainty undermines the teaching mission of the College. It can stand in the way of the academic progress of graduate students, thereby undermining the mission of the Graduate School of Arts and Sciences. It imposes delays in making campus spaces available for the full panoply of uses. The significance of these burdens warrants change.

The committee recommends that the FAS move to a system of Previous-Term Registration. This change is required to meaningfully reduce the enrollment uncertainty that leads to many problems, and it opens the opportunity to improve other elements of the academic experience, including advising. At the same time, such a system can be designed to preserve much of the flexibility for students to adjust their schedules to allow for exploration, change in academic direction, and serendipity. Students will be just as free, and just as welcome, to attend as many courses' initial class meetings as they were during the pre-pandemic system of In-Term Registration.

To come to this finding, the committee consulted broadly within our community through group listening sessions and one-on-one consultations with a variety of constituencies. The committee reviewed data on fluctuations in TF appointments at the start of the semester and studies of predictive mechanisms that could allow us to have a greater degree of certainty around enrollments if we retained an In-Term Registration system. Representatives of the committee also spoke to registrars at peer institutions, which have universally adopted systems of Previous-Term Registration, to learn more about their experiences in ways that would help guide our own implementation.

Because course registration is a complex system, the committee recommends that the FAS make change incrementally, and in as local a manner as possible to reduce unwanted impacts. For this reason, the committee makes the following recommendations, which constitute the minimum changes necessary to move to a system of Previous-Term Registration.

1. The faculty vote to alter the legislated policies governing course registration to make this change possible. In particular, this requires that adding a course is not legislated to be by permission of instructor only.
2. An earlier curriculum work cycle must be established. Faculty must decide what they will teach somewhat earlier than the current FAS timeline. They also need to provide course information, including course descriptions, enrollment requirements, and syllabi in time for

course registration. Peer institutions have cited the ability of faculty to deliver timely information for course registration as the single greatest challenge to a smooth registration process.

3. Both the timing and the structure of advising must change to accommodate the new registration timeline. This will affect incoming students—first-year and transfer—as well as rising sophomores the most.
4. Several technological enhancements are needed to the current registration system in order to make registration and enrollment management as smooth as possible.

The committee believes that the overall benefits of a Previous-Term system make it worth undertaking this collective work.

2. Preamble

In the Spring of 2019, the Faculty of Arts and Sciences voted to create a Committee on Course Registration to study the current system of course registration and to offer recommendations for improvements, including recommending that the FAS adopt a different system of course registration. The Committee was to work for three years and submit a report to the Faculty at the end of that period in the Spring of 2022. Today, we submit this report.

Course registration is a complex system that affects all members of the Harvard community: students, faculty, and administrators. Before students can begin to register for courses, course heads need to create these courses and provide the information about them that students need to make informed decisions. Advisers need to understand course offerings and have the time to meet with students prior to registration to offer logistical advice (e.g., is a student on track to satisfy their requirements?) as well as holistic advice about the myriad considerations that bear on course choice. For courses to run smoothly, administrators need to match courses with necessary resources, whether that be instructional support staff or physical resources such as classroom and lab space, course materials such as textbooks, course readers, equipment, and materials for projects. Students need reliable information on which to base their course selections, the ability to plan and take full advantage of advising resources, and courses that have adequate teaching and learning resources to support them. They also require flexibility to adapt their schedules as their interests and needs change.

These factors feed back on one another in complex ways. Instructional support staff, which are oftentimes GSAS PhD students, need to plan their other activities, including their own studies, around whether they can rely on having teaching appointments to support themselves financially, and if so, what they must do to meet the demands of these appointments. Faculty plan their courses in part based on the enrollments they anticipate. A highly interactive, seminar style class works well for 15 students, less well for 50.

Once these preparations are in place, students choose their courses, trying to balance many different considerations. Which courses align with their current interests? Which courses could open up new interests? Which courses provide classroom environments that will help the student succeed? Which courses “feel” right? – A question that is as hard to put more precisely as it is crucial in influencing the students’ learning experiences and academic success.

This report is the result of a lengthy process of investigation, study, and deliberation on the interconnectedness of these factors. The Committee itself has been purposefully constructed to include representatives from many different constituencies: faculty, undergraduate and graduate

students, and administrators.¹ We have held listening sessions with different members of the community and spoken to representatives from other universities about their experiences with different systems of course registration. We have collected data that bear on different elements of course registration. We have drawn on the intellectual resources of the community to explore available options, for instance in the prospects for using machine learning as a predictive tool.

One thing is abundantly clear: the details of a course registration system need to reflect the broader educational environment. For example, though all our peer institutions use Previous-Term Registration, their processes all differ significantly in their details because of the broader setting within which they are embedded.² Thus, our aim in developing the particular version of the Previous-Term Registration system has been to describe the version that is best *for Harvard*.

While we do make a recommendation, we do not wish this report to simply be a prescription, but an aid to deliberation. To that end, we spend a lot of time discussing the various drawbacks and benefits of the different systems. We recognize that different members of our community will place different weights on different considerations, and so their reckoning of where the balance of considerations points might differ from ours. Our report will have reached its goal if everyone has a clearer understanding of the full breadth of the relevant considerations and their implications.

Prior to the COVID-19 pandemic, Harvard made use of a system of *In-Term-Registration*: students register for courses in the very same term for which they are registering. Usually, the registration deadline fell at the end of the first week of classes of each term, a week widely albeit informally called “Shopping Week.”

While that system provided benefits for several constituencies, it also gave rise to several major areas of concern that impact the overall quality of undergraduate education, including loss of instructional time at the beginning of the term, broad variation in how and when courses with enrollment limits decided to which students to offer spots, and uncertainty around enrollments. It is clear that students, faculty, administrators, and advisers would all benefit from additional time to plan and select courses and allocate resources to them.

Among the areas of concern above, uncertainty around enrollments is the most important for the purposes of this report, both because it has the most pernicious consequences, and because it is the one that most urgently requires Faculty Legislation to address.

Systems of course registration are complex, with many components that feed back on one another. They serve and affect different constituencies, faculty, undergraduate and graduate students, and administrators. None of these constituencies is monolithic. Importantly, the burdens imposed by the pre-pandemic system are not distributed uniformly, even within each constituency. Some courses have very stable enrollments, which allows faculty to plan well in advance and graduate students who teach for these courses to have appointment security well in advance of the beginning of the term. Other courses face a great deal of uncertainty, with the attendant burdens for faculty and graduate student instructors. The complexity of this situation suggests two principles that should guide discussion of the legislation before the Faculty, as well as future policy decisions.

Make change incrementally. Because predicting the effects of any change is extremely difficult, changes to the course registration system should be made as incrementally as possible.

Make change as locally as possible. Because the course registration system serves many

¹ For a full list of the Committee’s membership, see Appendix 12.1.

² For a high-level overview of the registration systems at our peer institutions, see Appendix 12.5.

different constituencies and affects members of our community in very different circumstances, changes should be made as locally as possible, be that at the level of an academic division, department, or program.

The problems that a system of course registration needs to solve, and the challenges it must meet, change over time and occur at different scales. Hence, a course registration system is not a static object, but a dynamic component of vibrant academic life. The recommendations we make below seek to unlock options that can be pursued as changing circumstances warrant.

With this background in mind, we present our findings and recommendations.

3. Findings and Recommendations

The problems of the pre-pandemic system of In-Term Registration are sufficiently serious that they should be addressed, even in the face of an extremely high level of satisfaction among undergraduate students with the pre-pandemic system of In-Term Registration (Section 5).

We cannot meaningfully address the uncertainty concerning enrollment numbers by only altering the predictive mechanisms used to project enrollments in courses prior to the beginning of term (Section 6).

Permanently moving to a system of registration in which registration takes place immediately prior to the start of the term, such as the system that the FAS instituted in response to the COVID-19 pandemic, will not make for a meaningful improvement. The lead time it gives faculty and especially graduate students to plan is not significantly greater than in the pre-pandemic system of In-Term Registration. What is more, it imposes the significant cost of taking away time from breaks that all members of our community need (Section 7).

Thus, we can only make meaningful improvements in enrollment certainty by moving to a system of *Previous-Term Registration*: A system in which students register for courses in the term preceding the one for which they are registering (described in Section 8).

We recommend that the following steps be undertaken.

1. The faculty vote to alter the legislated policies governing course registration to make this change possible. In particular, this requires that adding a course is not legislated to be by permission of instructor only.
2. An earlier curriculum work cycle must be established. Faculty must decide what they will teach somewhat earlier than the current FAS timeline. They also need to provide course information, including course descriptions, enrollment requirements, and syllabi in time for course registration. Peer institutions have cited the ability of faculty to deliver timely information for course registration as the single greatest challenge to a smooth registration process.
3. Both the timing and the structure of advising must change to accommodate the new registration timeline. This will affect incoming students—first-year and transfer—as well as rising sophomores the most.
4. Several technological enhancements are needed to the current registration system in order to make registration and enrollment management as smooth as possible.

These are the only changes we recommend. Crucially, we recommend that the FAS retain a general policy of *maximally flexible resource allocation* through the first week of classes. In the pre-pandemic system, the University followed such a policy of maximally flexible resource allocation: if a course's enrollment was not limited ("capped") by decision of the instructor, students

could simply enroll in that course and the University would make every reasonable effort to find teaching support staff and physical resources like classrooms to accommodate this student demand. We recommend that this policy be retained.

Retaining the policy of maximally flexible resource allocation will still give students enrolling in courses the flexibility to adjust their schedules in the same ways that they could in the pre-pandemic system of In-Term Registration. This will allow the FAS to retain many of the benefits of openness to exploration and adjustment of schedule that undergraduate students experienced in the pre-pandemic system (Section 9).

This raises the question of whether the move to Previous-Term Registration will improve the situation vis-à-vis enrollment uncertainty. While there is reason to be optimistic based on the experience of our peer schools, every university, and thus every system of course registration, behaves differently depending on the broader context it is in. However, it is crucial to keep in mind the incremental approach to solving the problems around course registration. If we find that maintaining the policy of maximally flexible enrollments leads to too much uncertainty, it is possible to add additional constraints *locally*. A course, department, or program could decide, for example, that it would be best to only allow the relevant course(s) to grow by a certain percentage, or a certain number of sections, rather than without constraints. Because such changes can be implemented locally, their unanticipated knock-on effects will be smaller than those of FAS-wide policies.

The improvement in enrollment certainty must be treated as an incremental improvement, as well. Even in the pre-pandemic system of course registration, some courses had great enrollment certainty, and some allocations of instructional staff could be made with corresponding certainty. The goal of moving to a system of Previous-Term Registration can only be to extend this to more courses and instructional staff (Section 10).

4. Historical Background

The topic of whether to alter the course registration system for students in the Faculty of Arts and Sciences, both undergraduate and graduate, has come up at various times in the past. Prior to the start of the current discussion in 2018, it came before the FAS Faculty in 2002 when then Dean of the Faculty of Arts and Sciences William Kirby proposed introducing an early registration system.

One key motivating factor for this proposed legislation was the fact that enrollments in many courses were often quite surprising to both faculty and administrators, coming in much higher or lower than expected. Such unexpected enrollments in turn led to various disruptions, be it moving courses into different rooms, hiring teaching staff for highly subscribed courses on short notice, forcing teaching staff in undersubscribed courses to find alternative appointments on short notice, or scrambling to get textbooks and course packets.

The Faculty decided to table the issue without taking a vote on whether to retain or revise the current system of course registration at that time.

Since the difficulty of predicting enrollments was probably the key factor driving interest in alternatives to the current system of course registration, several students in the Computer Science Department conducted a study on the use of machine learning tools within the context of the course CS96 in the Fall of 2003 which was submitted to the FAS in the Spring of 2004.³ This is where the debates have remained until 2017.

³ Available here: <https://coursereregistration.fas.harvard.edu/files/coursereregistration/files/cs96final.pdf>

In the Fall of 2018, the Registrar prepared a report and submitted it to the Faculty Council in support of a proposal to move from the then current system of In-Term Registration to a system of Previous-Term Registration.⁴ The Faculty Council asked that the issue be studied further by a committee composed of members of the faculty, the student body, and administrators before bringing legislation before the Faculty Council and the full Faculty. As a result, an initial Committee to study course registration was formed with the aim of formulating legislation to be brought before the faculty in the Spring of 2019. That Committee was a predecessor to the current one, and its initial investigations indicated the complexity of the issues.⁵ Rather than proposing legislation to change the course registration system then, the Committee suggested that a longer-running Committee be formed to investigate the issues more thoroughly and have the time to engage the University Community broadly in the process. This legislation was passed, and the present Committee formed.

5. The Case for Change

Before setting out the case for change, we need to recognize that this case must clear a high bar. The pre-pandemic system of In-Term Registration has enjoyed significant support from several quarters of our community. It has extremely strong support from undergraduate students. Over the several years that the conversations around course registration and “Shopping Week” have gone on, undergraduates have repeatedly expressed their support of that system. Here are just two recent examples:

- In the Fall of 2018, the Undergraduate Council conducted a survey on “Shopping Week” and received 1883 responses, with the vast majority coming out strongly in favor of “Shopping Week”.
(https://coureregistration.fas.harvard.edu/files/coureregistration/files/shopping_week_survey_report_2018.pdf)
- In September 2021, more than 1300 students signed a petition in support of retaining “Shopping Week” (Crimson Coverage: <https://www.thecrimson.com/article/2021/9/3/save-shopping-week-petition/>)

These surveys are in line with many of the informal conversations we have had with undergraduate students.

Clearly, many undergraduate students view “Shopping Week” as an important element of their educational experience at Harvard, setting them up for a successful term and helping them find their way academically.⁶ Indeed, we suspect that few aspects of our academic system see quite as much, and as strong, approval among undergraduates as the practice of registering for courses via a “Shopping Week.” We take seriously the observation that students’ sense of agency in their education is itself an important educational good since it is strongly correlated with educational

⁴ Available here: https://coureregistration.fas.harvard.edu/files/coureregistration/files/fas_registration_report_2018-09-06.pdf

⁵ Report available here: https://coureregistration.fas.harvard.edu/files/coureregistration/files/report_of_the_committee_on_course_registration.pdf

⁶ See for one representative example Cheng, M. “Shopping Week Changed My Life. It Can Change Yours, Too, If We Vote to Restore It.” *The Crimson*, 09/14/2021. (<https://www.thecrimson.com/article/2021/9/14/cheng-save-shopping-week/>)

achievement.⁷

Likewise, many faculty support the pre-pandemic system of In-Term Registration, in part because of the high level of support undergraduate students give it, in part because that system gives faculty some distinctive benefits. We'll discuss these benefits in detail in Section 9.7, below.

Finally, some graduate students in their role as students enrolling in classes can garner some of the same benefits as do undergraduates.

With these considerations in mind, we set out the case for change, highlighting the main problems that arise within the pre-pandemic system, and then describing the improvements that are within our reach. We will discuss the extent to which the newly proposed system of course registration retains the benefits of the pre-pandemic registration system in Section 9.

5.1. Undermining Teaching

The pre-pandemic system of In-Term Registration detracted from the quality of teaching, and it did so through a number of pathways. Many of these pathways run via the unpredictability of enrollments in that system.

- Instructors may have to adjust pedagogical strategies “on the fly” if enrollments are very different from what they expected. Seminar-style discussions are not viable in a class of fifty, and a scripted lecture is artificial in a room of ten.
- Some instructors make pedagogical choices based on this uncertainty: they refrain from organizing field trips and including work with collections because they do not know whether the final class size will in fact allow for these events.
- Additional TFs may have to be hired after “Shopping Week.” At that point, many departments have trouble finding qualified teaching fellows or teaching assistants. As we describe below in greater detail, uncertainty about their appointments is a severe concern for many graduate students. Even when a qualified teaching fellow can be found after the semester starts, that TF must catch up on the materials for the class with insufficient time. For courses with a lab component, TFs may need to be trained in safety procedures on an unreasonably accelerated schedule.
- Since TF appointments are not guaranteed, there is less incentive for TFs to prepare for a course they may not end up teaching.
- With the variability in enrollment comes variability in how many different section meetings and/or labs a course will have. Many courses can only schedule sections or labs after the registration deadline. But at that point, students' schedules have become so constrained that it is sometimes difficult to find section times that the instructor and all the students can make. Anticipating this problem, some courses make sections optional, even if course heads would prefer to design their courses with sections as a required component of the course.⁸

We now turn from the mechanisms and pathways that undermine teaching quality in the system of In-Term Registration to a discussion of its scope. We'll focus on the most recent academic year that

⁷ See, e.g., *Student Agency for 2030*, OECD. https://www.oecd.org/education/2030-project/teaching-and-learning/learning/student-agency/Student_Agency_for_2030_concept_note.pdf

⁸ In some cases, the difficulty of finding qualified TFs is exacerbated by similar scheduling constraints. A course may need to retain a certain number of sections, even if the enrollment numbers do not justify all of them, simply in order to have enough different section times to meet student constraints.

saw a full year under the pre-pandemic system, 2018-19.⁹ The following two charts aggregate significant enrollment changes for courses that requested instructional support allocations, between the predictions prior to the start of term and enrollments post-registration for Fall 2018 (Figure 1) and Spring 2019 (Figure 2). Note that these charts do not include SEAS courses, since data for these courses was not available.

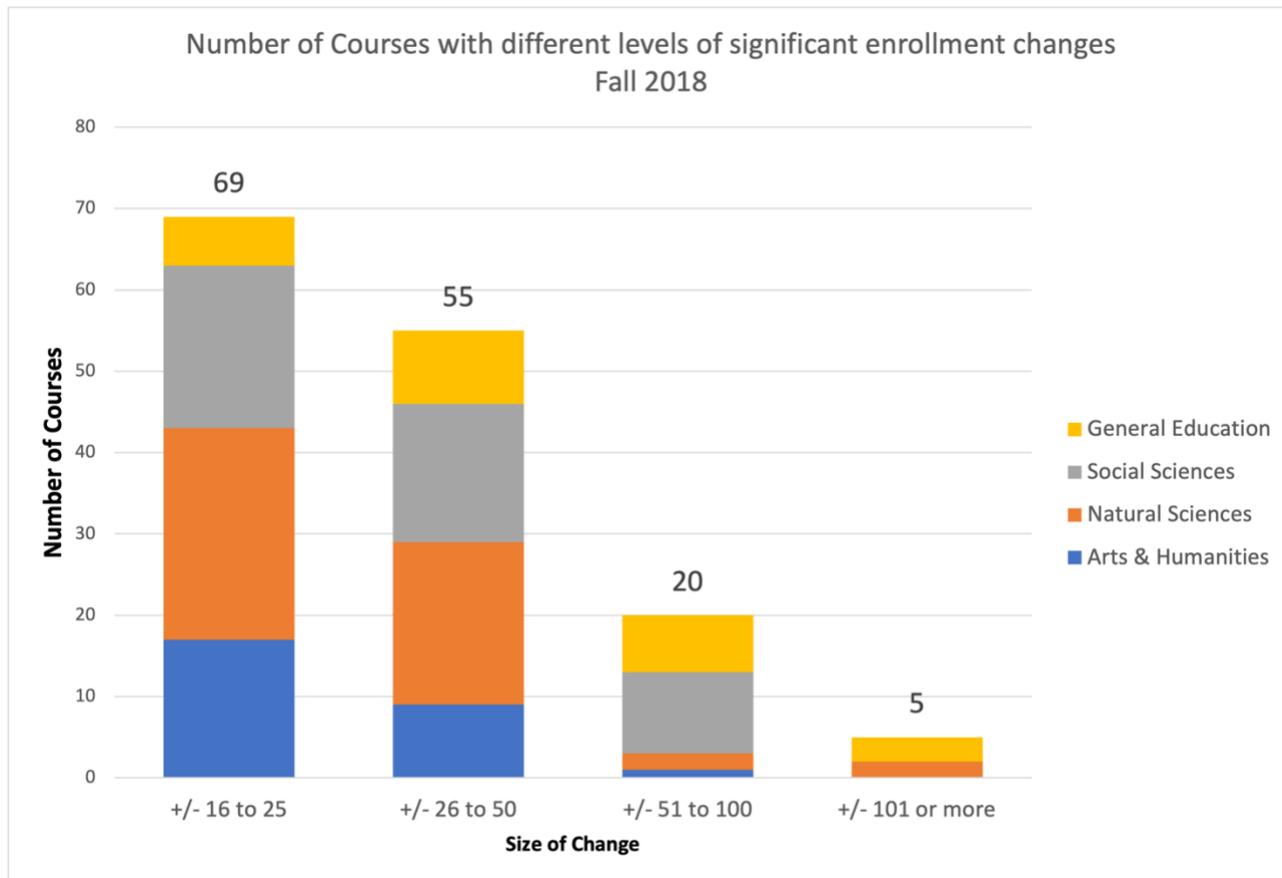


Figure 1

⁹ The numbers we report here are based on projection and enrollment data available through the OUE. They do not include information from SEAS since the allocation of instructional support is handled separately by that Division.

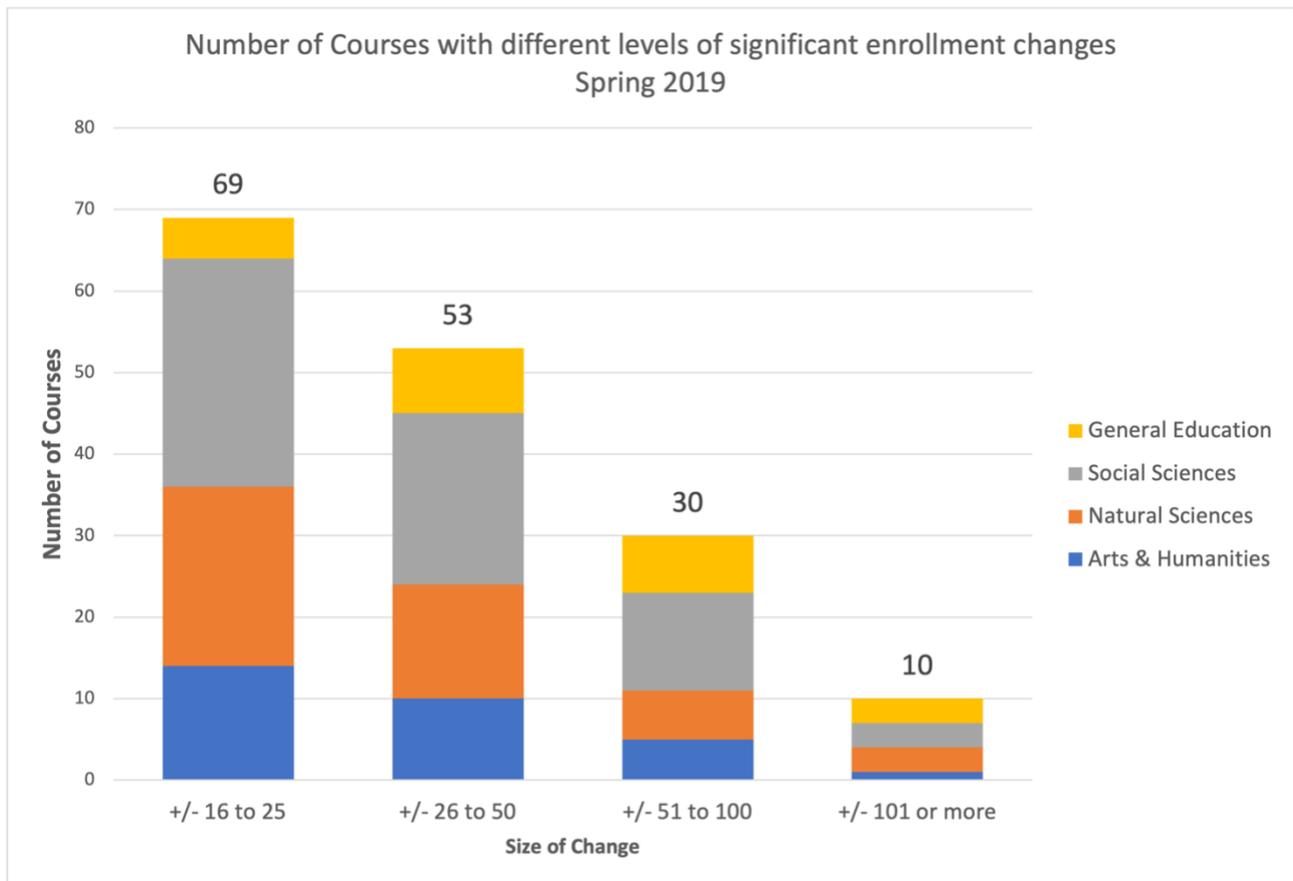


Figure 2

In these charts, we set aside courses that saw no enrollment changes as well as courses that saw changes of 15 or fewer enrollments, since these can usually be handled smoothly and without causing disruptions. A few points deserve emphasis.

- Unpredicted and potentially disruptive enrollment variations are present across the FAS. They are not restricted to a single division or program. While some of the best-known courses that have seen massive enrollment shifts are in the General Education program, courses outside of that program also see these shifts.
- Accommodating an additional 100 students usually requires hiring several additional TFs. Even in the humanities, where the teaching load for Teaching Fellows is among the highest, the highest typical workload for a single TF is two sections with 18-student targets, that is, 36 students per semester. So, accommodating an additional 100 students may mean finding up to three more qualified TFs even in courses where TFs have the highest teaching loads.
- How significant is the number of courses that see large enrollment change? One way to get a feel for the scope of the problem is that in the same data set, the total number of courses with at least 16 students were:
 - Fall 2018: 260
 - Spring 2019: 280
 That means that more than half the courses each term with at least 16 students saw such significant enrollment changes.

Along with these variations in enrollment comes variation in the number of sections allocated to different courses. As we discuss in greater detail in the next section, the allocation of sections to courses is not just determined by the course's enrollments. Many graduate students have a teaching guarantee as part of their funding package. Many graduate students in Arts and Humanities

departments, for example, are guaranteed teaching during their G3 and G4 years. So the University may well assign such graduate students to courses even if the courses' enrollments would not justify that assignment. Thus, in general, changes in section allocation are fewer than we would see were allocations determined only by course enrollments. Even so, we still see significant changes in section allocations to courses in both Fall 2018 (Figure 3) and Spring 2019 (Figure 4). As before, these numbers exclude SEAS courses, for which data was unavailable.

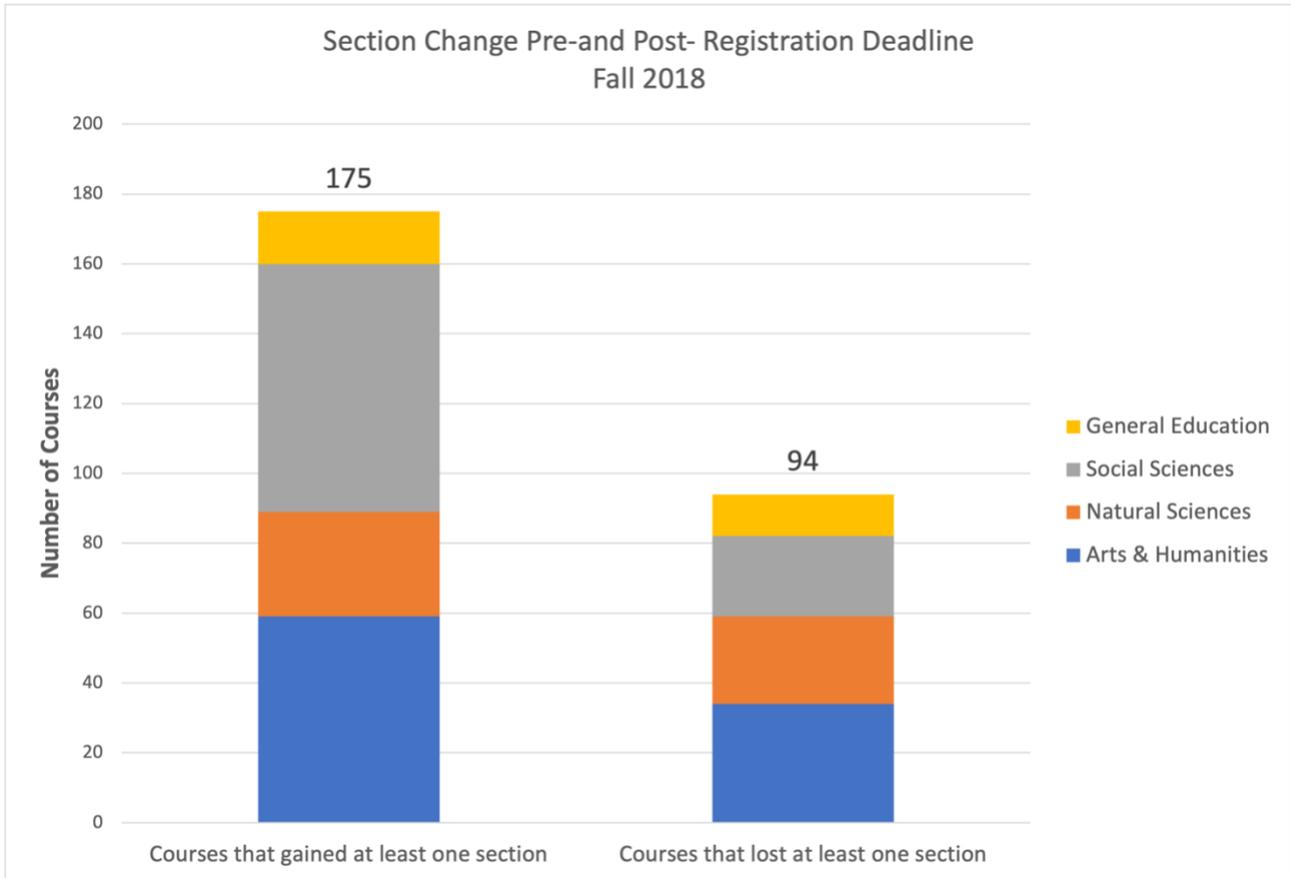


Figure 3

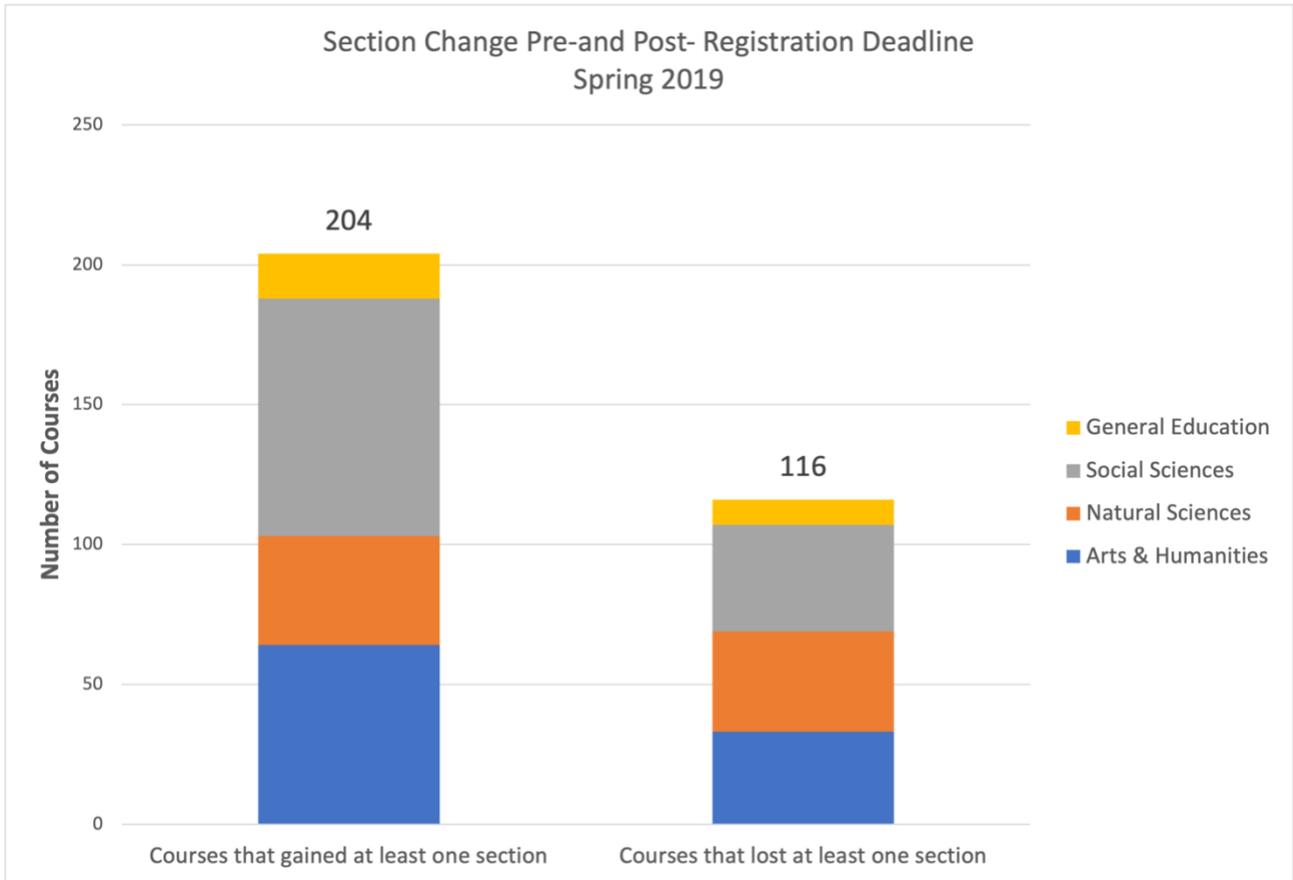


Figure 4

These charts aggregate the courses that have gained or lost *at least* one section in each term. The total number of section changes is much greater, as shown in Figure (Figure 5).

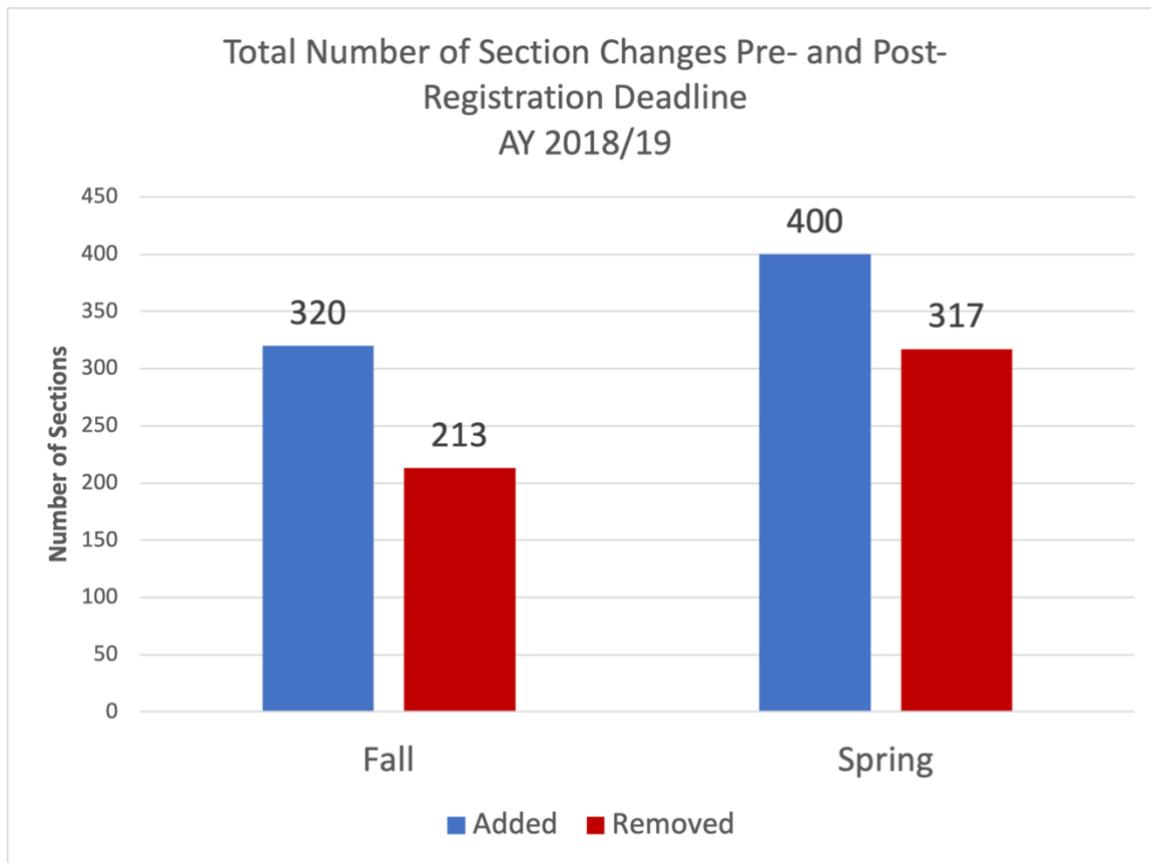


Figure 5

It is also important to keep in mind that *actual* variability understates the scope of the problem, since for many faculty and graduate students, the uncertainty around enrollments itself is a major concern. So even if a course happens to come in with roughly the predicted enrollments and ends up with exactly the predicted number of sections, faculty still need to plan for the possibility that it will not.

We have also attempted to determine whether the uncertainty and adjustments on short notice are reflected in the experience of students enrolled in courses. A good way of measuring this would be to determine whether academic performance is influenced by whether a TF or TA was appointed late, be that during or after “Shopping Week.” Unfortunately, this type of information is unavailable, so the Office of Institutional Research conducted an analysis using the top-line prompt “Evaluate your instructor overall” as an admittedly very noisy proxy for teaching effectiveness.

The analysis found only a slight correlation between appointment timing and Q-score. TFs with late appointments score, on average, between .05 and .15 lower on the Q than TFs with early appointments. TFs with later appointments are also slightly less likely to earn a 4.5 or above (46% vs. 53%) and slightly more likely to have very low scores of 2.5 or less (1.8% vs. 0.9%). These differences, although slight, are statistically significant. A much more important factor in accounting for variance in Q-scores is teaching experience.¹⁰

In light of how noisy the measure used is, we do not place great weight on these results.

¹⁰ Per the analysis provided by Harvard College Institutional Research.

5.2. The Burden on Graduate Students

The pre-pandemic system of In-Term Registration is marked by the fact that two types of decisions are delayed until the end of “Shopping Week.” The first, and more easily visible, is the decision on the part of enrolling students about which courses to enroll in. The second, less visible to many, is the decision on the part of the University and the FAS about which courses to support with which additional resources, including most crucially instructional staff. The University often only makes binding commitments to graduate student TFs and TAs at the conclusion of “Shopping Week” in order to be able to accommodate enrolling students’ preferences as much as possible.

If students enrolling in courses enjoy the flexibility of being able to enroll in courses without enrollment caps, or with relatively flexible caps, such flexibility must be provided somehow, and in the pre-pandemic system, that burden falls most clearly on graduate students who are uncertain where, and in some cases even whether, they will be teaching.

Thus the current system is a source of considerable anxiety and stress for very many graduate students. They must make contingency plans, negotiate with different faculty to secure possible teaching positions, and handle the stress of potentially disappointing faculty who are themselves in need of instructional support. As one graduate student put it:

I have had a horrible experience as a TF with shopping week. The course I was originally assigned to teach was half the size they guessed, so I had to scramble to find another course. As a consequence, I was incredibly stressed for 2 weeks and got almost nothing done.¹¹

As we mentioned briefly in section 5.1, graduate students thus have a strong incentive to seek out teaching for courses that are certain to have robust enrollments, even if these courses are outside of their area of greatest expertise. This prevents graduate students from gaining teaching experience in their fields.

Graduate student TFs also face a very direct financial burden. When TF assignments are made after the beginning of term, graduate students often begin receiving their pay late, sometimes months late.¹²

Here, too, the burden is not uniformly distributed among graduate students throughout GSAS. In some departments, undergraduate enrollment is so robust that graduate students effectively have guaranteed teaching assignments well in advance of the start of term. In other departments, the uncertainty is very high. We can see this reflected in graduate student attitudes towards the In-Term Registration system, as presented in a survey conducted by the Graduate Student Council in 2018.¹³ Graduate student respondents in the division of Arts and Humanities were *uniformly* in favor of implementing a system of Previous-Term Registration, while support for such a system was around 75%-80% among graduate students from other divisions.

¹¹ From GSC survey on “Shopping Week” and Early Registration, available here:

https://coureregistration.fas.harvard.edu/files/coureregistration/files/gsc_views_on_early_registration_11132018.pdf.

As that survey shows, the sentiments quoted above are representative of a common experience among graduate students.

¹² In some cases, this problem has been addressed by appointing TFs who have a teaching guarantee as part of their funding, but for whom a set course assignment could not be made prior to the end of “Shopping Week” with a “Course TBD” so that their information is in the payment system, even if their teaching assignment hasn’t been finalized.

¹³ Available here:

https://coureregistration.fas.harvard.edu/files/coureregistration/files/gsc_views_on_early_registration_11132018.pdf.

The survey only saw 56 responses, so we don’t want to place too much weight on these results.

There is also a significant difference between international graduate students and U.S. citizens or permanent residents, since under the terms of most visa statuses, international graduate students cannot work off-campus. For these students, the stakes associated with the question whether they find teaching work on campus are nothing short of extraordinary. They may have to leave the U.S., derailing their studies and in extreme cases forcing them to abandon them. The anxiety induced by this uncertainty is correspondingly great.

Finally, and perhaps somewhat surprisingly, teaching for a course with a consistently large enrollment is not the only avenue for some graduate students to achieve appointment security. In some cases, a graduate student's expertise is so specific that they are unable to teach anything but a small number of courses. For these graduate students, the University's commitment to guaranteed funding during their priority status years means that they are guaranteed low-enrollment teaching positions in their area of expertise.

5.3. Loss of Instructional Time

The policy of In-Term Registration has given rise to an unofficial norm under which instruction in many courses did not truly begin until after "Shopping Week."¹⁴ This has been felt particularly strongly in courses that have a pronounced cumulative structure, such as language courses. As one faculty member describes:

Teaching a language during Shopping Week was dysfunctional, as I imagine any course would be if it progressively builds knowledge from week to week or day to day. We could not assume that students in the second week of class would know any of the material covered in the first week, and could not do anything during the first week which would begin to build students' knowledge of the language. And yet we had to prepare 4 or more Shopping Week class sessions that would nevertheless be worth attending. In essence, we could not begin real language instruction for the first week and spent it all on culture (which would still be important, but not progressive); the first week was, in terms of language acquisition, essentially a labor-intensive misuse of time.¹⁵

Language courses have the most meetings per week. On the other end of the spectrum, courses that meet only once per week, especially seminar style courses, face a similar problem.

As with all elements of the pre-pandemic system, this problem was more pronounced for some courses than others, and some used *ad hoc measures* to deal with the uncertainty engendered by the In-Term Registration system. Some simply start covering material from the first class. Some courses have assignments due during the first week. Some reinforce the requirement that students begin attending class meetings from the very start of term via the controlled enrollment mechanism, which brings us to our next point.

5.4. Stressful Controlled Enrollment Processes

Many courses now have enrollment caps that are below student interest, necessitating a system of determining who is offered a spot in class. This includes random lotteries as well as a host of non-

¹⁴ As *The Crimson's* Flyby Blog said somewhat tongue-in-cheek, "If you play your cards right, shopping week can simply be an extension of winter break: catching up with friends all day, and then partying every night." (Enrique, Carmen S., *Shopping Week Mistakes*, <https://www.thecrimson.com/flyby/article/2018/1/24/shopping-mistakes/>)

¹⁵ Comment submitted via the Feedback Form of the Course Registration Website (<https://coureregistration.fas.harvard.edu>)

random methods of determining which students are admitted to a course, such as preferences based on concentration, class year, or an application. As an umbrella term, we will refer to these as courses with *controlled enrollment*, and the processes by which course heads determine who to offer spots in the courses to, *controlled enrollment processes*. The ways in which these processes are run leads to a lot of stress, for both students and faculty.

Some courses require interested students to attend the first class meeting and either bindingly accept or reject a spot in the course after that first meeting, a means to ensure that these courses can begin instruction at the very start of term.

Currently, some lotteries run late and unevenly, indeed, some only run once “Shopping Week” has concluded. Many students thus find themselves in a situation of having to accept or decline a spot in one course even as they are still waiting on results from other controlled enrollment mechanisms. In some cases, students never hear about the outcome of a lottery. What is more, students have to go through the controlled enrollment mechanisms as classes are ongoing, requiring them to make contingency plans should they be excluded from a course they wished to enroll in so that they are not too far behind in the course they enroll in instead. According to the Undergraduate Council’s Fall 2018 survey (1332 respondents), almost 70% of students reported having to wait for the results of a lottery before finalizing their course registration, an experience reported as moderately stressful (5 on a scale of 10). Faculty advisers have even shared with us that some of their advisees, in order to avoid this stress, avoid courses with enrollment limits entirely.

These findings among students mirror anecdotally reported attitudes among faculty. Many found the pre-pandemic system quite stressful since they felt the time pressure to get students settled in their courses just as keenly as the students felt the pressure to settle their schedules.

5.5. **Blocking Rooms**

FAS classrooms cannot be accurately assigned until weeks into the term when enrollments have settled down. There is a cascade effect—course spaces must be settled before section space may be assigned; non-course event spaces (conferences, symposia, meetings) may not be confirmed until well into the term. Priority is given to courses, and there is a high possibility that a section or event space will be cancelled if a course needs to be moved due to enrollment fluctuations.

Consider the number of changes to classroom assignments after the registration deadline in AY 2019/20. Importantly, these are just assignments for main course meetings, not for section meetings.

	<i>Fall 2019</i>	<i>Spring 2020</i>
<i>Total Room Assignments</i>	1763	1695
<i>Total Changes</i> ¹⁶	702	669

In other words, about 40 percent of classroom assignments had to be changed after the registration deadline.

Uncertainty around classrooms is of particular concern from the perspective of *accessibility*. When course locations are in flux, the registrar strains to provide an equitable educational experience for

¹⁶ Total Changes include both assigning a room to a course that were not assigned a room until after the registration deadline, and courses that needed to be moved.

students and faculty who rely on classrooms with special features such as adaptive technologies.

5.6. Accessibility

Indeed, concerns around accessibility extend beyond the setup of the classroom. Depending on the type and format of course materials, it can take several weeks for accessible versions of these materials to be ready. In the pre-pandemic system of In-Term Registration, that meant that students may not have accessible versions of readings by the time they are due.

5.7. Prospects for Change

As this overview has shown, the pre-pandemic system of course registration is probably best thought of as a framework that allows for significant variation. While most courses handle enrollments within the framework of a first week of course discovery, exploration, and selection, some courses operate on a different timeline for registration. While enrollments in some courses are sufficiently predictable in advance to allow for easy planning and administration, other courses are volatile and, at least with current resources, unpredictable. While some graduate students have effectively guaranteed teaching assignments, others face serious uncertainty. The FAS is not a single body with a uniform set of challenges and resources.

Some of the concerns we have reviewed, especially those that can be traced to enrollment uncertainty, are the direct results of explicit policies. Others, such as the loss of instructional time or the conduct of controlled enrollment mechanisms, are due to the practices and norms that grow up around and within the explicit policies. There, the policies influence and shape, but do not determine.

In the first instance, a change to the system of course registration is a change to the explicit policies. This is what we shall focus on in the remainder of this report, discussing associated norms and practices along the way. Moreover, a change to the system of course registration will not be a wholesale change that affects everyone equally. Instead, it is a change in framework that should allow more members of our community to reap the benefits that are already available to some, such as the ability for faculty to plan courses, for graduate student instructors to have appointment security, and for everyone to have a less stressful experience with controlled enrollment mechanisms. As we saw in discussing the situation of especially graduate student TFs, their appointments are influenced by many factors beyond enrollments, and GSAS will have to continue to work with OUE to find appropriate teaching positions for graduate students, sometimes on a case-by-case basis, responding both to the needs of the graduate students and the context of the courses for which students can potentially teach.¹⁷

Crucially, such incremental progress may require not just action at the level of the FAS as a whole through the process of passing legislation. We have already seen that different concentrations handle their tutorials quite differently, adopting ad hoc rules that fit the needs of all members of that concentration: students, teachers, and administrators. At a different level of organization, we have seen General Education adopt policies specific to that program, such as a coordinated ranked-choice lottery. Each of these parts of the FAS can operate within the framework that a system of course registration establishes.

Changing the system of course registration should therefore not be viewed as the only and final step in addressing the problems we have described in making the case for change. The question is rather:

¹⁷ This may include appointing different graduate students at different times, depending on the course's and the students' needs.

does the pre-pandemic system offer the space and resources to make meaningful headway on addressing the problems, so that more localized solutions can be used? We have concluded that it cannot. In order to make meaningful progress, a change to the registration system is necessary. It may not be sufficient. However, we believe that additional measures are best applied at lower levels of the organization so that they can be more tailored to the specificities of the situation that calls for them.

As we noted in the executive summary, we take the problem of enrollment uncertainty to be the most pressing, and we therefore focus mainly on that. This coincides with our procedural focus on which FAS-wide policies to adopt via Faculty Legislation, for we have come to learn that it is impossible to make meaningful progress without implementing a new system of course registration.

We turn to this topic next.

6. Why prediction alone will not solve our problems

We cannot meaningfully improve the certainty concerning enrollment numbers by only altering the predictive mechanisms used to project enrollments in courses prior to the beginning of term. Here, we share our reasoning for this conclusion.

In the context of this report, enrollment certainty has a very specific meaning. As we described in making the case for change in Section 5, enrollment uncertainty is a problem to the extent that it requires adjustments that themselves undermine teaching and learning. That means, for example, that a change in enrollment in a course that does not require any such changes—no change in teaching format, number of sections, assignment of learning spaces, etc.—is not something we are concerned with. Changes in enrollments between what faculty and administrators use for planning purposes and actual enrollments are problematic to the extent that they require changes in the allocation of resources. These are the changes that lead to graduate students being uncertain of their teaching assignments, of faculty not knowing what pedagogical strategies they can use, and of classrooms being shuffled. The goal of greater enrollment certainty is most definitely not to freeze enrollments completely.

6.1. The CS96 Report, 2003

Can we then gain greater certainty about enrollments by improving the predictive methods we use? This question was initially addressed in the wake of the inconclusive conversations about changing the course registration system in the early 2000s, described in Section 4 on historical background.

Several students in computer science, under the guidance of Professor Stuart Shieber, conducted a study to see how well course enrollment numbers could be predicted by bringing to bear sophisticated statistical and machine-learning resources. The study was conducted in the Fall of 2003 and the final report submitted in 2004.¹⁸ Its main conclusion was that it is possible to more accurately predict enrollments compared to a baseline. The report relied on two such baseline comparisons:

- A human baseline. A small number of courses (73) were selected and administrators in the departments offering them made predictions about enrollments. As the report itself states, "The 73 courses predicted are of limited scope and low in number, so the results obtained from the human baseline cannot be considered strictly comparable to those obtained from the [Machine Learning] system. Nevertheless, we provide these results because they are our best available approximation of human performance on the task of course enrollment

¹⁸ Available here: <https://coureregistration.fas.harvard.edu/files/coureregistration/files/cs96final.pdf>

prediction." (Page 41)

- The simplest possible automated baseline. "It predicts that courses previously offered will have enrollments equal to those of the last offering, and that new courses will have 26 students, the mean enrollment of all courses." (Page 41)

As the report itself notes, especially the second, automated baseline recommends itself by its simplicity and universal applicability, not its accuracy. So, while it is suggestive that the machine learning algorithm outperforms these baselines, the report couldn't conclusively show that predictive mechanisms could solve the problems generated by unpredicted and unexpected enrollments.

For this reason, one of the main recommendations of the CS96 report was to keep records of the predictions made in the course of projecting teaching support allocations to different courses over the years so that future investigations into bringing to bear machine learning solutions had a more realistic baseline to compare against.

Fortunately, the University did just that. For several years, the Office of Undergraduate Education (OUE) has used the Section Allocation Tool to track predictions about enrollments and allocations of teaching staff. The information about these projections, as well as the final enrollments and allocations have been recorded, and our committee was able to use these as a more realistic baseline against which to evaluate the potential of solutions based in machine learning.

6.2. *Diana Lee's Senior Thesis, 2020*

Diana Lee, a concentrator in the Computer Science Department, wrote her senior thesis pursuing precisely this line of inquiry.¹⁹

This is an impressive and important piece of work. Lee could draw on significantly better data than the CS96 report, since she was conducting her study after the FAS switched from physical study cards to the electronic my.Harvard system. Lee could also evaluate the success of her models according to some very important metrics. In particular, certain prediction errors are more important than others. For example, being off by five students in enrollment matters less in humanities courses if the difference is that between 25 and 30, but it matters much more if it's the difference between 34 and 39. That's because the standard target section size in the humanities is 18, so the first difference in enrollment will not precipitate a difference in the number of sections assigned to the course, while the second will. Lee evaluated both the baseline of the current system of prediction relying solely on humans and the machine learning models not just against the raw number of students, but also made some rough estimations about how many sections would be misallocated (we say more about the way in which these estimates are "rough" below).

The thesis is available on the course registration website.²⁰ Here, we summarize the main points.

Background information and assumptions about the thesis

As one may well suspect, the prospects for successfully predicting a course's enrollment will be quite different depending on whether the course has been offered before or is new. Lee thus separated her investigation into two parts, considering each of these subgroups.

The test case for the machine learning algorithms was a single year: the 2018/19 academic year.

¹⁹ The thesis was advised by Professor James Waldo, and is available in full here:

https://coureregistration.fas.harvard.edu/files/coureregistration/files/diannelee_thesis_final.pdf.

²⁰ https://coureregistration.fas.harvard.edu/files/coureregistration/files/diannelee_thesis_final.pdf.

That is to say: Lee used information from past years to train her algorithms, and then ran the algorithms to predict enrollments for 2018/19 on the basis of information about previous years. Lee then compared the results of these algorithms against baselines for that same year. The most important baselines were the predictions that OUE made after consultation with individual departments, and the allocations OUE made immediately after the registration deadline when course support staff were hired.

General Education courses were excluded from the study (page 20).²¹ It was reasonable to exclude General Education courses since the immediate historical data was very noisy as the General Education program transitioned into a new phase in the wake of the 2016 report by the General Education Review Committee and implemented different types of course capping and lottery mechanisms. Even so, this is a limitation of the study since General Education courses are often quite volatile.

In order to estimate the extent to which prediction errors in enrollments would require changes to the number of sections allocated, Lee made the simplifying assumption that the section size was uniformly 15 students. Some such simplifying assumption is required, but we want to stress that it has to set aside many of the factors besides enrollments that influence whether a section is allocated to a course. That includes whether a potential TF for the course has a teaching guarantee. If so, a section may be allocated so that this particular student can be given an appointment. Likewise, section sizes vary widely between different divisions, and tutorials in many concentrations are governed by widely varying policies as concerns the appointment of graduate students. We mention these considerations here only to emphasize that the absolute numbers about projected sections in Lee's research may be inaccurate. But that does not make Lee's research less valuable. It just means that we need to look to comparisons between options.

Key Findings

It is almost impossible to predict enrollments for new courses. One surprising finding of Lee's thesis is that the best overall predictive strategy for new courses is that they have an enrollment that is too low to justify the appointment of teaching support. This predictive strategy will lead to less error than our current system, where many departments seem to be too optimistic about enrollments for new courses. But this will not help to predict the enrollments for the relatively fewer courses that see significant enrollments even when they are first offered (page 52).

For continuing courses—courses that have been offered at least once before—a machine learning algorithm performs better than the OUE prediction. While the average estimated error in section allocation is 1.13 sections per course, it is 1.069 sections per course for the most successful machine learning model, the "Random Forest" model. We can put this in different terms that may be useful here (cf. pp. 56-7). The baseline comparison of OUE prediction was based on predictions for ca. 1000 courses for the full academic year, so roughly 500 courses per semester. Given the estimated TF allocation errors:

- OUE predictions would yield 565 misallocated sections per term.
- Machine Learning predictions would yield 534 misallocated sections per term.

These numbers require comment. It is important to keep in mind that section allocations are modeled within the context of this report on the simplified assumption that every course has a section size of 15 students. So, the *absolute* numbers in this comparison are not very informative.

²¹ Page references are to Lee's senior thesis.

What matters is only the *relative* improvement.

And while the machine learning option is an improvement, it does not represent the kind of qualitative jump that holds the promise that it is possible to reduce enrollment uncertainty to a significantly lower level than what we experience right now without any further input from students.²²

Finally, we emphasize that this study did not consider General Education courses, which are among the courses that see both large enrollments and high volatility.

The only viable path to meaningfully greater enrollment certainty lies in adopting a system of Previous-Term Registration.

7. Against Pre-Term Registration

In response to the COVID-19 pandemic, the FAS adopted a system of Pre-Term Registration. In that system, students registered for courses in roughly the two weeks preceding the term for which they registered. That system was a compromise. Registration could be conducted without requiring large numbers of students to be in confined spaces, and the system attempted to make as much information as possible available prior to the start of term so that students could make informed choices. But it was also constrained by the fact that the FAS could not change the timeline for constructing the course catalog “on the fly,” thereby constraining the possible changes to the registration timeline.

This Pre-Term system of course registration offered a few benefits. Faculty had slightly more advance notice about the likely size of their enrollments. Those graduate students who did not have settled teaching far in advance had a bit more time to find teaching appointments. Course lotteries and the like could be run before classes began so that students didn’t have to wait for their results even as they were doing work for their courses.

The Pre-Term system also had significant drawbacks. It was set up on short notice, and under challenging conditions. If students’ experience during “Shopping Week” wasn’t uniform prior to the pandemic, course presentation was even less so. Different courses differed on whether they held any real-time events prior to the start of classes, and among those courses that did, there was a lot of variation in how course heads used the time. Likewise, different courses offered very different kinds and amounts of information about the course through the course’s Canvas site.

These are problems that could be worked out with proper planning and taking feedback into account. However, a Pre-Term course registration system also faces structural problems that are inextricable from its basic make-up. For neither graduate students nor course heads is the additional lead time much of a difference maker. If a faculty member has to decide whether to organize their class as a seminar or a lecture course based on enrollments, then knowing one’s enrollments a few days before classes start is no better than knowing it at least roughly after the first class, based on the number of “shoppers.” If a graduate student has to decide whether to live in Cambridge or elsewhere, based on whether they will be able to support themselves through teaching, an extra week’s time does not help. And for students, Pre-Term registration occurred during a time of unpredictable commitments as students were busy moving back to campus or completing jobs or internships. And everyone lost a significant part of their semester breaks.

²² The data sets are probably too small to allow machine learning mechanisms to bring to bear the full power of big data processing, which is why we are not optimistic that allocating more computing and data resources to this strategy will yield a qualitative jump. (Personal Communication with Professor Stuart Shieber 07/12/2021.)

These considerations speak decisively against a Pre-Term system of course registration.

8. Details of the Proposed System of Previous-Term Registration

Systems of course registration need to be adapted to each institution, its resources, and its challenges. This is clear from our survey of course registration systems at our peer institutions.²³ While each school uses a system of Previous-Term Registration, there are significant differences in timing and how and when decisions about resource allocation are made. Likewise, different schools face different constraints. For this reason, we describe in some detail a system of Previous-Term Registration that is appropriate to the setting of Harvard and the FAS.

In a system of Previous-Term Registration, faculty, students, and administrators go through the course registration process in the term preceding the one for which students are registering. Academic advising concerning course selection takes place in the run-up to the registration deadline. Students then adjust their schedules at the start of term.

Registration for Fall Term classes during the preceding spring takes place for rising sophomores, juniors, and seniors. Incoming first-year students register for courses over the summer. Registration for Spring Term classes during the preceding fall takes place for all students at the same time.

We emphasize that there may well be some courses that do not fit this timeline. That is entirely to be expected. Any system of course registration has to be treated as a strong default, not as the only possible way for students to enroll in courses. Different courses will have significantly different pedagogical aims and needs, and we cannot have a single system that both is rigid and fits all cases. We have already seen such flexibility in the pre-pandemic system. While most courses in that system did not require any student actions prior to the start of classes, some did. Freshman Seminars and Expos sections are two prominent examples. Tutorials in at least some concentrations are another.

Likewise, we expect that there will be some courses for which enrollment cannot feasibly be settled during the standard registration period. We envision that this will be true of several types of courses, though even in aggregate, these courses account for only a relatively small proportion of total course enrollments.

- Courses that conduct interviews as part of their controlled enrollment mechanism.
- Tutorials in at least some concentrations. Staffing these courses well in advance of the beginning of the term in which they are offered can be challenging, especially when the planning and teaching of tutorials is significantly within the purview of graduate students. Graduate students may not be able to commit to teaching them far in advance since tutorials are often taught by more senior graduate students who need to wait for decisions about other funding opportunities, such as fellowships.²⁴
- Senior thesis projects that are advised by graduate students. Depending on exactly how a concentration handles its senior thesis process, students may not know whether they will write a senior thesis in the spring of their junior year, and departments may not yet know which graduate students are available to advise them, where graduate students handle senior thesis advising. The senior thesis process is one of the most variable department to department, so we cannot offer any general recommendations about how to handle them. We only wish to note that these are processes that, in at least some cases, will need to run

²³ An overview is available in Appendix 12.5.

²⁴ We should note that this is another example illustrating the fact that no constituency is monolithic.

separately from the default course registration process—as they do already.

- Courses that require cross-registration and are thus on a different schedule.

At the end of the registration process, students are enrolled in a full load of courses for the following term. If they take no further action, that settles their schedule for the upcoming term. However, these enrollments are only binding *in one direction*: a student who has enrolled in a class is guaranteed their spot, but that student is not bound to take the courses for which they register during the registration process. They may modify their schedules once the semester begins through the Add/Drop Process.

8.1. Advising

Academic advising would need to change in several important ways should the recommendations for Previous-Term course registration be approved. Academic advising would be based on a different timeline with many more nuances, depending on class year and semester. Rather than occurring immediately before the start of classes and during the first week of classes, as in the current system of In-Term Registration, academic advising will mostly take place during the preceding semester.

Previous-Term Registration will necessitate changes to academic advising, but it is worth noting that *academic* advising is one part of the broader system of advising support. Many people contribute to a student’s holistic advising network. For example, even when not assigned as a student’s official academic adviser, proctors and tutors get to know undergraduates as students and members of the community.

At present, undergraduates are assigned advisers based on their year of study. In the current system of academic advising, incoming students are matched with a first-year academic adviser, who is a member of the Board of First-Year Advisers (BFA). For some students, their first-year academic adviser is also their resident proctor, who lives in residence in the first-year dorms. Other students have non-resident academic advisers, who are staff or faculty. Incoming first-years have course selection advising meetings with assigned academic advisers during First-Year Orientation, conversations which are scaffolded by academic orientation events designed to introduce students to the curriculum. First-years meet with their academic adviser throughout the year, including to discuss course selection for the spring term. Before the pandemic, most spring-term course selection advising took place in the first week of spring term classes or the days immediately prior.

In the sophomore year, after students are assigned to an upper-level House, they are matched with a sophomore adviser, most often a resident tutor in the House. Sophomore advisers are responsible for course selection advising before students declare a concentration near the end of the third term, at which point concentrations take on the primary responsibility for academic advising including course selection.

We can thus distinguish three phases of advising in a typical student’s path through the College:

- First-year advising.
- Sophomore year advising prior to concentration declaration.
- Advising for all terms after the student’s concentration declaration.

The proposed move to a system of Previous-Term Registration presents distinctive challenges for each of these phases of advising. Before we discuss these, we offer two more general suggestions.

In thinking about how to conduct advising for returning students, we need to be particularly mindful of the workload of the academic advisers, since they must conduct their advising work in the middle of the semester. For this reason, we suggest that advising be conducted in waves: give each class

year (seniors, juniors, sophomores, first-years) staggered deadlines to lift advising holds, likely within the months of November and April. This will help spread the advising load out over time.

Exactly how to spread out the deadlines to lift advising holds will be different between the two terms. During the spring term registration period, when students register for the fall, the deadlines will be closer together so that all students can register between the time that the course catalog is published and the registration deadline. We expect that the workload on advisers, especially in large concentrations, will be manageable since graduating seniors will require less advising.

During the fall registration period, when students register for spring term classes, we suggest that the deadlines to lift advising holds be staggered more widely. The curriculum will largely be in place early in the term, so that seniors for example can usefully meet with their academic advisers relatively early in the semester. We also suggest that the deadline for sophomores to have their advising holds lifted be the last deadline (even after the first-year students) so that their advising conversations can take place after they declare a concentration.

We now turn to two groups of students for whom the advising experience will be most different. The first are students who are first entering Harvard: incoming first-year and incoming transfer students. The second are first-year students in their second term who are registering for the first term of their sophomore year.

Incoming Students

Incoming first-year students need information and tools to make well-considered course selection decisions. Incoming students should be provided guidance and resources over the summer, such as webinars and online guides to the curriculum, and should have advising conversations ahead of their registration period. In the summers of 2020 and 2021, the Advising Programs Office invited incoming first-years to webinars and small-group discussions about advising resources, the curriculum, and course selection. Nearly half of the class attended at least one session, demonstrating an appetite for academic advising the summer prior to matriculation. We encourage a continued pre-matriculation campaign to introduce incoming students to Harvard College. In addition, we recommend the OUE consider different approaches to building and sustaining strong academic advising experiences for first-year students that would complement the recommended timeline shift for course registration. We also draw attention to the fact that the advising timeline needs to fit with the timing of placement exams for first-year students and the respective parties should be involved in any shifts that are needed.

Advising for the Third Term

Several facets of academic advising for rising sophomores would also have to change. Currently, sophomores receive their academic advising through the Houses. Sophomores usually only meet their sophomore academic advisers as they return to campus in the fall, so they have to get to know their adviser at the same time as they select their courses for the term. Under a system of Previous-Term Registration, advising for rising sophomores would have to be fundamentally rethought. Perhaps, while registering for courses in the spring of their first year, rising sophomores will discuss course selection with an adviser they already know – their first-year adviser – rather than someone they are likely meeting for the first time. Alternatively, it may be possible to schedule course registration and the deadline to lift advising holds in such a way that first-year students register after Housing Day and could meet with both their first-year and sophomore academic advisers. While these are suggestions, we leave the academic advising experience and changes to the system to the OUE and its respective offices, in particular the Advising Programs Office, for closer consideration.

Even in a system in which rising sophomores register for courses in the spring of their first year,

there will still be a need and opportunity for academic advising through the houses, since students may well wish to adjust their course schedule during the add/drop period at the beginning of the term.

Concluding Remarks about Advising

In a system of Previous-Term Registration, advising conversations about course selection will be spread out, giving students time to reflect on their course registration plans. Students will meet with their academic adviser during the course registration period, and then have the opportunity for further advising conversation as courses begin the following semester. The first week of classes will require good academic advising as students consider and reconsider their course enrollments during a period of flexible add/drop. **Far from limiting academic advising opportunities, we believe Previous-Term Registration can provide more opportunities for thoughtful advising conversations.**

Academic advising on course selection will naturally take place within the system of course registration, to serve the needs of undergraduate students. Our committee has consulted with the leadership of the OUE, including the Advising Programs Office, as well as the DSO, including the First Year Experience Office, and all are aware of the impacts such a registration change will have on academic advising and residential structures. They have collectively made a commitment to collaborate and bring to the table appropriate solutions to ensure the continuity of excellence in academic advising within the framework of a new course registration system.

8.2. Course Information

Students need adequate information about courses in order to make informed choices about courses during the registration period. In all our conversations with representatives from other schools, this has come up repeatedly as the single most important obstacle in the way of a smooth and successful course registration period. And thus, we want to emphasize that **if the FAS Faculty votes to adopt a system of Previous-Term Registration, course heads must stand ready to make information about their courses available in time for students to survey the offerings, seek advice and input from advisers, peers, and others, and register for courses.**

Some faculty may well be able to provide full syllabi on a timeline for Previous-Term Registration, even if they are open to revision. But it is also true that the higher the demand placed on faculty for course materials to be ready ahead of time, the more faculty will not meet these demands. And in this context, it is more important that all course heads provide an adequate amount of information than that fewer faculty provide more.

For this reason, we recommend that the FAS provide some minimal templates that faculty and students can agree provide the crucial information for a course. This lightens the workload on faculty, since they do not have to make as many decisions about their courses (which chapter will I ask the students to read for the first lecture of week 9?), and it makes the key information more easily accessible to students. We include the templates in use at Yale and Princeton in appendix 0.

8.3. Registration Limits

We suggest that during course registration, students be limited to enrolling in four courses, the equivalent of a full rate of work for a term.

Students who wish to take more than the regular load of courses during a term can add the additional courses during the first week of classes as part of the add/drop process.

We make this suggestion, prompted by the example of our peer institutions. All the schools we

spoke to follow this policy, and we believe that it will not disadvantage students so long as there is a period at the start of term during which students have sufficient flexibility to adjust their schedule in light of whatever considerations are relevant at the time, including the desire to take more than four courses. This brings us to our next topic.

8.4. Add/Drop

We recommend that during the first week of classes, the processes of adding and dropping a class be as unconstrained as possible. In the first instance, that means that the FAS continues to maintain its policy of maximally flexible resource allocation: compatibly with constraints imposed by the instructor, such as enrollment caps or other requirements that students must meet to enroll, the FAS continues to make every reasonable effort to allocate resources in the form of instructional support and learning spaces to accommodate student demand. Relatedly, students can add and drop a course without restriction such as instructor permission for courses that allow such unconstrained adds. After the first week of classes, adding a course will require permission of instructor. This distinction between how the first and later weeks of the term are treated in the proposed system of Previous-Term Registration mirrors the distinction between “Shopping Week” and add/drop in the pre-pandemic system of In-Term Registration.

We will expand on the importance of this component of our proposal in Section 9 below when we explain how it seeks to retain the benefits of the pre-pandemic “Shopping Week.” It is crucial.

8.5. Benefits for Different Constituencies

We have noted that the system of In-Term Registration imposes significant stresses on many different members of our community. Here, we want to briefly mention how the system of Previous-Term Registration described so far addresses the ones that are not specifically caused by unpredictable enrollment variability, such as the scrambling for TFs.

Students

The first round of controlled enrollment processes will run during the registration period for most courses.²⁵ Therefore, students can avoid the stress of having to keep up with work for courses only to ensure that these courses remain as viable backups should they be excluded from their first choice of courses.

Especially at the beginning of an academic year, some students face additional challenges. These include making sure that their financial affairs, including financial aid, are in order. Within a system of In-Term Registration, students must handle these problems at the same time that they attempt to register for courses. Here, a system of Previous-Term Registration is clearly superior to its alternatives since it places the registration period far enough into the term for financial holds to be cleared up.

At Harvard, students have the opportunity to pursue many different credentials, each with associated requirements and options. Some of these credentials are obligatory, such as choosing a concentration, or meeting the General Education and divisional distribution requirements. Others are optional, such as secondaries or citations. In many cases, the requirements associated with these credentials can be pursued in many different ways: concentrations and secondaries have different tracks, students can petition to count courses towards the satisfaction of one or another requirement, and the like. Generally, a system of In-Term Registration forces students and administrators to

²⁵ Setting aside courses that, for whatever reason, operate on a different timeline, as noted at the start of this section.

check student progress and clarify any issues more quickly, and should a student find that what they hoped would meet a certain requirement does not, it is harder to switch their enrollments since they are already in the term. A system of Previous-Term Registration would allow more time to check that students are on track and allow for an easier adjustment should students find that they are not.

Finally, students who have needs that are met through services provided by the Accessible Education Office can be much better served, since these students can know their enrollments in advance and appropriate accommodations can be put in place so that they can fully participate in course events from the start.

Students and Faculty

Norms around how classes are conducted at the start of term arise within the official policy framework, even if they are not explicitly instituted. The system of In-Term Registration fostered norms that let instruction start in a serious way only in the second week of classes, especially for courses with a very clear linear structure. Faculty simply could not rely on students' attending all the sessions of the first week of classes, and they had only a dim sense of how many students seriously considered enrolling in their course.

In the system we have described, faculty will know more about this. But it is difficult to predict whether this additional knowledge will lead to new norms around the start of instruction, since that depends on just how much movement in enrollments there is during the add/drop period. We suspect, however, that as students need not attend as many classes simply as a matter of contingency planning for the outcomes of controlled enrollment processes, they can focus their class attendance more on the courses they are definitely taking and the ones they are exploring. That, in turn, will make it easier for students to keep up with coursework from the start of the term, making it more feasible for faculty to begin instruction at the beginning of the term.

At the same time, we need to temper the expectations of just how much of course logistics can be settled before the start of term. Many courses have multiple types of class meetings. Two common models are the lecture/section and lecture/lab format, where students register for the main lecture meetings associated with a course as well as one section/lab, where students usually have the choice of several times.

From the perspective of settling a student's schedule in advance, thereby allowing the student to plan, and from the perspective of allowing instruction to start in earnest from the beginning of the semester, section and lab meetings are just as important as lecture meetings for courses where sections or labs are required components of the course. Thus, from the planning perspective, a system of course registration could benefit both students and faculty if students could enroll in all required class meetings for a course at the same time or nearly enough the same time.

However, we doubt that this would be possible even in a system of Previous-Term Registration. It would require that enrollments be settled before course registration, that teaching staff be allocated to courses before course registration, and that teaching staff know enough about their schedules, including their own requirements, to be able to plan this far in advance. Certainly, in a system in which teaching resources are allocated with as much flexibility as possible, this will be difficult to achieve. Even so, having a much clearer idea of enrollments before the term begins will allow section scheduling to take place much earlier in the term than in the pre-pandemic system.

On a separate point, a system of course registration that would allow teaching staff to be assigned to courses in advance of the term in which the course is conducted will allow teaching staff to be trained. We recognize that many faculty do not currently engage in specialized training of their Teaching Fellows, Teaching Assistants, and Course Assistants, and we suspect that for many courses, that will continue to be the case, even if teaching staff are assigned to a course in advance.

However, having settled assignments of teaching support staff to a given course would allow courses that place particular pedagogical demands on their staff to train their staff appropriately. These could include courses that discuss “hot” issues, and which might create tense situations in the classroom, or courses that tend to see students with special academic needs.

8.6. *Rough Timeline*

Fall

Late October: Departments finalize their spring course offerings, students can begin to have advising conversations to have their advising holds lifted.

Late October and early November: staggered deadlines for different class years to have their advising holds lifted.

After the Concentration Declaration Deadline: deadline for sophomores to have their advising hold lifted.

Middle of November, before Thanksgiving Break: Course Registration Deadline.

Spring

Middle of March: Course Catalog is published, students can begin to have advising conversations to have their advising holds lifted.

Early April to middle of April: staggered deadlines for returning students to have their advising hold lifted.

Middle of April: Course Registration Deadline for returning students

End of July: Course Registration for incoming first-year students

8.7. *Suggested Practices for Controlled Enrollment Mechanisms*

We want to briefly touch on some suggestions for best practices for running lotteries and other controlled enrollment mechanisms. These are intended as suggestions since the particular shape of the controlled enrollment mechanism for a course needs to be chosen based on the pedagogical aims of each course. For some courses, a completely random lottery may be appropriate, while for other courses, a quota system of drawing students from different class years may be appropriate, while for still other courses an application system may be the right choice.

Whatever criteria a course head chooses for their controlled enrollment system, we offer the following suggestions.

Treating Students from Different Class Years Differently

Many schools implement a system in which the most senior students are given preference for places in courses with controlled enrollments since these students will have fewer—and in the case of seniors, no more—opportunities to take the course in the future. But we want to emphasize that just as is the case under current policies, it is up to course heads to decide who to admit to their controlled enrollment courses. They may, if they wish, give preference to more senior students.

Here, we offer a suggestion about how to implement a policy that gives preference by class year.

We have seen several schools offer places in courses with controlled enrollments on a strict first-come, first-served basis, together with staggered enrollment periods for different class years, usually seniors first, then juniors, etc. Within each staggered period, students are offered spaces in

courses on a first-come, first-served basis, as well. In the experience of our peer schools, this leads to the predictable behavior that students all attempt to enroll in courses at the very first moment that course registration opens for them. If that time happens to fall during class times, students will be absent from class to secure their enrollments for the following term. This is an undesirable consequence that we suggest the FAS avoid. The same effect of giving more senior students priority during course enrollment can be achieved by allowing all students to indicate their interest at the same time and then giving seniors preference when the controlled enrollment process is run.

This is an example of an information technology capability that we recommend that HUIT together with the registrar develop. Indeed, we believe that the principal new requirements that the FAS information technology needs to meet are resources to make handling controlled enrollments as smooth as possible during the registration and add/drop periods. This brings us to the next point.

Maintaining a Robust, Centralized Waitlist System

As we noted, there are at least two moments in the course registration system that make having a robust waitlist system attractive. The first arises from the fact that registration for the Fall Term takes place separately for returning students and incoming First Year students. That makes it desirable that returning students can be placed on a waitlist should spots be available after First Years have gone through registration. The second arises from the fact that students will only be able to enroll in certain courses at the start of the semester for which they are registering, be that because the courses have been recently added or because they have a controlled enrollment mechanism that can only be run then. Whatever the reason, students who enroll in these courses will vacate positions in the courses they originally enrolled in, and it would be a benefit for the students next in line for these vacated positions to be automatically offered these spots.

Relatedly, it would be useful to implement an automatic course swapping mechanism.²⁶ This would be particularly helpful when students want to move between courses that all have enrollment controls, e.g., where both the course the student wishes to drop and the course the student wishes to add have enrollment caps. In such a case, a student could identify both the course they wish to add and the course they wish to drop, and as soon as a spot becomes available in the course the student wishes to add, the system removes the student from the course they wish to drop. This would streamline the process of allowing students to move between courses with enrollment controls, since there would not be any delay in the student dropping the course that they no longer want to enroll in, thus more quickly freeing up that spot for another student.

Tracking Students' Intentions to Enroll

We have mentioned above that some courses will almost certainly be in a position of only being able to offer places to students at the start of the term. We recommend that the Registrar's Office and HUIT provide the ability for a student to indicate that they intend to enroll in a course for which enrollment can only be decided at the start of term. This could be achieved, for example, by maintaining a student's Crimson Cart after registration, and using information about courses in the students' carts as a guide to how many students will enter the controlled enrollment mechanism for a given class at the start of term. This would give heads of such courses a better sense of, for example, how many interviews they will need to conduct. Students who wish to enroll in such courses once term begins should enroll for their back-up courses during the registration period.

²⁶ Many other institutions already use such a system.

9. The Benefits of “Shopping Week”

In Section 5, we described the case for change from the pre-pandemic system of In-Term Registration. There, we noted that “Shopping Week” enjoys extremely high approval and allegiance among undergraduate students. A significant number of faculty and some graduate students favor it, as well.

We have argued that even so, the case for a change is strong enough to warrant a move to a system of Previous-Term Registration. We now want to discuss the ways in which the particular version of Previous-Term Registration that we described in Section 8 can retain or replicate benefits of “Shopping Week.”

In doing so, we want to focus as much as possible on the aspects of the pre-pandemic system that most support the teaching mission of both the College and GSAS (see Appendix 12.2 for statements of these missions). We will focus on both outcomes and procedures. The list of features is drawn from listening sessions with undergraduate and graduate students, informal conversations with students and advisers, and input from the Undergraduate Council in the form of their research document on “Shopping Week.”²⁷

From the perspective of students enrolling in courses, both undergraduate and graduate, one important outcome---perhaps the most important outcome---of course registration is being enrolled in a set of courses for the term. That outcome is successful to the extent that the courses the students are enrolled in fit with their academic goals, unsuccessful if not. To have an umbrella term, we can say that a given student's courses are a good or a poor fit.

Procedurally, a system of course registration can support a student's sense of agency in their own education by making their ultimate enrollments as much a matter of their own decisions and choices as possible, choices that the students make in the light of sufficient information to let them make informed decisions, and under conditions conducive to making good choices. As we noted in Section 5, supporting students' agency and their excitement about taking courses is an important element in fostering academic success.

Separately, a system of course registration can also support the quality of instruction, and as we have suggested in Section 5, it is here that the system of In-Term Registration faces its greatest shortfalls.

In discussing the case for change, we noted that many faculty also favor a system of In-Term Registration over its alternative. Naturally, some of the reasons for a preference for a system of In-Term Registration concern something more akin to convenience. It can be convenient for faculty to only need to prepare course materials in time for the beginning of term. Indeed, as we noted in Section 8.2, one of the greatest obstacles to the smooth operation of a system of Previous-Term Registration lies precisely there: faculty need to provide timely and adequate information about the courses they are going to teach. For the purposes of this report, we set such considerations of convenience aside, focusing only on how elements of the system of In-Term Registration more directly support the teaching mission of the College and GSAS.

Faculty of course have an interest in teaching courses that are a good fit for the students who enroll in them, and that the students be in the best position to succeed. In that respect, faculty interests coincide with the interests of the students they teach. We want to mention one additional factor that we have heard from some faculty: not having to commit to teaching a certain line-up of courses allows faculty to teach courses on timely topics. We will address this concern in Section 9.7, below.

²⁷ Available here: https://coureregistration.fas.harvard.edu/files/coureregistration/files/shopping_week_research.pdf.

Administrators and graduate students in their roles as instructors do not seem to reap any distinctive benefits from the pre-pandemic system of In-Term Registration. So, we will set them aside for now as we discuss the benefits of that system to different constituencies.

To summarize, we have identified the following list of features of the pre-pandemic system as providing important benefits.

- Students can choose their enrollments on complete information, including:
 - Complete Syllabi.
 - First-hand experience of the classroom.
 - Information gathered through individual contact with a course head.
 - Knowledge of the full suite of curricular options.
 - Knowledge of their own interests, goals, and prior academic performance.
- Students experience as little "Lock-in" as possible, so that it is as easy as possible for students to act on the information they gather in constructing their schedule.
- Students are attitudinally prepared for a successful term: they have a sense of agency and academic excitement and vibrancy.
- Faculty can design new courses or modify existing ones on short notice.

Some of these statements of benefits deserve elaboration. We provide this in the next sections.

9.1. Information

We described the outcome that everyone in the FAS desires for students above, in part, as allowing students to arrive at an ultimate set of enrollments that fit with their academic goals. These goals are themselves what we might call a "moving target": especially for undergraduate students, the time spent at Harvard is a period of exploration and transformation. Indeed, it is the very mission of the College to encourage transformation. That crucially includes the students' academic goals: students need to be able to reconsider and perhaps alter their academic goals while they are at Harvard as they learn more about their talents and interests and come to imagine different possible futures for themselves.

Exploring courses is therefore not simply a matter of finding courses that fit with antecedently given and fixed goals. The process of course exploration itself shapes the students' academic goals, which in turn shapes the choices students make about particular courses or whole directions of study.

We thus have a duality of aims of course exploration: to shape academic goals, and to identify courses of study to meet them.

There are many ways for students to explore courses with this duality of aims in mind. Students have discussions with advisers, peers, family, and friends. They browse the course catalog, read syllabi, actively seek out courses that address topics that are of interest, and they attend classes to see if they are a good fit.

In the pre-pandemic system of In-Term Registration, the information about courses that students could draw on before the term began was very sparse. In most cases, it consisted of a course title, description, and if the course had been taught before, student evaluations from previous iterations. A great deal of exploration through all of the different information channels was thus compressed into "Shopping Week" and the time immediately preceding it. Students would meet with advisers, often have the first chance to look at a syllabus only as the term begins, and attend initial class meetings, some in full, some in passing. They would chat with their peers about the courses they had already

"shopped" and the ones they were still planning to visit. They would eliminate some courses from consideration, adding others, navigating at the same time a host of variegated controlled enrollment processes.

At this point in the term, the students had a lot of information, provided through many different channels. They also knew the most about themselves, since they had had a chance to incorporate all their experiences, in school and out, leading up to that term's academic work, including their past academic performance. Based on that information, the students could make their course selections, within the constraints of schedules, enrollment caps where those existed, satisfied prerequisites, and the like.

To summarize these reflections, we take it that the key benefit that students enjoyed in the pre-pandemic system of In-Term Registration was the fact that they could shape their course enrollments on the basis of as complete information as possible, both about the academic options available and themselves.

How does the system of Previous-Term Registration that we have described in Section 8 measure up against this desideratum?

It is clear that students make many decisions about courses independently of having attended any class meetings. After all, no student actively shops each and every one of the many hundreds of courses offered every term. In the pre-pandemic system, students made these decisions based on the information we described: course title, course description, and course evaluations where available, together with input from advisers, peers, etc.

In a system of Previous-Term Registration, students will actually have more and better information about the courses they are considering at this stage, since course heads need to provide more information about course materials, topics, assessments, and the like, than they did in the pre-pandemic system. So the selection process that precedes the first week of classes will put students in a better position to make informed choices. In this respect, course exploration will be improved compared to the pre-pandemic system.

Likewise, we would hope that many faculty will be available to answer questions about their courses during the registration period. So at least some of the questions that students need answered to determine if a course is a good fit for them may be answerable during the registration period. In addition, faculty will be available at the start of classes.

And of course, students will be just as free, and just as welcome, to attend as many courses' class meetings as they were during the pre-pandemic system of In-Term Registration. So, they will be able to gather first-hand knowledge about courses in exactly the same way during the first week of classes. In the same way, they will be able to revisit any of the decisions they may have made in the past. They may have excluded a course from consideration based on the information available before the term and then be moved to take another look at it based on the recommendation of a peer. The grades they received in the previous term may have revealed new opportunities or difficulties.

Finally, students can continue to use the first week of classes to reconsider their course choices in light of any changes to the curriculum that may have been made since the course registration period. Courses may be removed as faculty become unavailable, and other courses may be added as new faculty join the FAS after the registration deadline.

Taken together, all of this means that students will have more information available to them before the start of term, and exactly as much information once the term starts. So, from the perspective of giving students information about courses, the system of Previous-Term Registration is an improvement.

Of course, if the only change to the system of course registration we are proposing consisted in giving students more information about courses earlier in the process, we suspect that there would be little concern about the change, except perhaps on the part of the faculty who have to provide this additional information. The crucial question is whether the fact that students *register* for courses in advance of the beginning of courses will meaningfully restrict their ability to construct a set of enrollments by the end of the first week of classes that is a good fit with their academic goals at that time. Is it more difficult to arrive at such a schedule by adjusting a preliminary schedule via a process of adding and dropping classes from a set of enrollments than by only adding courses at the end of the first week to an officially blank slate?²⁸ We turn to this question next.

9.2. Logistics

The logistical issues around schedule adjustment are fundamentally driven by how flexible resource allocation is during the first week of classes. If resource allocation is maximally flexible, students will have many of the same options as they would have in the pre-pandemic system of In-Term Registration. This is why the proposal we made in Section 8.4 is so important. It is the element of the course registration system that most powerfully influences just how flexible and frictionless the add/drop process during the first week of classes can be.

In the proposed system of Previous-Term Registration, students can add courses without enrollment caps in exactly the same way as in the pre-pandemic system. Since the university will continue to meet student demand by allocating teaching resources for these courses, there is no need to impose any additional administrative hurdles, such as requiring permission of the instructor.

The same holds true for courses that have some type of controlled enrollment but no enrollment caps, perhaps as a means of ensuring that students are adequately prepared. Here, too, there will be no difference between the pre-pandemic system of course registration and the proposed Previous-Term system.

This is also true for courses that are added to the curriculum only after the course registration deadline. Students will have the opportunity to add them to their course schedule at the start of term in precisely the same way as in the system of In-Term Registration.²⁹

Having students register for courses during the previous term *will* make a difference in courses with course caps. Students who want to add a course during the add/drop period at the start of term only have access to the spots left open at the conclusion of course registration in the previous term and those opening up as other students drop the course. Students who wish to add the course at the start of term may thus face longer odds of being offered a spot than students who registered during the registration period.

This difference is undeniable, so let us consider how widespread this reduction in flexibility during add/drop might be in practice. Here, the crucial question is whether a course with an enrollment cap actually reaches its enrollment capacity. Consider the numbers for Fall 2021, when there was an

²⁸ We say that the slate is "officially" blank since many students enter the term with at least some of their classes already settled, at least in their own mind.

²⁹ The most important subclass of courses that are added to the curriculum late are courses offered by faculty who are only hired during the spring or summer preceding the academic year in which they will teach courses. This includes faculty joining the tenure track, but also lecturers and preceptors. To get a sense for the scope of the issue, the FAS employs about 230 lecturers every year who teach one or two courses per term. Some of the courses these faculty teach are pre-determined and already in the catalog, albeit lacking instructor information. Other courses are newly developed by the faculty, and these are genuinely new.

unprecedented number of undergraduate students enrolled.³⁰

Immediately following the registration deadline, which is when demand for spots in capped courses is at its peak, there were 403 courses with an enrollment cap. We set aside tutorials, since these are highly idiosyncratic and usually run on their own registration timeline, something that we expect to continue in any future system.³¹ Of the remaining 392 courses:

- 352 courses still had spaces available at the registration deadline
- 40 courses were at capacity.

We also want to add that in particular first-year students in their first semester will experience hardly any difference since, historically, very few first-year enrollments are in courses with enrollment caps (setting aside the special cases of Freshman Seminars and Expos and other courses open only to first-year students, such as Hum 10). In the Fall of 2021, for example, there were only 538 total enrollments among first-years in courses with enrollment caps. And only 13 such courses had more than 10 first-year enrollments.³²

These considerations suggest that logistically, the flexibility that students will have to *adjust* their schedule during add/drop will not be significantly less than the flexibility they had during the pre-pandemic system of In-Term Registration.

We believe that this logistical element is the most important way for the FAS to retain many of the benefits of the pre-pandemic system.

9.3. Risk and “Safe Choices”

These considerations speak to one of the most important issues we've heard from students, both in informal conversations and in surveys. It is important to students to try out a course with as little risk as possible. In this context, we consider the relevant risk to end up enrolled in a course that is not a good fit by the end of the first week of classes.

The proposed system of Previous-Term Registration, like any course registration system, would not impose any direct limits on a student's ability to *drop* a course. A student's enrollment in a course during the registration period never by itself commits the student to staying in the course. A student will only ever be prevented from dropping a course indirectly, for want of another course to add in its place. Thus, the risk associated with trying out a course is a direct function of how hard it is to add a different course that is a better fit during the add/drop period.

In light of the considerations we just marshaled, this risk is barely larger in the proposed system of course registration than it is in the pre-pandemic one.

Relatedly, we may ask whether a change in the registration process is likely to lead to a change in registration patterns. Will students take more or fewer risks, will they gravitate towards “safe” choices?

As a first point, the notion of a “safe” choice is an incredibly flexible one. It means very different things to different students. For some students, the risky choice may be one that diverges from the path they are expected to take by family and friends. For others, the risky choice may be taking

³⁰ Per data provided by the Registrar.

³¹ There are more than 11 tutorials offered every semester, of course, since there are more than 11 concentrations. But not all concentrations list their tutorials with enrollment caps in the course catalog. That explains why only 11 courses were excluded on the basis of being tutorials.

³² Per data from the University Registrar.

courses in fields other than the ones they have already studied in previous schooling. As one current graduate student, who was also an undergraduate at Harvard, notes:

Speaking from my own experiences, as well as those of my friends and several studies on the subject, it's no secret that men are more likely to overestimate how well they will do in courses and attempt harder courses than women even when women are doing equally well or better. Having the ability to try courses with zero commitment was essential to me taking the more advanced courses I did my freshman year and put me on my current path toward academia. It is not an underestimate to say that I would not be where I am today without shopping week. Additionally, when you are one of the only women in your classes, seeing who else is in the class and the personality/sexism of the instructor is something you cannot gauge without in person instruction. Finally, the difficulty of classes in the math department varies dramatically from year to year (for example, out of two years I shopped math 113, one complex analysis instructor gave grad qual questions on his midterm, while another started by telling us how complex numbers work and what a proof is). The only way to know the difficulty of these classes is to know the instructor which relies on connections in the department, which white men who took 55 are much more likely to have than anyone else.³³

We take considerations about risk seriously, and this is one of the important considerations that leads us to advocate for making the process by which students can adjust their schedule during the start of term as flexible as possible. We believe that this is the most reasonable strategy to pursue.

Beyond this, we have no way of telling whether the change in registration process will lead to a change in registration patterns. Yale, which has recently transitioned from an In-Term Registration system akin to Harvard's pre-pandemic system to a Previous-Term system, cannot yet tell if there are any changes in patterns in the wake of the change in registration process.

Finally, we note that the pre-pandemic system was rife with its own patterns of safe choices. Perhaps the clearest such pattern is that new courses almost uniformly see very low enrollments.

9.4. Attitudinal Issues

The two preceding subsections also bear directly on the attitudinal issues we raised above. To the extent that students can construct their schedule based on as complete information as possible, and as free from other constraints as possible, they are able to experience a sense of agency and control over their own education. As we have argued, the system of Previous-Term Registration can provide almost the same flexibility as the pre-pandemic system of In-Term Registration.

In fact, there is one important respect in which the system of Previous-Term Registration may be superior. We have noted above that lotteries and other controlled enrollment processes are a source of significant anxiety and stress among students registering for courses during "Shopping Week." For many students, this process would take place prior to the start of term, thus removing this source of anxiety and stress.

Likewise, students who were unsure about which courses with controlled enrollments they would be admitted to had to keep up with the work for their first-choice course as well as their second- and third-choice options. That additional workload would be removed, allowing students to spend their

³³ Comment submitted via the Feedback form on the course registration website (<https://courseregistration.fas.harvard.edu>).

time during the first week of classes elsewhere.

A third consideration along similar lines: in a system of Previous-Term Registration, it will be easier for advisers to check that students are completing the requirements for the credentials they are pursuing, including concentrations and secondaries.

Finally, we recognize that prior to the pandemic, the first week of classes during a semester was marked by high levels of energy and excitement on campus. To be sure, some of this excitement was due to scrambling to keep up. But it was also a time marked by the excitement of possibilities as students attended many different classes, shared their impressions with each other, and opened themselves up to being moved out of the tracks they had laid with greater or lesser firmness in the time leading up to term.

We cannot tell whether a move to a system of Previous-Term Registration would significantly dampen this source of excitement. As we said, we fully expect that within such a system, students would still be encouraged to attend many different classes and feel free to make use of this opportunity. And the fact that students would be able to act on the information they gathered during the first week of classes by adjusting their schedule would continue to make this an activity worth their time.

9.5. *The Psychology of Failure*

In listening sessions that we conducted with members of our community, we have heard several times that independently of any logistical or policy mechanisms that might lead students to feel locked into their schedule, there is an important psychological factor to consider. Right now, dropping a course can feel like an admission of failure, and nobody likes to feel as if they have failed. Especially not at Harvard.

For that reason, there is a big difference between starting the semester without any set schedule and then adding courses, as students do in the present system, and starting the semester with a preliminary course schedule in place that is modified by dropping and then adding courses. The latter is harder, just because it includes a step that can for some feel like failure, which the former avoids.

We take such psychological considerations seriously. We are keenly aware that students avoid classes that would otherwise meet their interests and serve their intellectual goals, for a host of psychological reasons. And we want to design a system of course registration that minimizes such obstacles: the point of a course registration system is to give all students real opportunities to enroll in classes that serve their intellectual interests. But we also want to suggest that the meaning of a particular action depends on the broader context. In particular, whether dropping a class feels like a failure to the student doing it, or is viewed this way by others, depends on the broader context. In particular, a student may be more heavily identified with their choice of courses two weeks into a term than at the very beginning, even more so if this student has remained in the class after exploring many others. By contrast, a student who drops the class on the first day will most likely not identify nearly as strongly, and hence not experience the drop as a failure.

Here, it may be useful to reflect on how students experience dropping a course very early in the semester for which the FAS already has early registration, such as Freshman Seminars or some tutorials. We suspect that whatever feeling of failure might be attached to dropping a class later in the semester, it is much attenuated when a student drops a Freshman Seminar after the first meeting because it's just not right for them.

9.6. When Does Instruction Start?

In discussing the case for change in Section 5, we focused on the uncertainty around enrollments and its knock-on effects, since these are problems requiring a policy response: the move to Previous-Term Registration.

Another factor contributing to the case for change is the loss of instructional time. This is not a matter that requires separate Faculty Legislation, since it is simply a matter of how faculty choose to make use of their class time. However, the question of when instruction begins interacts with the issue of how easy or difficult it is to adjust one's schedule, and what kind of information students can glean from the first week of classes.

In the system of In-Term Registration, courses have differed significantly in when they start focused instruction. Some begin at the first class meeting, while others spend the first week of classes "selling" the course to prospective enrollees and only begin focused instruction the second week of classes. Likewise, labs and sections usually cannot meet until several weeks into the term because sectioning and the like cannot be done until enrollments are settled.

From the perspective of making it easy to adjust one's schedule in light of information one gathers during the first week of classes, the fact that courses do not start focused instruction in the first week makes it easier to add that course at the end of the first week. Correspondingly, if courses begin instruction on the first day of classes, it becomes harder for students to add the course after the start of term since they will have to catch up. This is an academic, not a logistical hurdle.

Thus, if faculty generally decide that they will follow a norm of beginning focused instruction during the first class meeting, students will be more constrained in their ability to adjust their schedule as the semester goes on. This is an important point for students and advisers to keep in mind as they plan their courses.

We think that there is a countervailing benefit, however. If every course begins genuine instruction at the first class meeting, students will get a much better sense of what the actual course is like. Consider, for example, the difference between a lecture in which a professor can assume nothing at all on the part of the students in the classroom and a lecture after students have done a reading assignment, even if it is only a few pages.

Should faculty generally adopt the norm of beginning instruction at the first class meeting, we strongly recommend that course heads make available the materials students are supposed to engage with during these initial meetings in a no-cost form. For example, we recommend that even if students are expected to purchase materials such as books or a course reader if they enroll in the course, the first week's materials be made available electronically as scanned documents or the like.

Indeed, if faculty determine that it would be preferable, both from the perspective of reaching the learning goals they set out for their courses and from the perspective of giving students an experience that is more truly representative of the course as a whole, that instruction begin at the beginning of term, a system of Previous-Term Registration may actually *improve* the way students can use the first week of class meetings to adjust their schedules. Students will already have settled the courses they have definitely decided to take and had a chance to explore the course materials covered in the first week before classes begin.

9.7. Faculty Ability to Defer Many Decisions About Courses

The FAS is quite exceptional in the degree of autonomy it grants to individual faculty over their courses. Based on our survey, Harvard is the only university at which there is no central review

mechanism for the introduction of new courses into the curriculum.³⁴ Faculty are thus able to create courses and have them added to the curriculum with little or no logistical hurdles. In the pre-pandemic system of course registration, faculty could thus create a course from scratch until fairly close to the beginning of the term. Faculty have shared with us that the ability to defer making decisions about their courses allows them to create courses on timely topics.

We recognize the importance of being able to teach courses on timely topics. We also maintain that in a system of Previous-Term Registration, this would still be possible. As we note below, Harvard's curriculum construction workflow is subject to forces outside of our control, such as the timeline for hiring new faculty, so there will always be a need for a mechanism that allows the curriculum to be adjusted after the registration deadline, especially during the spring registration period for the fall term.

Faculty will thus still be able in principle to create courses, or more likely, modify their courses, very close to the start of term. However, we would hope that faculty plan far enough ahead that their course plans be available during the registration period so that students can be aware of them.

10. Enrollment Certainty in the System of Previous-Term Registration

In Section 9, we emphasized that the system of Previous-Term Registration we described in Section 8 will give students almost as much flexibility in making changes to their schedule during the first week of classes as they had in the pre-pandemic system to construct their schedule during the first week of classes. That naturally invites the question: will the new system simply re-create the chaos and enrollment uncertainty that drives the case for change in the first place?

Let's pose the question more specifically: do we have reason to expect that the course enrollment numbers post-registration will be reliable indicators of enrollment numbers at the end of the first week of classes? In posing the question this way, we have in mind a very specific understanding of "reliable:" The number of enrollments at the end of the first week of the term should be sufficiently similar to post-registration enrollment numbers as to not require a new resource allocation, for as many courses as possible.

That last sentence was a mouthful, so let us unpack it. Suppose a course is allocated a certain number of sections, and a certain classroom space. Usually, the resources are not utilized 100%. So, such a course can grow or shrink a bit without requiring changing the resource allocation. We want as many courses to not require a change in resource allocation during first week as possible.

With this in mind, there are two issues that can affect the reliability of post-registration enrollment numbers in the sense at issue:

1. Students register for courses on the basis of information available to them at the time, and they use that information to register for the courses they believe to be the best fit for their academic goals. However, during the first week of classes, students gather new information that leads them to alter their schedule. This information may concern courses, such as learning that a course they enrolled in is in fact not a good fit or becoming aware of a course they had not considered before. The new information could concern themselves if their academic goals have changed.
2. Students register for courses not simply on the basis of what best fits their academic goals, but *strategically*, registering for courses that they believe to be difficult to add should they decide to want to add them at the start of term.

³⁴ To be sure, individual programs have their own approval process, such as General Education or Freshman Seminars.

How likely is each of these factors to lead to massive uncertainty about enrollments? One way to approach the issues raised by changes in information is to consider the factors that can lead to there being a wide divergence between the enrollments faculty and administrators predict and actual enrollments. Some of these factors are available to students well ahead of the beginning of term, and so to the extent that enrollments are driven by these factors, we should expect them to be reflected in post-registration enrollments. A good example is perhaps the impact of course evaluations. A course with attractive scores will, all things being equal, see an increase in enrollments, and a course with unattractive scores a decrease, though it is difficult to tell in any given case how much of a change there will be. This is information that is available to students during course registration, and we should expect it to be reflected, at least in part, in their post-registration enrollment patterns.³⁵

The more that enrollments are influenced by such factors, the more reliable the post-registration enrollments will be, and the more likely it is that the adjustments that students make to their schedules during the add/drop process can be accommodated without a change to the allocation of resources.

In our discussions with registrars at peer schools, strategic registration was not an issue they were concerned about. In addition, it seems clear that whether students register strategically is determined in large part by the incentives the students face. Tendentially, the more courses there are that are difficult to add during the add/drop period, the more students are likely to engage in strategic registration. Therefore, giving students as much flexibility as possible during the add/drop period will make post-registration enrollment numbers more reliable than they otherwise would be. In addition, it may also prove helpful to students to have information about whether a course with an enrollment cap reached that cap in previous years.

All told, there is some cause for optimism, both based on the experience of our peer institutions and based on how the registration system we are recommending is constructed.

The most important point, however, is that the adoption of a system of Previous-Term Registration is not the only and final step in addressing enrollment uncertainty. Within the framework of such a system, much more localized responses are possible. In particular, the following situation has occurred often enough in the past to be worthy of concern. A course's enrollments may grow explosively over the course of the first week(s) of the term. These additional enrollments have to come from somewhere. In some cases, the new enrollments in the course will be true additions: students may add the course as a fifth or sixth course, above and beyond the courses they were planning on taking anyway. But many of these new enrollments in the growing course will be shifts. Students drop their enrollment in one course to add this explosively growing one.

Thus, a system that allows for such explosive growth of a course will see important ripple effects. If it is possible for many students to shift their enrollments in this way, the courses from which the students shift their enrollments will have unpredictable enrollments. And this may well affect a large number of courses, since it will not be predictable where the students who are moving into the exploding course are moving *from*.

Looking at the last several terms, the number of courses with significant enrollment increases is quite small.

³⁵ Just how much this information is reflected in the patterns will depend on whether students seek it out at that stage.

		<i>Enrollments increased by between 50 and 99</i>		<i>Enrollments increased by 100 or more</i>		<i>Total</i>
		Gen Ed	Divisional	Gen Ed	Divisional	
<i>2018-19</i>	Fall	2	6	3	0	11
	Spring	5	13	2	4	20
<i>2019-20</i>	Fall	2	10	6	1	18
	Spring	7	10	3	4	20
<i>2020-21</i>	Fall	1	3	1	0	5
	Spring	2	4	1	1	7

This strongly suggests to us that to the extent that courses with such explosive growth during the add/drop period remain, it will be much better to impose any further constraints in the system locally and narrowly. It may become appropriate, for example, to set up some courses in the system with antecedently determined limits on enrollment increases post-registration. Such a limit could take the enrollment post-registration as a baseline and limit the growth of the course to a certain number of sections, or a percentage of students. To give a concrete example, a course that has 300 enrollments post-registration may be limited to growing at most by another 60 students.³⁶

We do caution the Faculty that the situation here is complicated, not least because of the incentives involved. The burden of dealing with a situation in which one or more courses experiences explosive growth during add/drop is borne to a significant degree by the courses that *lose* the enrollments, not just the course that is growing. In fact, the course head of the course that experiences explosive growth may not experience this growth as a burden at all. Yet it is the course that is experiencing explosive growth that would have to set a limit on growth. The courses losing enrollments cannot unilaterally place a limit on diminution. We hope that faculty can work together to make decisions that are best not just for a single course, considered in isolation, but that support the teaching mission of the College and the Graduate School.

As we learn more about how reliable post-registration enrollments are as a guide to actual enrollments, we also hope that the FAS and other relevant parts of the administration will help address the uncertainty graduate students face, especially non-priority students who are appointed to teaching positions post-registration.

A system of Previous-Term Registration is a necessary step towards greater enrollment predictability. It may need to be supplemented with additional, localized steps.

11. Proposed Timeline for Implementation

We recommend that the new system of course registration be launched during registration for a spring term. Course registration during the fall term for the subsequent spring is much simpler than course registration for the fall in the preceding spring. For departments that already plan their curriculum for the full academic year, this will not require a change in their curriculum planning workflow. First-year students can go through the same registration process as other returning students.

³⁶ Note: this is not the same as an enrollment cap that is imposed prior to course registration. Such a course will be uncapped during course registration, and then only have a cap on growth during the add/drop process, where that cap is determined as a function of the post-registration enrollment numbers.

With these considerations in mind, we propose that students register through the new system for the first time in the Fall of 2023, for courses in the Spring of 2024.

Departments would have to provide curricular information on the new schedule in the Spring term of 2024 in time for registration during that term for courses in the Fall of 2024.

12. Appendices

12.1. Appendix A: Membership

The Committee on Course Registration has had varying membership, reflecting its relatively long existence of three years, and the different roles it has played.

Academic Year 2019/20

Bernhard Nickel, Professor of Philosophy, Chair
Chloe Chapin, Graduate Student, American Studies
Kiran Gajwani, Lecturer and Associate Director of Undergraduate Advising in Economics
Danielle Green, Undergraduate Student
Bryan Jones, Associate Registrar
Lauren Kaminsky, Director of Studies and Associate Senior Lecturer in the Committee on Degrees in History & Literature
Scott Duke Kominers, MBA Class of 1960 Associate Professor of Business Administration, HBS
Taimur Kouser, Undergraduate Student
Lisa Laskin, Assistant Dean of Undergraduate Education
Patrick O'Brien, Assistant Dean of Student Affairs, GSAS
Isaac Silvera, Thomas D. Cabot Professor of the Natural Sciences, Department of Physics
Anne Marie Sousa, Director, Advising Programs Office
Karen Thornber, Harry Tuchman Levin Professor in Literature and Professor of East Asian Languages and Civilizations
Eli Tziperman, Pamela and Vasco McCoy, Jr. Professor of Oceanography and Applied Physics
Nick Utzig, Graduate Student, Department of English
James Waldo, Gordon McKay Professor of the Practice of Computer Science
Christopher Winship, Diker-Tishman Professor of Sociology

Academic Year 2020/21

Bernhard Nickel, Professor of Philosophy, Chair
Bes Bajraktarevic, Graduate Student, Comparative Literature
Noël Bisson, Associate Dean of Academic Programs, GSAS
Laura E. Hess, Director, Program in General Education
Lauren Kaminsky, Director of Studies and Associate Senior Lecturer in the Committee on Degrees in History & Literature
Scott Duke Kominers, MBA Class of 1960 Associate Professor of Business Administration, HBS
Lisa Laskin, Assistant Dean of Undergraduate Education
Brooks Lambert-Sluder, Assistant Director, Advising Programs Office
Erika McDonald, Deputy Registrar
Gillian Pierce, Associate Dean for Strategic Initiatives, OUE
Christian Struck, Graduate Student, Germanic Languages and Literatures
Jack Swanson, Undergraduate Student
Sheila Thomas, Dean for Academic Programs and Diversity, GSAS
Karen Thornber, Harry Tuchman Levin Professor in Literature and Professor of East Asian Languages and Civilizations
Esther Xiang, Undergraduate Student

Academic Year 2021/22

Bernhard Nickel, Professor of Philosophy, Chair

Noël Bisson, Associate Dean of Academic Programs, GSAS

Laura E. Hess, Director, Program in General Education

Ruth Jaensubhakij, Undergraduate Student

Lauren Kaminsky, Director of Studies and Associate Senior Lecturer in the Committee on Degrees in History & Literature

Scott Duke Kominers, MBA Class of 1960 Associate Professor of Business Administration, HBS

Lisa Laskin, Assistant Dean of Undergraduate Education

Brooks Lambert-Sluder, Assistant Director, Advising Programs Office

Marlee Masters, Undergraduate Student

Erika McDonald, Deputy Registrar

Gillian Pierce, Associate Dean for Strategic Initiatives, OUE

Christian Struck, Graduate Student, Germanic Languages and Literatures

Jack Swanson, Undergraduate Student

Sheila Thomas, Dean for Academic Programs and Diversity, GSAS

Karen Thornber, Harry Tuchman Levin Professor in Literature and Professor of East Asian Languages and Civilizations

12.2. Mission Statements

Harvard College

The mission of Harvard College is to educate the citizens and citizen-leaders for our society. We do this through our commitment to the transformative power of a liberal arts and sciences education.

Beginning in the classroom with exposure to new ideas, new ways of understanding, and new ways of knowing, students embark on a journey of intellectual transformation. Through a diverse living environment, where students live with people who are studying different topics, who come from different walks of life and have evolving identities, intellectual transformation is deepened and conditions for social transformation are created. From this we hope that students will begin to fashion their lives by gaining a sense of what they want to do with their gifts and talents, assessing their values and interests, and learning how they can best serve the world.

(<https://college.harvard.edu/about/mission-vision-history>)

Graduate School of Arts and Sciences

To identify and attract the most promising students to form a dynamic and diverse community, and to shape them into visionary scholars, innovative educators, and creative leaders.

(<https://gsas.harvard.edu/about/gsas-glance>)

Faculty of Arts and Sciences

Founded in 1890, the Faculty of Arts and Sciences (FAS) is the largest division of Harvard University. The Faculty of Arts and Sciences is dedicated to being at the forefront of teaching and learning and fostering cutting edge research and discovery. FAS is redefining liberal arts education for the 21st century and is committed to an open Harvard and student aid by making a Harvard education accessible to students from all backgrounds.

(<https://www.fas.harvard.edu/pages/what-fas>)

12.3. *List of Registrars Consulted*

- Yale
- Princeton
- Columbia
- Cornell
- University of Chicago
- Dartmouth
- Brown

12.4. Sample Templates for Course Information

Princeton

The Princeton course catalog makes use of an expanded entry in the course catalog itself. The information is easily available in the Princeton course catalog at:

<https://registrar.princeton.edu/course-offerings>

Here, we include a screenshot of one such entry.

Medieval Asian Worlds: Korea, Japan, China, Inner and South Asia 300 CE-1700 CE

2021-2022 Fall
 EAS 206
 HIS 206
 MED 206

DISTRIBUTION AREA:
 HA

GRADING BASIS:
 No Pass/D/Fail

INSTRUCTORS:

- [Thomas D. Conlan](#)
- [Sooji Han](#)

LINKS:

- [Books](#)
- [Evaluations](#)

Description

This course explores the Middle Ages (300-1700) of the East Asian world (China, Japan, and Korea) as well as the varying links between these polities and Inner and South Asia. Particular focus will be devoted to the rise of Buddhist notions of kingship in South Asia and their transmission to the major states of Inner and East Asia, as well as the rise of notions of ethnicity, and the creation of distinct states and cultures of China, Korea and Japan. Topics will be chronological, emphasizing the movements of ideas and peoples, with a framework centered on influential figures who propagated the spread of goods and ideas across borders.

Sample Reading List

- N.A. Nikam and Richard McKeon, trans., *The Edicts of Asoka* (University of Chicago Press, 1978...)
- John Strong, *The Legend of King Asoka: A Study and Translation...*
- Andrew Eisenberg, *Retired Emperors in Medieval China: The Northern Wei...*
- Translated by Edward J. Shultz and Hugh H.W. Kang..., *Silla Annals of the Samguk Sagi. Gyeonggi-do Seongnam-si...*
- Edwin O. Reischauer, *Ennin's Diary: The Record of a Pilgrimage to China...*
- Thomas Conlan, *From Sovereign to Symbol* (Oxford University Press, 2011)

See instructor for complete list.

Reading/Writing Assignments

Three short papers, 30% (10% each paper); attendance & participation, 20%; mid-term examination, 15%. The final exam (35%) will have two components: 20% of your grade will be a take home final which must be handed within 24 hours, and the remaining 15% will constitute a 3-minute video analyzing an individual or sources.

Requirements/Grading

- Mid term exam - 15%
- Final exam - 35%
- Papers - 30%
- Class/precept participation - 20%

Other Information

This course is co-taught by Professor Conlan and graduate student Soojung (Sooji) Han through the Collaborative Teaching Initiative.

Schedule/Classroom Assignment

CLASS NUMBER	SECTION	MEETINGS	ENROLLMENT	STATUS
22855	C01	M W, 3:00 pm – 4:20 pm, McCosh Hal 64	Enrolled: 17 Limit: 30	

Yale

Yale asks its course heads to upload a standardized template for course information to the course's

canvas website. The template is available here:

https://media.screensteps.com/attachment_assets/assets/003/848/979/original/FAS_Template_SP21.pdf

12.5. High-Level Comparison of Registration Systems at Peer Institutions

All of our peer institutions listed here make use of a system of Previous-Term Registration.

	<i>Registration for Fall Term</i>	<i>Registration for Spring Term</i>	<i>Registration for Incoming Students</i>	<i>Add/Drop Period</i>
<i>Yale</i>	Returning students register by the end of May.	Students register by the middle of December.	Incoming students meet with advisers during orientation; they register for courses during first two weeks of fall term.	Opens a week before classes starts, runs first two weeks of term.
<i>Columbia</i>	Registration opens in April and remains open throughout the summer. Within the registration period, students have appointment times when they can register for courses.	Early December, staggered by class year.	Advising takes place over the summer, registration during first week of classes.	Starts first day of classes, runs approximately 2 weeks.
<i>Cornell</i>	Students enroll in early May, with enrollment dates sequenced by class year. Capped courses are first-come, first-served.	Students enroll in November, with enrollment dates sequenced by class year. Capped courses are first-come, first-served.	Incoming students register in July.	7-10 days prior to semester start; staggered by class year; some courses are closed

	<i>Registration for Fall Term</i>	<i>Registration for Spring Term</i>	<i>Registration for Incoming Students</i>	<i>Add/Drop Period</i>
<i>MIT</i>	Pre-registration begins middle of June, runs through late August. Enrollments confirmed during registration at the end of August.	Pre-registration begins in early December, runs through middle of January. Enrollments are confirmed during registration in the last week of January, just before classes begin.	Incoming students register in July.	First two weeks of term.
<i>University of Chicago</i>	One week, week 7 of the quarter (Chicago is on the Quarter System).	One week, week 7 of the quarter (Chicago is on the Quarter System).	Incoming students register in late August, roughly 3 weeks before the fall term begins.	Starts in Week 11 of the preceding term, and courses can only be added until the end of the first week of classes.
<i>Dartmouth</i>	Week 7 (Dartmouth is on the Quarter system).	Week 7 (Dartmouth is on the Quarter system).	First-years register on a single day right before classes start.	Two stages: first, there's course change right after registration, still during the preceding term, limited by capacity, first-come, first-served. Then there's add/drop during the first week. That's also when students add a fourth course to their schedule if they choose.
<i>Stanford</i>	Two weeks preceding start of term (Stanford is on the Quarter System).	Last week of preceding term (Stanford is on the Quarter System).	Incoming students register about two weeks before the start of fall classes.	First two weeks of term.

	<i>Registration for Fall Term</i>	<i>Registration for Spring Term</i>	<i>Registration for Incoming Students</i>	<i>Add/Drop Period</i>
<i>Princeton</i> ³⁷	Middle of April.	Early December.	Advising and Course Selection takes place in August before the beginning of fall term.	First two weeks of term.
<i>University of Pennsylvania</i> ³⁸	Late March.	Early November.	Incoming students register over the summer.	First two weeks of term.
<i>Brown</i>	Second week of November, staggered by class year.	End of April, staggered by class year.	During orientation, right before classes start.	2-week shopping week during which students adjust their schedules.

³⁷ The Advising Period is 2 weeks; Each Class Year gets one day to register for next term's courses.

³⁸ Students submit a prioritized list with alternates, plus a desired course load, and the system stops assigning them to courses once their desired load has been reached.