PRINCETON UNIVERSITY
ACCREDITATION SELF-STUDY
for the Middle States Commission on Higher Education
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Executive Summary

As outlined in the Self-Study Design Document, this self-study centers on three institutional priorities that derive from the institution’s mission, substantively engage undergraduate and graduate education and institutional improvement, and provide ample basis to address the seven accreditation standards.

Priority 1: Ensure that students from all social, economic, and academic backgrounds will thrive in the curriculum.
Priority 2: Steward an expansion of the undergraduate student body while ensuring excellence throughout the educational experience.
Priority 3: Respond to technology’s impact on research and education.

Three working groups comprised of faculty and administrative staff were impaneled to research these questions, and the co-chairs of each group served on the University’s Accreditation Steering Committee. They were assisted by an Evidence Inventory Working Group, a Core Administrative Team, a Student Committee, and an additional working group to examine mission, governance, and administration.

We start with a brief Institutional Overview that highlights facets of the University that are particularly relevant to the priorities selected for self-study.

For additional context, Chapter 1 begins with the 2014-2016 strategic planning process that reviewed the University mission statement and established a framework of institutional principles and priorities, including those selected for this self-study. We then turn to an examination of governance, leadership, and administration.

Chapter 2 focuses on student learning and the priority of ensuring that all students can thrive in the curriculum.

Chapter 3 examines the University’s response to technology’s impact on research and education, with particular focus on how the COVID-19 pandemic tested and shaped the University’s approach and policies toward these questions.

Chapter 4 turns to the planned expansion of the undergraduate student body, which started with the entering Class of 2026.

Appendix A provides a synoptic table of the demonstrated standards and requirements of affiliation by chapter.

Appendix B lists the members of the Accreditation Steering Committee and working groups.

Appendix C provides an alphabetical reference list for commonly used abbreviations.
Summary of Findings

Chapter 1: University Mission, Governance, and Administration — Strategic Planning

The first chapter provides an overview of the University’s governance, leadership, administrative, and central decision-making processes. In addition to demonstrating compliance with the Middle States standards around mission and goals [Standard I] and governance, leadership, and administration [Standard VII], the chapter describes the structures and processes that have identified, developed, and advanced the three institutional priorities that were selected for this self-study.

Strengths

- Since its last reaccreditation through Middle States in 2014, the University’s Trustees and Administration implemented a formal, rigorous, and transparent strategic planning process engaging faculty, staff, and students to produce a flexible framework for setting strategic direction to advance Princeton’s teaching and research mission.

- The University’s institutional planning and assessment processes are tightly interconnected and mutually reinforcing. The 2016 Strategic Plan directly informed the annual Integrated Financial Plan, the 2017 Campus Plan, the 2017 reset of the Enterprise Risk Management report, the 2021 Venture Forward Capital Campaign, and annual priorities for the Committee on Strengthening University Management and Resources.

- The Trustees have implemented a regular cycle to review and update the University mission statement, strategic framework, and institutional priorities.

- The President has instituted annual State of the University letters and town halls to update the campus community on major goals and initiatives.

- The Office of the Dean of the Faculty has completed a comprehensive review of core procedures, updated guidelines and policies, and created a new position to oversee external academic reviews.

- Key policies, statements, and reports are easily accessible on University websites, increasing the transparency of University governance, administrative, and decision-making processes. These include: University and unit mission statements; the administrative leadership team; strategic planning documents; the President’s annual State of the University letters; numerous working group and committee reports; a central repository of University policies; and a page for disclosures required under State and federal regulations such as the Higher Education Opportunity Act.

Chapter 2: Student Learning — Ensuring That All Students Can Thrive in the Curriculum

This chapter traces the wide-ranging ways by which various units within the University have prioritized ensuring that students from all backgrounds have full access to the curriculum. In taking stock of these efforts and related assessment projects, a number of strengths emerge alongside opportunities for improvement.
Strengths

- The University’s rates of retention and degree completion for both undergraduate and graduate students remain extraordinarily high. We have a uniquely strong foundation upon which to expand our current access initiatives, and to continue offering all students highly personalized advising and individualized assessment in the form of the Senior Thesis and the doctoral dissertation.

- The self-study shows that the Freshman Scholars Institute (FSI) and the Scholars Institute Fellows Program (SIFP) have created a remarkably successful model of robust support for first-generation, low-income students. Institutionally, staff in the Emma Bloomberg Center for Access and Opportunity (EBCAO) have helped identify opportunities to meet the curricular challenges and financial constraints that first-generation, low-income students face. These interventions are also important touchpoints for ensuring equitable educational access more broadly.

- A range of curricular interventions has been initiated in recent years that illustrate Princeton’s culture of continuous improvement, specifically the University’s commitment to developing alternative pathways for students in STEM as well as refined training within departments for all students as they prepare for the Senior Thesis.

Opportunities for Improvement

- Many new initiatives have not yet generated enough data to allow for structured analysis and evaluation. For instance, some initiatives around access, diversity, and inclusion at the Graduate School are in the early stages and, given the regular program lengths of five years beyond the initial Pre-Doc year, the Graduate School is still several years away from accruing meaningful data around retention, degree completion, and outcomes for students who participate in the program. These are areas of opportunity for innovative development given that some of the initiatives are relatively small and benefit from the close interaction with the Access, Diversity, and Inclusion staff. Importantly, the Graduate School benefits from a centralized environment that facilitates novel data collections and the subsequent dissemination of the findings.

- With the institutional commitment to ensure the success of all students, including those from low-income, first-generation, or historically underrepresented backgrounds, it is important to create consistent review processes. Available data are dispersed across multiple departments, which makes regular review more difficult. We need to understand whether the experiences and educational opportunities across campus are in fact equally accessible to all, for instance in study abroad, utilization of summer programming, internships, and research partnerships with faculty.
As FSI and SIFP expand to accommodate the planned growth of the undergraduate student body, there may be room for enhancing ties and collaboration with academic departments, identifying faculty who may want to teach FSI courses or develop educational spaces for SIFP students, and developing appropriate institutional incentives for faculty to participate. A consultative committee comprised of faculty and EBCAO administrators could be a way to formalize faculty involvement, and EBCAO could benefit from the methodological and conceptual expertise of Princeton faculty.

Chapter 3: Respond to Technology’s Impact on Research and Education

This chapter narrates how the University has responded to technology’s impact on teaching and research. Many of these technological innovations were already in process before the pandemic arrived, in keeping with the University’s commitment to this priority as articulated in the 2016 Strategic Plan. The shift to a new Learning Management System, for instance, and the Princeton University Library’s digitization efforts were strategic projects initiated prior to 2019. Even so, the sudden switch to remote learning in Spring 2020 required the University to activate its existing infrastructure for planning, resource allocation, and assessment so as to ensure continuity of the University’s core commitments to teaching and research. In this way, the pandemic formed a “stress test” of precisely these areas, which have highlighted a number of strengths as well as areas for improvement.

Strengths

- In instances of planned technological adaptation, such as Canvas, stakeholders were identified early and integrated into the decision process, and resources were applied throughout to adequately train all users (faculty and students) of the system. This yielded minimal disruption at what turned out to be a very challenging moment (the pandemic).

- The University’s response to the pandemic was characterized by strong ethical principles: first, to ensure the health and safety of students, faculty, and staff by shifting to a virtual pedagogical environment; and second, to make special efforts to render online teaching and learning as close as possible to Princeton’s traditional in-person instruction. Given the very short lead time for planning these transitions, the grounding principles and robust resource allocation helped the institution to weather the pandemic comparatively smoothly. (The Library’s shift to digital resource provision is an illustration of this point.)

- During the period of remote instruction, the cooperative leadership of the McGraw Center and the Office of Information Technology helped to ensure equity of experience in the online curriculum. These initiatives were particularly important to ensure that students from less-resourced backgrounds were able to learn remotely. (Separately, the University implemented a process for providing on-campus housing to students with documented exigent need and/or financial or family precarity.)
The University has invested heavily in technology as a critical component of research, and is well-positioned to continue providing outstanding resources that support data storage, computational research, and a plethora of accessible training opportunities. Faculty are also using digital platforms to engage with audiences and communities beyond Princeton, whether by sharing data with other researchers or making findings from faculty and student research easily accessible and usable by external audiences.

Ongoing projects at the nexus of teaching, research, and technology are supported by cross-campus collaborations that promote efficiency and sustainability that will position these initiatives for long-term impact and effectiveness.

Opportunities for Improvement

- We certainly hope that we do not experience another pandemic and an abrupt shift to remote teaching. The experience, however, produced a wealth of lessons learned that could be implemented should a similar event occur in the future. In spite of all efforts to facilitate consistent excellence, faculty reports on their remote teaching experiences revealed the limits the entirely virtual setting imposes on Princeton’s pedagogical approach, and the challenge of preserving equity when students are living in vastly disparate circumstances.

- Continuing assessment of the Canvas implementation points to ongoing opportunities to improve training for faculty and other instructional personnel — particularly graduate student assistants in instruction. In some cases, seemingly small challenges within the learning management system can feel like significant pedagogical obstacles.

- While the pandemic and associated remote teaching harnessed the benefits of technological innovation, its downsides for Princeton’s approach to teaching and learning were also revealed during the remote semesters. Faculty reported losing the essential feedback loop from their students and frequently expressed concerns about academic integrity. These challenges point to a continuing need to address these aspects of our on-campus learning culture now that students are back on campus.

Chapter 4: Stewarding the Expansion of the Undergraduate Student Body

The final chapter summarizes the University’s comprehensive planning for the expansion of the undergraduate student body, a process that began in 2016 and has started to become a reality with the arrival of the Class of 2026. Although much of this analysis has documented the strengths of Princeton’s assessment and planning structure, the unprecedented disruption of the COVID-19 pandemic also means that expansion has arrived in a markedly different social and cultural context than initially planned. Moreover, the University had an over-yield of first-time, first-year students in the Class of 2026 (1,500 versus a planned 1,425). We conclude by noting what our self-study of this priority has revealed about both the University’s strengths and areas for continuous improvement.
Strengths

- The structures put in place to steward the undergraduate expansion illustrate the efficacy of Princeton’s mission-driven planning processes and highlight the University’s steadfast commitment to providing students with outstanding living-learning communities.

- The surprising over-yield of the incoming class in Fall 2022 generated a “stress test” of the residential college system. The system proved adaptable to the change, but underscored the importance of using a more aggressive waitlist in the admissions process to ensure that disruptions to student life and study are minimized.

Opportunities for Improvement

- The planning process for expansion adopted a wait-and-see approach to the student body in terms of areas of disciplinary interest and course enrollment patterns, as the number of faculty and graduate students had grown over time while the undergraduate population had remained constant. The dramatic shift toward STEM fields nationwide has been further accentuated by the preferences of an expanded first-generation, low-income student body who are more attracted to these disciplines. This has produced some imbalances in staffing and classroom capacity that must be addressed. More dynamic modeling of future student bodies would help with this issue, and classroom needs should be assessed with an eye toward current trends as well as future growth.

- Both the mental health crisis that was exacerbated by the pandemic and the documentable learning loss that has accompanied it cast shadows over the present. They remain challenges for all institutions of higher education. Princeton must continue to develop additional strategies and devote further resources to support students’ well-being and mental health as well as academic success.

- During the past few years, individual departments have proposed creative and agile solutions to the pandemic and changes in student enrollments. As the student population (and the campus) expands, we must move beyond ad hoc responses grounded in the goodwill of individual faculty and departments. Systemic processes will be necessary to “crosswalk” important decisions and to include stakeholders — especially faculty — early in planning processes, to better anticipate downstream effects. As we grow, we must keep a focus on the areas where the high-touch aspects of a Princeton education continue to define our University.
Institutional Overview

Founded in 1746 as the College of New Jersey, Princeton University is the fourth oldest university in the country. It is an independent, nondenominational, coeducational institution that provides undergraduate and graduate instruction in the humanities, social sciences, natural sciences, and engineering.

Christopher L. Eisgruber became the University’s 20th president in 2013, after serving nine years as provost. A constitutional law scholar with an A.B. in physics from Princeton (’83), an M.Litt. in politics from the University of Oxford, and a J.D. from the University of Chicago Law School, he joined the Princeton faculty in 2001 as the Laurance S. Rockefeller Professor of Public Affairs. [Standard VII.3.b]

As shown in Chart A and reported in the Common Data Set 2022-2023 (p. 3), Princeton enrolled 8,842 students — 5,540 undergraduates, 3,238 graduate students, and 64 special students — in AY 2022-2023. The six-year graduation rate for the undergraduate Fall 2016 Cohort was 97.5%. [ROA 2]

Chart A: Opening Fall Enrollment — Degree-Seeking Students, by Academic Year

The ratio of undergraduate students to faculty members (in full-time equivalents) is 5 to 1. In Fall 2022, the faculty totaled 1,267, including 526 full professors, 120 associate professors, 190 assistant professors, 16 instructors, 295 lecturers, 29 senior lecturers, 8 university lecturers, 4 lecturers with the rank of professor, 5 professors of the practice, and 74 visitors. Seventy-seven percent of the professorial faculty are tenured. All faculty members are expected to teach as well as engage in research. Faculty members work closely with undergraduates in the supervision of
junior-year independent work and senior theses, and supervise graduate students in their research and dissertations. (A Princeton Profile_Faculty) [Standard III.2.c and ROA 15] The University has approximately 7,400 benefits-eligible employees. [Standard VI.4]

Princeton enrolls roughly 740 new graduate students each year. Prior to the planned expansion starting with the Class of 2026 — one of the institutional priorities examined in this self-study — Princeton yielded a class of approximately 1,300 undergraduate students each year. Since reinstating its transfer admission program in 2018 and prior to the planned expansion, the University has admitted 9-15 transfer students annually.

The University takes seriously its responsibility to seek out qualified students from all socioeconomic backgrounds and to ensure that they have the requisite financial and other support to thrive at Princeton. The percentage of first-time, full-time undergraduates in the entering class eligible for federal Pell Grants for lower-income students has increased significantly over the past decade, as shown in Chart B. Today, nearly one-fifth of incoming students are first-generation-to-college students. As President Eisgruber noted in his 2017 State of the University Letter: “The rapid increase in socioeconomic diversity is arguably the fastest and most substantial change to Princeton’s undergraduate demography since the University began admitting women in 1969.”

Chart B: Pell Recipients as a Percentage of Entering First-Year, by Class Year

![Chart B: Pell Recipients as a Percentage of Entering First-Year, by Class Year](chart)

Source: Office of Undergraduate Financial Aid and Student Employment

The University’s financial aid policies enhance its ability to attract talent from all sectors, including lower-income international students. In AY 2022-2023, Princeton awarded $199 million in institutional need-based aid to undergraduates. That year, federal scholarships and grants totaled an estimated $7.1 million, and state scholarships and grants totaled $1.3 million.
For the entering undergraduate Class of 2026, 62% were on financial aid, as shown below in Chart C. Current cost for tuition, housing, food, and miscellaneous expenses is $83,140, and the average grant is over $72,000. Eighty-three percent of recent seniors graduated debt free, and for those who borrowed, the average debt was $12,500. [Standard II.7.a]

Chart C: Students on Aid/Not on Aid in Entering First-Year Class, by Academic Year

Princeton provides all doctoral students with guaranteed financial support, which includes tuition and stipend support, through their program lengths (typically four or five years). Internal financial support for Ph.D. candidates can come from a variety of sources, including University fellowships, first-year fellowships in science and engineering, assistantships in research, and assistantships in instruction. Princeton graduate students can also secure competitive external fellowship funding to support their academic goals. [Standard II.7.a and Standard IV.1.a]

The University offers 37 undergraduate majors, ten master’s programs, and doctoral studies leading to the Ph.D. in 43 degree-granting departments and programs. Academic departments (and three schools) are organized into four divisions (Humanities, Social Sciences, Natural Sciences, and Engineering). Undergraduate majors in Engineering lead to the B.S.E., and undergraduate majors in Humanities, Social Sciences, and Natural Sciences lead to the A.B. Among graduating seniors in May 2023, the University awarded 72% the A.B. and 28% the B.S.E. More detailed data on degrees conferred are published on the Registrar's website.

As shown in Chart D, nearly three-quarters of undergraduate courses (“class sections”) offered in Fall 2022 had enrollments of 19 or fewer. (Common Data Set 2022-2023, p. 25.)
Chart D: Number of Class Sections with Undergraduates Enrolled, by Class Size

<table>
<thead>
<tr>
<th>Class Size</th>
<th>2-9</th>
<th>10-19</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-99</th>
<th>100+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Class Sections</td>
<td>311</td>
<td>443</td>
<td>96</td>
<td>42</td>
<td>25</td>
<td>65</td>
<td>37</td>
<td>1019</td>
</tr>
<tr>
<td>Number of Class Sub-Sections</td>
<td>281</td>
<td>658</td>
<td>150</td>
<td>23</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1117</td>
</tr>
</tbody>
</table>

Source: Office of the Registrar

The “precept” is one defining component of a Princeton education. Loosely based on the tutorial systems of the University of Oxford and the University of Cambridge, precepts are small discussion groups that meet weekly to further explore the readings and topics in a particular course. They provide an open forum in which students are encouraged to voice their opinions and challenge those of their peers. Precepts may be led by the professor who teaches the course, by other faculty members, or by advanced graduate students.

Chart E: Total Courses Offered, Total Enrollment, Average Enrollment, by Division, Fall 2002-2003 versus Fall 2022-2023

Source: Office of the Registrar
Total course offerings have increased over time but the distribution of course enrollments has shifted noticeably by division — a reflection of changing student interests over the past two decades. [Standard III.4] Chart E shows the shifts in course offerings, enrollments, and average enrollment for Engineering, Humanities, Natural Sciences, and Social Sciences between Fall 2002 and Fall 2022 for both undergraduate (100-400 level, in red) and graduate (500-level, in blue) courses. We note the pronounced uptick in average enrollments for undergraduate courses in Engineering (from 29 to 48) and Natural Sciences (from 45 to 57), which is consistent with changes in undergraduates’ choices of major across this time period.

Pre-major faculty advising is a hallmark of the Princeton experience. All first-year students and all A.B. sophomores meet individually with faculty advisers before enrolling in courses for the subsequent term. Advisers are carefully trained to help students meet prerequisites and general education requirements, while also introducing them to the academic culture of the University. Once undergraduate students identify their intended major, Directors of Undergraduate Studies (DUS) assume responsibility for advising, offering academic support and advice regarding their respective departments’ requirements, courses, and opportunities. Each department and program also appoints a Director of Graduate Studies (DGS) to assist and advise graduate students in meeting degree milestones.

Finally, Princeton’s residential community comprises an integral part of its educational mission. First- and second-year undergraduates are required to live on campus. Housing is guaranteed for all four years, and nearly all undergraduates (98%) reside on campus. In housing and dining arrangements, extracurricular activities, and daily social life, undergraduates make up a single student body regardless of degree candidacy or program of study. Upon matriculation, undergraduates are randomly sorted into residential colleges whose composition reflects the diversity of the larger community. The professional advising team in each college supports students through their academic pathways and guides them through co-curricular choices and concerns. Graduate students are guaranteed housing in their first year. Overall, Princeton houses approximately 70% of regularly enrolled graduate students across their time in their programs. With the completion of new graduate housing currently under construction, Princeton intends to be able to offer housing to all regularly enrolled graduate students for the length of their programs.
Chapter 1: University Mission, Governance, and Administration — Strategic Planning

One self-study working group examined how the University’s strategic planning process demonstrates compliance with mission and goals [Standard I] and governance, leadership, and administration [Standard VII]. In particular, this group was asked to assess the extent to which the procedure for periodic review of the strategic plan feeds back into campus priorities, including the three highlighted as the topics for the later chapters of this self-study.

I. Strategic Plan

In January 2014, six months after President Eisgruber took office, the University Board of Trustees launched a comprehensive, campus-wide strategic planning process that was unprecedented in scope and transparency.

Sixteen campus task forces and committees — involving more than 110 faculty, 40 staff, 15 students, and alumni — consulted widely and met regularly to examine key questions about the University’s future. Across two years, the Trustees participated in the process and produced a flexible framework that identified institutional priorities and formulated guideposts for decision-making.

All committee charges and membership were originally posted on a public website, Planning for Princeton’s Future, which has since been archived. Each task force report was posted to the website for public comment. The President, Provost, Executive Vice President, Dean of the Faculty, and Dean of the College then variously co-authored report responses, which included specific decisions as to which recommendations could be implemented, which required fundraising or further work, and which had to be deferred or rejected. [Standard I.1.a, Standard I.4, Standard VI.2, and Standard VII.5]

The strategic framework adopted by the Trustees was publicly released in February 2016. It affirmed the University’s core commitments to excellence in teaching and research as well as to foundational principles of affordability, diversity, inclusivity, and service. [Standard I.1.c and Standard I.1.f] The introduction stated:

The purpose of this flexible, revisable framework is to guide important choices by the University’s trustees, administration, and faculty. It identifies key goals, trends, and constraints, and it describes major priorities. It articulates standards and questions against which to judge proposals for new programs or capital investments, but it does not contain a comprehensive list of projects to be undertaken. The plan’s objective is not to specify all of the University’s future initiatives, but to create a planning framework for determining them and for understanding the trade-offs among them. (See 2016 Princeton University Strategic Framework, p. 1.) [Standard I.1.d]
The Trustees and the administration committed “to annually review the University’s progress towards the goals articulated…” and to “conduct a thorough review of the framework and publish an updated version on a quadrennial basis.” [Standard I.1.g]

The President has regularly updated the community on the University’s progress toward these strategic goals through his annual State of the University Letter, a tradition he instituted in 2017. These letters are emailed to all employees, posted on the Office of the President website, announced on the University website, and discussed at campus town hall meetings, including one with the Council of the Princeton University Community (CPUC). (See, for example, State of the University 2023.) [Standard VII.4.e]

The quadrennial review of the strategic framework culminates in a multi-day Board of Trustees retreat. During its first review in Spring 2019, the Trustees “examined significant trends relevant to the basic premises of the framework and its goals, considered the state of the University’s academic enterprise and resources, and explored recent developments that either bore upon the framework’s vitality or raised new questions deserving the University’s attention.” (See June 2019 Update, p. 1.) [Standard I.2, Standard I.4, and Standard VI.1]

The Trustees further noted that “[t]he 2016 framework identified ‘two trends of particular importance to the University’: the growing stratification of higher education, and technology’s transformative impact upon ‘fields of research, forms of pedagogy, the economy, the organization of society, and the challenges for which we must prepare our students’” (p. 2). In 2019, the Trustees’ view was that these two trends remain “the most important ones affecting Princeton and its mission” and that they have “intensified rather than abated” in recent years.

The Trustees completed another planning cycle in 2023. The 18-month review emphasized three areas of particular relevance to the institutional priorities selected for this self-study, as shown in the following excerpts from the introduction to the report (see June 2023 Update, p. 2):

- The board focused attention on the need to sustain a culture of learning that embraces vigorous discussion and interaction across multiple perspectives, and that enables all members of the campus community to flourish and grow.

- It agreed that the University should plan both to renovate existing undergraduate and graduate housing and to add new forms of housing with the goal of accommodating the needs of all students and allowing for additional expansion of the student body in future years.

- Finally, the board recognized Princeton’s opportunity and responsibility to experiment with new research and pedagogical projects that would supplement the University’s core model, including investments in shared computational infrastructure and teaching initiatives designed to reach new populations of students.

Each of these points aligns with an institutional priority selected for this self-study: ensuring accessibility within the curriculum, stewarding an expansion of the student body, and recognizing the transformative impact of technology on teaching and research. Further, the
Trustees’ periodic review reports, in combination with the President’s annual State of the University updates, have served to refine and inform the University’s leading goals and objectives.

The strategic planning process is tightly interwoven with the University’s infrastructure, capital, and financial planning processes. Together, these processes, the last three of which we describe briefly here, determine the major goals and commitments that guide long-term planning and resource allocation consistent with the University’s mission. [Standard VI.3, Standard VI.5, Standard VI.6, and ROA 10]

**Campus Plan**

In June 2014, the Trustees launched a comprehensive campus planning process in parallel with the strategic planning process with the expectation that these two processes would be mutually reinforcing. This continued the formal decennial process that had produced a campus plan in January 2008. In 2017, the University published a “mission-centered vision for the campus” that “[b]y integrating planning for development with planning related to land use, sustainability, infrastructure, transportation and landscape, … allows the University to pursue multiple objectives in a comprehensive way” (p. 160). President Eisgruber noted that the plan “aims to provide options that allow Princeton to achieve its strategic objectives over the next ten years, while preserving its capacity to respond flexibly to changing needs over the next thirty years and beyond.” (See Princeton University Campus Plan: A Framework for Development through 2026 and Beyond, p. 1.) [Standard I.1.b and Standard VI.6]

**Venture Forward Campaign**

In 2021, the University publicly launched Venture Forward, a mission-driven capital campaign that aims to “[build] community and alumni engagement, [seek] critical philanthropic support for the University’s highest strategic initiatives, and [share] Princeton’s defining principles and their impact on the world.” (See Princeton Launches Venture Forward web story.) All units wishing to undertake a fundraising project must prepare an initial proposal to be submitted to the Provost or Executive Vice President (depending on which position the unit falls under) for review and prioritization in relation to the University’s mission. Proposals affecting the University’s academic programs must be approved by the Academic Planning Group before being considered for fundraising approval. The Fundraising Priorities Committee, chaired by the President, considers and makes final decisions on requests for authorization of fundraising initiatives. [Standard VI.4, Standard VI.5, and ROA 11]

**Integrated Financial Plan**

The Office of Finance and Treasury prepares, updates, and maintains an Integrated Financial Plan that projects the University’s resources and needs for the coming decade, based on the strategic priorities and goals set by the Trustees and senior administration. This work models potential changes in University revenue streams, including endowment payout, tuition and grants and contract revenue, gifts, and other sources, as well as levels of debt. Ongoing and planned new capital and operating expenditures, financial aid, debt service, and other costs are compared to estimated revenues to produce scenarios that support University decision-making on major
capital projects, new operating initiatives, and potential parameter changes (e.g., rates of salary
growth; tuition, housing, and food rates; non-personnel expense inflation). These models are
used in informal early internal planning discussions as well as formal presentations to the
Trustees during annual conversations about the capital plan, operating budget, and debt
authorizations. (See 10-year Integrated Financial Plan.)

A capital planning working group, which includes the Executive Vice President, Vice President
for Finance and Treasurer, and Vice President for Facilities, meets throughout the year. The
group monitors the ten-year capital plan and prepares the annual update for the Priorities
Committee and the Trustees. The President and Provost review this annual capital plan update
prior to its presentation to the joint meeting of both the Finance and the Grounds and Building
Trustee Committees. [Standard VII.2.e] At the end of each fiscal year, the Office of Finance
and Treasury prepares the Report of the Treasurer and audited financial statements that provide
detailed summaries of the actual use of the University’s resources. [Standard VI.7 and ROA 11]

II. Mission Statement

The University’s informal motto — “In the Nation’s Service and in the Service of Humanity” —
harkens back to an 1896 address by then faculty member Woodrow Wilson (Class of 1879) who
used the phrase “Princeton in the Nation’s Service.” Former President Harold Shapiro (GS ’64)
added “in the Service of all Nations” in a speech celebrating the University’s 250th anniversary
in 1996, and, in a speech she gave in 2014, Supreme Court Justice Sonia Sotomayor (’76)
suggested this be updated to “in the Service of Humanity.” (Robert K. Durkee, The New
was adopted by Princeton’s current president.

This oft-cited motto forms the long-standing roots of today’s articulation of the University’s
mission statement, quoted in the box on the next page along with the defining characteristics and
aspirations deemed essential to Princeton’s model of teaching and research. [Standard I.1.b,
Standard I.1.e, and Standard I.2]

The present incarnation was initially developed by the Wythes Committee and formally
approved by the Trustees in April 2000. During 2014-2015, the University strategic planning
process undertook a review designed to sharpen the articulation of Princeton’s mission and
identify opportunities to advance that mission more effectively, inviting in-depth discussion from
the campus community and culminating in a formal review and proposed revisions. [Standard
I.1.a and Standard I.1.g]

The Trustees approved the Mission Statement and Defining Characteristics and Aspirations on
September 26, 2015. (See 2016 Princeton University Strategic Framework, p. 2.) [Standard
I.1.c, Standard I.1.g, Standard II.1, Standard II.2, and ROA 7]

Following the quadrennial strategic framework review in 2023, the Trustees indicated that they
remain convinced that “Princeton University’s long-standing mission — as a residential research
university committed to an expansive vision of the liberal arts that encompasses engineering —
is robust, valuable, and important to the world.” (See June 2023 Update, p. 2.)
Our Mission Statement

Princeton University advances learning through scholarship, research, and teaching of unsurpassed quality, with an emphasis on undergraduate and doctoral education that is distinctive among the world’s great universities, and with a pervasive commitment to serve the nation and the world.

The University’s defining characteristics and aspirations include:

- a focus on the arts and humanities, the social sciences, the natural sciences, and engineering, with world-class excellence across all of its departments;
- a commitment to innovation, free inquiry, and the discovery of new knowledge and new ideas, coupled with a commitment to preserve and transmit the intellectual, artistic, and cultural heritage of the past;
- a faculty of world-class scholars who are engaged with and accessible to students and devoted to the thorough integration of teaching and research;
- a focus on undergraduate education that is unique for a major research university, with a program of liberal arts that simultaneously prepares students for meaningful lives and careers, broadens their outlooks, and helps form their characters and values;
- a graduate school that is unusual in its emphasis on doctoral education, while also offering high quality masters programs in selected areas;
- a human scale that nurtures a strong sense of community, invites high levels of engagement, and fosters personal communication;
- exceptional student aid programs at the undergraduate and graduate level that ensure Princeton is affordable to all;
- a commitment to welcome, support, and engage students, faculty, and staff with a broad range of backgrounds and experiences, and to encourage all members of the University community to learn from the robust expression of diverse perspectives;
- a commitment to support and promote the mental and physical well-being of its students, staff, and faculty so that they have a genuine opportunity to thrive and engage fully with the University’s mission of research, teaching, and service;
- a vibrant and immersive residential experience on a campus with a distinctive sense of place that promotes interaction, reflection, and lifelong attachment;
- a commitment to prepare students for lives of service, civic engagement, and ethical leadership; and
- an intensely engaged and generously supportive alumni community.

In their June 2023 Update, the Trustees also expanded the mission statement, noting that “our society is also experiencing a mental health crisis that is especially acute within student-aged populations,” and endorsed “the administration’s campus-wide, integrated approach to well-
being, which emphasizes the role of all campus departments in promoting well-being through a continuing, careful examination of policies, procedures, and practices” (p. 3). The expanded mission statement, as shown in the box above, reflects this new aspiration. [Standard I.3]

The mission statement is publicized on the University’s main website and permeates the mission statements, goals, and core values established by the University offices with primary oversight responsibility for teaching and research — including the Office of the Dean of the Faculty, the Office of the Dean for Research, the Office of the Dean of the Graduate School, and the Office of the Dean of the College. [Standard I.1.f and Standard I.2]

III. Governance

The Bylaws of the Trustees of Princeton University, most recently updated on January 28, 2023, as well as the other documentation listed in the box below and included in the Evidence Inventory, demonstrate that the University’s system of governance clearly defines the roles of institutional constituencies in policy development and decision-making. This system of governance includes a legally constituted governing body with sufficient autonomy to assure institutional integrity and fulfill its responsibility of policy and resource development, consistent with the mission of the institution. [Standard VII.1, Standard VII.2.b, Standard VII.2.f, and Standard VII.2.h]

University Governance Documents

The following documents describe the University’s governance structure and outline the roles, responsibilities, and accountability for decision-making:

- Bylaws of the Trustees of Princeton University
- Resolution on the Officers of the Corporation (Appendix A of the Bylaws)
- Resolution on the Delegation of Authority (Appendix B of the Bylaws)
- Rules and Procedures of the Faculty
- Rules and Procedures of the Professional Researchers and Professional Specialists of Princeton University
- Rules and Procedures of the Librarians of Princeton University
- Charter of the Council of the Princeton University Community
- Constitution of the Senate of the Undergraduate Student Government
- Graduate Student Government Constitution
- Human Resources Policy and Procedures Manual
- Organization Statement of Princeton University Investment Company
A. Trustees

The powers and allocations of responsibilities of the Board as expressed in the Charter of the Trustees of Princeton University in 1963 derive from, and are set forth in, Princeton’s original Charter of 1746 and its amendments from legislation, from the Board’s own bylaws, and from resolutions it passes from time to time. All the powers of the Corporation are vested in the Board of Trustees. [Standard VII.2.a, ROA 1, and ROA 12]

The Resolution on the Delegation of Authority (Appendix B in the Bylaws of the Trustees of Princeton University) was first adopted in 1969 after a major review of University governance. Affirmed repeatedly — most recently following a 2019 Board Governance review — this resolution fosters collegial governance as it sets forth the role of the Board in decision-making and assigns authority and accountability for policy development and decision-making to various officers of the University, the Faculty, and other members of the University community, including students. [Standard VII.2.c]

The Board consists of no fewer than 23 and no more than 40 members. There are 13 Alumni Trustees, four of whom are Young Alumni Trustees elected annually by the junior and senior classes and the two most recently graduated classes, and nine of whom are elected by all alumni. At least two Alumni Trustees must be alumni of the Graduate School, including one recent graduate alumnus/alumna. As the List of Current Trustees demonstrates, the Trustee Committee on Board Development seeks to appoint trustees who are committed to the University, who have the breadth and depth of expertise to govern a major research university, and who represent a variety of backgrounds, age groups, and professions. [Standard VII. 2.b and ROA 13]

The Chair is elected by the Board for a four-year term and convenes Board meetings five times a year. Current Chair, Louise Sams (’79), was initially elected at the November 17, 2019, Board Meeting, and reelected at the November 19, 2022, Board Meeting to a four-year term starting July 1, 2023. [Standard VII.3.a and ROA 13]

The Committee on Board Development conducts mandatory orientation sessions to familiarize all new trustees with their responsibilities and duties, which include adhering to the University’s rigorous policies governing conflicts of interest. [ROA 13] In addition, the Committee has developed several procedures for assessing the University and the Board’s own governance practices, members, and leadership. These include:

- a self-review during any change in the Board’s leadership that involves detailed consideration of governing documents, the Board’s responsibilities and authority, its composition, as well as procedural questions related to frequency of meetings and communication. Such a review last took place in 2018-2019.
- an annual online survey of all Trustees.
- individual Trustee interviews to assess processes, expertise, and strategy.
- quadrennial Trustee retreats of two to four days to allow in-depth exploration of current topics of particular concern or long-range and strategic planning. [Standard VII.2.g]
The Board discharges its duties in part through twelve standing committees, and it may establish special or ad hoc committees as needed. For example, Academic Affairs, chaired by Heather Gerken (’91), the Sol and Lillian Goldman Professor of Law and Dean of Yale Law School, has oversight of matters pertaining to the programs of teaching and research pursued by the University, and it recommends for election by the Board all tenured and tenure-track faculty as well as all candidates for degrees. [Standard VII.2.d]

The Board has charge and control of the finances and funds of the University. Working through the Committee on Finance, chaired by Kimberly Johnson (’95), Chief Operating Officer for T. Rowe Price, it sets the operating and capital budgets and supervises the investment of the University’s endowment, which is managed by the Princeton University Investment Company (PRINCO). All campus real estate and long-range physical planning, the determination of architectural styling and landscaping, and the general condition of the University’s physical plant are directly overseen by the Board through its Committee on Grounds and Buildings, chaired by Blair Effron (’84), Co-founder and Partner, Centerview Partners. The Committee on Audit and Compliance, chaired by Sarah Stein (’97), Managing Partner, Hall Capital Partners LLC, assists the Board with overseeing the integrity of the University’s financial statements, timely completion of annual independent financial audits, and the University’s Enterprise Risk Management program. (Financial Statement Review FY22) [Standard VI.7, Standard VII.2.d, and ROA 11]

The President and the senior administration keep the Trustees closely informed of important issues and developments. Prior to each Board meeting, the President and senior administration members provide written reports; Trustee committee meetings then offer opportunities for further review and discussion of matters addressed in those reports as well as other matters of concern to the Trustees. The President also submits an annual report to the Board and delivers an oral report at each meeting. Trustee meetings include regular dinners with student groups and faculty that allow for more informal exchanges. [Standard VI.8 and Standard VII.2.i]

B. Chief Executive Officer and Administration

The Board elects the University President, and the Trustee Executive Committee reviews the President’s performance annually, with more detailed reviews at intervals set forth in the Bylaws of the Trustees of Princeton University, Chapter 6.6. The Board completed their last detailed review in April 2022 and subsequently approved the extension of Christopher L. Eisgruber’s presidency for another five years. [Standard VII.2, Standard VII.2.f, and Standard VII.3.a]

The President serves as the chief executive officer of the Corporation and “shall have the power to perform all acts which are necessary to carry out the policies and actions of the Board.” (See Bylaws of the Trustees of Princeton University, Chapter 6.3.) [Standard VII.3.c]

The President oversees the recruitment and hiring of senior administrators with the experience and skills needed, as evidenced by their professional biographies and curricula vitae available on the Our Leadership Page. Appendix A of the Bylaws of the Trustees of Princeton University sets forth the roles and responsibilities of the Officers of the Corporation and Academic Officers. [Standard VII.3.d, Standard VII.4.b, Standard VII.4.c, and Standard VII.4.d]
Chart F: Princeton University Officers of the Corporation and Direct Reports (7/27/2023)

Princeton University
The organizational structure and reporting relationships are provided in Administration Organizational Charts. (Top-level structure is shown in Chart F above.) [Standard VII.4.a]

Clear documentation of the lines of organization and authority are available to all employees of the University through governance documents as well as the online resources shown in the box below.

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<tr>
<th>University Directories</th>
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<tbody>
<tr>
<td><strong>Our Leadership Page</strong></td>
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<tr>
<td><strong>University Homepage</strong></td>
</tr>
<tr>
<td><strong>Unit-Level Webpages</strong></td>
</tr>
<tr>
<td><strong>Dean of the Faculty Directory</strong></td>
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</tbody>
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Additionally, the Transaction Authority Policy clarifies the authority with which individuals employed by Princeton University have been delegated to bind the University to agreements with outside parties, including individuals and governmental entities, and to make and receive commitments on the University’s behalf. [Standard VII.1]

The University widely disseminates information regarding administrative policy through written notices, handbooks, manuals, and websites. The University Policy website serves as a central repository of policies that govern a wide range of University activities, including policies regarding nondiscrimination, conflict of interest, and grievance procedures. [Standard II.3, Standard II.4, and Standard II.5] The internal Inside Princeton website posts announcements, memoranda, and news for University employees. [Standard II.6]

**Rights, Rules, Responsibilities**, updated annually, is a fundamental guide for all members of the Princeton University community, containing University principles of general conduct and regulations. Section 1.1.1 opens:

Free inquiry and free expression within the academic community are indispensable to the achievement of these goals. The freedom to teach and to learn depends upon the creation of appropriate conditions and opportunities on the campus as a whole as well as in classrooms and lecture halls. All members of the academic community share the responsibility for securing and sustaining the general conditions conducive to this freedom. [Standard II.1 and Standard II.2]
Additionally, the Office of Institutional Research maintains an HEOA Disclosures webpage that provides employees, students, and the public with convenient access to information the University must disclose under the Family Educational Rights and Privacy Act of 1974 (FERPA) and the Higher Education Opportunity Act of 1965 (HEOA). [Standard II.6, Standard II.8.a, Standard II.8.d, ROA 5, ROA 6, and ROA 14]

The administration also regularly holds large meetings where faculty, staff, and students may discuss issues and developments of particular interest. These include the President’s annual State of the University Letter town hall; the Council of the Princeton University Community (CPUC, described in more detail below); and the Academic and Administrative Managers Group, which convenes more than 400 managerial supervisors and senior administrators three times per year to communicate important, University-wide initiatives, developments, and events. In addition, the Dean of the Faculty regularly convenes Department Chairs and Program Directors; the Dean of the Graduate School convenes Directors of Graduate Studies; and the Dean of the College convenes Directors of Undergraduate Studies. [Standard VII.4.e]

The University’s Performance Evaluation Program encourages ongoing communication between supervisors and employees to foster performance improvement and enhancement. Human Resources oversees the process, which requires supervisors to conduct individual annual performance appraisal discussions with all employees whom they directly supervise. (See Human Resources Policy and Procedures Manual, Section 5.2.4.) [Standard VI.1]

C. Faculty

The Faculty consists of the President, the Academic Officers, the tenured and tenure-track faculty, and the lecturer ranks. The University Faculty meets regularly during the academic year to consider and vote upon changes to the curriculum and the recommendations of standing committees.

From 2020 to 2023, the Office of the Dean of the Faculty, working through the Faculty Advisory Committee on Policy, undertook a three-year comprehensive review of Rules and Procedures of the Faculty. In response, the Faculty has approved revisions to six of the eight chapters and to all three appendices. The revisions ranged from relatively minor updates of language to adding entirely new sections and an appendix. (See, for example, 23-04-24 Agenda for Faculty Meeting.) [Standard VII.1 and Standard VII.4.e]

The Office of the Dean of the Faculty recently completed several projects to review and refine core policies and procedures, including the following:

- Updated the Guidelines for Academic Reviews, which outline the process through which academic departments and programs can engage in serious periodic self-evaluation, assess program quality and effectiveness, review strategies for development and improvement, and plan for the future. This process was initiated in the late 1980s following a review of the role of advisory councils by administration and the Trustees, and had last been updated in 1993. The guidelines specify that a “thorough academic review will be scheduled every five to seven years or as needed.” In AY 2022-2023, Anthropology, Astrophysics, and Operations Research and Financial Engineering
completed self-studies and external reviews. Following these reviews, each department chair met with the Dean of the Faculty to identify next steps. [Standard III.2 and Standard III.8]

- Created a new position of Vice Dean for Academic Assessment to oversee the academic review process, strengthen engagement with academic advisory councils across campus, and work with the Provost’s Office to advance strategic academic priorities and initiatives. Professor Nolan McCarty, the Susan Dod Brown Professor of Politics and Public Affairs, was appointed to the role beginning September 1, 2023.
- Completed an overhaul of the Guidebook for Chairs, Directors and Managers, which provides information about current administrative practices and procedures relevant to department chairs and program directors in their official capacities. [Standard VII.1]
- In AY 2022-2023, charged academic departments with updating their tenure and promotion policies (75% complete as of August 2023). [Standard III.2.b and Standard III.2.e]
- Undertook an 18-month analysis of the mechanics to streamline key faculty and academic professional administration activities, identified the need for a Faculty Information System, and worked to develop the same. This will support the needs of academic units and campus partners within a single system through process automation and integration, and improve access to and visibility of academics’ activity data for reporting and assessment purposes. (See Interfolio Project Overview.) [Standard III.2.b]
- Increased the frequency of the meetings with department chairs and program directors from quarterly to monthly and changed the format of the meetings from general information sessions with senior administration to intensive working sessions to impart best practices and to learn from chairs and directors what problems they have and what information they need, individually, by division, and as a group.

Much faculty governance is conducted through the 19 standing faculty committees. (See Rules and Procedures of the Faculty, pp. 15-30, for the composition and charge of each.) Elected by their colleagues, committee members advise the senior administration and deliberate on matters related to policy, procedures, academic regulations, research, curriculum, co-curricular life, appointments, advancements, misconduct, and other areas of concern to the Faculty. [Standard VII.1] We describe here three committees particularly relevant to this self-study.

Committee on the Course of Study. The COCS considers and recommends to the Faculty appropriate action on all matters related to educational policy of the undergraduate program, including requirements for admission, requirements for bachelors’ degrees, programs of study, and regulations concerning scholastic standing. [Standard III.2]

Committee on the Graduate School. The CGS recommends to the Faculty appropriate action on all matters connected with the educational policy of the Graduate School, including requirements for admission, requirements for all earned degrees beyond the bachelor’s degree, programs of study, regulations concerning scholastic standing, policies for financial support of graduate students, and policies regarding graduate student life. [Standard III.2]

Committee on Classrooms and Schedule. The CCS arranges the academic calendar in accordance with the Rules and Procedures of the Faculty, Chapter 1. The committee assesses
classroom and teaching laboratory space and recommends physical and technological improvements that meet the evolving pedagogical needs of the University. [Standard III.4]

The Office of the Dean of the Faculty oversees the recruitment, hiring, and retention of qualified faculty. The Faculty Advisory Committee on Appointments and Advancements (C/3), chaired by the President, is the main mechanism of faculty assessment. The criteria for evaluation are excellence in research and teaching. This committee reviews all reappointments of tenure-track faculty, all promotions to tenure of both internal faculty and external hires, and all promotions to full professor. Each spring, C/3 reviews every department chair’s proposal for merit raises, which includes a written description of the performance of each faculty member. The committee routinely offers feedback about individual cases, which are transmitted verbally to the department chair by the Dean of the Faculty. (See Rules and Procedures of the Faculty, Chapter IV.) [Standard III.2.a, Standard III.2.b, and Standard III.2.e]

After an assessment of the lecturer ranks undertaken by the Office of the Dean of the Faculty, in 2020 the Faculty approved the redefinition of existing roles (Lecturer, Senior Lecturer) and designated two new ranks — University Lecturer and Professor of the Practice. The Faculty concomitantly formed the Faculty Advisory Committee for Appointments and Advancements in the Lecturer Ranks (C/9) to ensure that the Lecturer ranks would be evaluated according to similar criteria as those deployed by C/3. (See Rules and Procedures of the Faculty, Chapter IV, sections D-H.) [Standard III.2.b and Standard III.2.e] More detailed procedures and criteria are set forth in Guidelines for Submitting Materials to the C/9 for Promotions to Senior Lecturer, University Lecturer, and Professor of the Practice.

D. Student Government

The members of Undergraduate Student Government (USG) serve as the elected representatives of the undergraduates of Princeton University to the Trustees, administration, and faculty. The USG selects students from its ranks to serve on various faculty committees, such as the Committee on the Course of Study. [Standard VII.4.e] The Constitution of the Senate of the Undergraduate Student Government was ratified by the undergraduates on May 7, 1995, revised by the USG Senate on December 8, 2013, and last amended on October 25, 2020. It is publicly available on the USG website, along with the names of current members, meeting minutes, and Senate policy priorities. [Standard VII.1]

The Graduate Student Government (GSG) was formed in 1989 (originally named the Princeton Graduate Student Union and changed to GSG in 1999) through a referendum among all graduate students to provide a unifying voice to express graduate student concerns to the Princeton administration. The Graduate Student Government Constitution was adopted on November 1, 2000. The GSG Assembly approved the most recent modifications to the Constitution and Standing Rules in November 2014 and last approved modifications to their bylaws in November 2020. Every graduate department and academic program, and some recognized graduate student groups, sends a student representative to the Assembly. The governance documents, current membership, initiatives, advocacy, accomplishments, and reports are publicly available on the GSG website. [Standard VII.1]
E. Council of the Princeton University Community

The Council of the Princeton University Community (CPUC) is chaired by the President and includes elected representatives from the faculty, students, staff, and alumni. It holds regular meetings open to the entire University community, typically six times per year, and has authority to consider any aspect of University governance. The Charter of the Council of the Princeton University Community, last revised and approved in May 2013, is the governing document concerning rules applicable to the entire community. It sets forth the purposes, membership, procedures, and six standing committees (Executive; Rights and Rules; Governance; Priorities; Resources; and Judicial). In recent years, it has designated two special committees (Naming; Sexual Climate, Culture, and Conduct); in September 2022, it voted to make the Committee on Naming a standing committee. Membership, meeting agenda, reports, statements, and actions are publicly available on the CPUC website. [Standard VII.1 and Standard VII.4.e]

IV. Key Academic and Administrative Decision-Making Bodies

The University has developed an open, collaborative culture that supports strategic initiatives at all levels. Major institutional goals are ultimately set by the central administration in consultation with the Trustees, but academic units, individual faculty members, and other administrators often generate new ideas that, after extensive review, become key programmatic features of the University.

Mission and goals guide our planning efforts and inform all levels of decision-making from the Trustees to senior administration and staff. The University’s administrative and academic decision-making processes operate through the coordinated work of several high-level committees, most notably the Academic Planning Group, the Priorities Committee, and the Facilities Planning Group. Each of these committees reports to senior University leadership; their deliberations and decisions are also reviewed by the Board of Trustees as needed.

In addition, the President appoints internal ad hoc committees and working groups to examine critical issues, refine institutional goals and priorities, and inform decision-making. Examples include the 2014 report from the Ad Hoc Committee to Review Policies Regarding Assessment and Grading, the 2021 report of the Ad Hoc Committee on Principles to Govern Renaming and Changes to Campus Iconography, and the 2022 report of the Faculty Panel on Fossil Fuel Dissociation. Together, these standing and ad hoc committees create a closely integrated system of decision-making and assessment that informs and shapes the University’s most important strategic initiatives. [Standard VII.4.e]

A. Academic Planning Group

The Academic Planning Group (APG), chaired by the Provost and comprised of the senior academic leadership at the University, meets twice monthly through the academic year to review academic proposals. These include: new degree and certificate programs; new departments, institutes, centers, and other academic entities; proposed academic initiatives requesting permission for fundraising; agreements with other institutions; and revisions to University policies and procedures.
Every June, all department chairs (and directors of academic programs that appoint faculty) submit a confidential memo to the President, in which they report on the current state of the department, future plans, and current or anticipated challenges. Chairs focus on major issues and goals, which often include: faculty recruitment, retention, promotions, retirements, and research; graduate student recruitment, curriculum, completion, and placement; undergraduate enrollment and curriculum; staffing and space; and internal or external reviews in progress or completed. The President responds in writing to each chair, addressing key points raised in their memos. [ROA 8]

Every July, the Dean of the Faculty convenes a multi-day meeting of the Academic Planning Group, which the President attends. For the first portion of the meeting, the APG reviews detailed department Data Profiles and discusses emerging issues and strategic priorities for each academic department. For the second portion, the APG turns to University-wide issues and strategic priorities, discussing and responding to memoranda prepared by University academic officers. (Agenda APG Summer Meetings) [Standard III.8, Standard VI.8, and Standard VI.9]

Decisions and actions by the APG are informed by studies, analytic work, and recommendations that emerge from monthly, cross-functional meetings of professional staff who report to the APG members. These meetings are convened by the Vice Provost for Academic Affairs, who serves as secretary to the APG. Participants include the Vice Provost for Institutional Research, the Registrar, the University Data Officer, and the Deputy Deans of the Faculty, College, and Graduate School, as well as other professional staff from these offices who oversee academic data and analytics for their respective units. This framework of meetings of senior professional staff from across academic administrative units ensures that the APG has integrated and cross-referenced data and information to support its planning and decision-making processes.

B. Priorities Committee

The Priorities Committee (PriCOM) of the CPUC works closely with the Office of Finance and Treasury each year to prepare and recommend the University’s operating budget to the President and Board of Trustees. Chaired by the Provost, members include tenured and non-tenured faculty members, graduate and undergraduate students, and staff. [Standard VI.2, Standard VI.5, Standard VII.4.e, and ROA 11] As described in the March 8, 2023 Priorities Committee Report 2023-2024 (p.7):

The Committee’s work is guided by three fundamental principles: (1) a Princeton education should be affordable and accessible to any family; (2) Princeton’s status as a world-class teaching and research institution depends on its ability to attract, support, and retain the very best academic talent; and (3) the University must manage its resources so that a Princeton student years from now will be as advantaged by Princeton support as a student today, taking into account inflation and other changes in family economic circumstances. These three principles — access and affordability, academic excellence, and intergenerational equity — provide the framework within which the Committee makes decisions about specific budgetary priorities in a given year. [Standard VI.3]

Each year, the committee recommends rates of change for student charges (tuition, housing, and food), undergraduate financial aid, graduate student support, faculty and staff salaries, and rental
rates for University housing. The Priorities Committee also considers the impact of strategic planning initiatives on the University’s operating budget and reviews initiatives from the committee on Strengthening University Management and Resources (SUMAR; described below) aimed at improving efficiency and enhancing management.

The Committee’s annual reports dating back to 2008-2009 are publicly available on the Office of the Provost website.

C. Facilities Planning Group

The Facilities Planning Group (FPG), chaired by the Provost, oversees the planning, design, and budgeting for new construction, building renovation, and other related projects. FPG meets monthly to review and approve funding projects and to make funding recommendations to the Board of Trustees (Finance Committee; Grounds and Buildings Committee) as needed. Discussions typically examine University priorities for allocating resources to projects critical to the healthy functioning of the University. It has the authority to approve funding for projects with estimated costs of less than or equal to $7.5 million; it must recommend all projects in excess of $7.5 million to the Trustees for approval. [Standard VI.6]

V. Institutional Assessment Processes

Recognizing that the administrative needs of an institution of higher education are constantly changing, several high-level committees periodically assess administrative structures and resource allocations to ensure ongoing support and advancement of the University’s mission. These committees include the Executive Compliance Committee, the Executive Risk Management Committee, and the Committee to Strengthen University Management and Resources.

Additionally, departments, cross-campus standing committees, and ad hoc working groups provide regular self-assessments using a variety of tools and processes (surveys, focus groups, annual confidential letters to the President, internal audits, and peer benchmarking) to measure the achievement of goals and make appropriate decisions to improve operations and allocate resources.

We describe below in more detail two of the committees that are particularly relevant to this self-study, as well as recent enhancements by the University to refine its data governance, collection, integration, and analysis to inform decision-making and assessment.

A. Executive Risk Management Committee

The Executive Risk Management Committee, co-chaired by the Executive Vice President and the Provost, annually reviews the risks associated with the institutional mission and objectives, ascertaining the University’s appropriate tolerance for those risks, and ensuring that necessary mitigation strategies are in place, resourced appropriately, and integrated with existing initiatives to enhance management and control.
As described in a 2017 Enterprise Risk Management Reset memo from the Executive Vice President to the Trustee Committee on Audit and Compliance:

In FY2017, the University performed a reset of the Enterprise Risk Management (ERM) assessment. Since the spring of 2009, the University has employed an annual process to assess, monitor, and manage top risks to the University’s ability to fulfill its mission and achieve its goals. With the issuance of the Strategic Planning Framework in February 2016, it was important to refine our identification of the top risks to Princeton and review the status of corresponding key mitigation measures in the context of the institutional strategic priorities set forth in the framework plan. The assessment process considered inherent risks experienced by colleges and universities generally, as well as those specifically identified by ERM reset participants. Consistent with the prior years, the definition of a “Key Enterprise Risk” is a top risk to the University’s ability to fulfill its mission and to achieve its strategic priorities, including financial, operational, compliance, and reputational risks.

Each year, the committee formally assigns responsibility for identifying and mitigating risks to senior managers across the institution, focusing administrative attention and resources on significant issues. The process includes interviews with more than 50 risk management officers to review and update mitigation strategies and identify new Key Enterprise Risks. The committee submits its final report to the Audit and Compliance Committee of the Board of Trustees, and Key Enterprise Risks are presented to Trustee Committees responsible for their oversight.

The risk management effort also informs the Office of Audit and Compliance’s University-wide audit and compliance work plan. [Standard VI.9]

B. Committee to Strengthen University Management and Resources

Growing out of a Spring 2009 Cost Savings Working Group, the Committee to Strengthen University Management and Resources (SUMAR), chaired by the Executive Vice President, meets quarterly to sponsor initiatives that strengthen University management functions, implement cost-controlling measures, or ensure regulatory compliance.

SUMAR encourages all departments to implement changes within their units if they have the ability to do so without central assistance. In cases that are interdepartmental in scope, SUMAR identifies managers to lead the related analysis and possible implementation. Suggestions and feedback are regularly solicited and received from University constituencies such as the Academic and Administrative Managers Group, as well as directly through the SUMAR website. Each year SUMAR reports to the Priorities Committee, which in turn reports to the Board of Trustees, on its current and new priority initiatives for the fiscal year, such as efforts to find more cost-efficient health-care plans. As described on the SUMAR Webpage:

The committee focuses its efforts on projects that fit the following criteria:

- Represent cross-cutting, campus-wide initiatives that require the efforts of multiple University units;
• Require significant cultural or policy change, and therefore benefit from the attention and support from this cabinet-level committee; and/or
• Benefit from SUMAR members’ organizational roles, expertise, and broad department representation, affording broad institutional perspectives that would not be found in a single department.

SUMAR identifies promising initiatives that are interdepartmental in scope or would rely on centralized oversight for success, considers the costs and benefits of the proposed initiative with particular attention to the impact on business units and individuals within the University community, and guides and monitors progress against defined goals and metrics. (History of SUMAR and Priority Initiatives) [Standard VI.8 and Standard VI.9]

C. Data Governance and Assessment

The Provost named Princeton’s first University Data Officer (UDO) in 2022 to address a data risk identified through the 2017 Enterprise Risk Management framework. The UDO works with institutional leaders to implement an institutional data strategy that will enhance both data sharing and responsible data use to support goals for teaching, research, and the student experience. [Standard VI.8]

The establishment of this new position speaks to Princeton’s commitment to building a better University-wide infrastructure for continuous assessment. Additional positions have been established since 2017 to support this work, including an Assistant Director for Educational and Program Assessment in the McGraw Center for Teaching and Learning (2018), an Assistant Provost for Academic Studies and Analysis (2019), and a revised portfolio for the Associate Dean of the College for Curriculum and Assessment (2021).

The UDO convenes data stewards, information technology partners, report developers, analysts, and information users to develop and deliver standards, processes, resources, training, and tools to amplify analytics. Relevant efforts include the following:

• Convening a Data Strategy Executive Council that includes Cabinet-level representatives to guide the institutional data strategy and its component priorities. The Council has aligned around a “questions first” approach to add rigor to the definition of strategic drivers and decision-making needs. The resulting questions will seed an updated approach and architecture for analytics. [Standard VI.9]
• Developing a data governance framework that describes principles and guidelines for the consistent and responsible collection, access, and use of personal attribute data. This will help the University navigate the dynamic requirements for personal data collection and reporting by state and federal agencies.
• Remediating highly restricted data from personal records following a required retention period which will amplify security while maintaining the content that is most relevant to aggregation and analysis for assessment and planning.
• Working with the Office of Information Technology (OIT) to more consistently manage the collection of new data, apply best practices for reporting requirements, and consider
standards for data security and privacy in the cloud, all of which enhance the integrity and availability of data for analysis. [Standard VII.4.f]

- Coordinating with the Center for Data, Analytics, and Reporting (CeDAR) in OIT to create a road map for modernizing Princeton’s data architecture, platform, and tools to provide an information ecosystem for analysts that allows them to develop insights more quickly and sustainably. [Standard VII.4.d]

Conclusion

This chapter has provided an overview of the University’s governance, leadership, administrative, and central decision-making processes. In addition to demonstrating compliance with the Middle States standards around mission and goals [Standard I] and governance, leadership, and administration [Standard VII], the chapter describes the structures and processes that have identified, developed, and advanced the three institutional priorities that were selected for this self-study.

Strengths

- Since its last reaccreditation through Middle States in 2014, the University’s Trustees and Administration implemented a formal, rigorous, and transparent strategic planning process engaging faculty, staff, and students to produce a flexible framework for setting strategic direction to advance Princeton’s teaching and research mission.
- The University’s institutional planning and assessment processes are tightly interconnected and mutually reinforcing. The 2016 Strategic Plan directly informed the annual Integrated Financial Plan, the 2017 Campus Plan, the 2017 reset of the Enterprise Risk Management process, the 2021 Venture Forward Capital Campaign, and annual priorities for SUMAR.
- The Trustees have implemented a regular cycle to review and update the University mission statement, strategic framework, and institutional priorities.
- The President has instituted annual State of the University letters and town halls to update the campus community on major goals and initiatives.
- The Office of the Dean of the Faculty has completed a comprehensive review of core procedures, updated guidelines and policies, and created a new position to oversee external academic reviews.
- Key policies, statements, and reports are easily accessible on University websites, increasing the transparency of University governance, administrative, and decision-making processes. These include: University and unit mission statements; the administrative leadership team; strategic planning documents; the President’s annual State of the University letters; numerous working group and committee reports; a central repository of University policies; and a page for disclosures required under State and federal regulations such as the Higher Education Opportunity Act.
Chapter 2: Student Learning — Ensuring That All Students Can Thrive in the Curriculum

The self-study group examining Priority 1 was charged with exploring a range of questions about student learning, and the extent to which all students can thrive in their chosen course of study regardless of their academic and personal experiences prior to Princeton.

Accordingly, this group paid particular attention to how the University has addressed differences in students’ preparation, such as the role of the Emma Bloomberg Center for Access and Opportunity in serving the increasingly diverse range of Princeton students, including many low-income and first-generation-to-college students. In reviewing such programs and outcome patterns at the University level, the self-study also explored how academic departments themselves ensure that all students have the opportunity to flourish.

Chapter 2 summarizes this group’s findings by discussing three broad lines of inquiry, each of which explores how the University’s strategic planning process engages questions of curricular access and has used assessment-driven practices to promote continuous institutional improvement. In the process, we document how Princeton serves both undergraduate and graduate students through the structure of the student experience [Standard III], support of the student experience [Standard IV], and the use of assessment to improve educational effectiveness [Standard V].

Section I outlines the role of the University’s strategic planning process in generating curricular changes in the General Education requirements, enhancing Junior Methods training, and bringing renewed attention to the Senior Thesis. These curricular changes and revisions apply to all undergraduates, but they are particularly relevant for students with less pre-college exposure to the kind of rigorous writing, research, and interdisciplinary inquiry that characterizes the Princeton curriculum.

Section II examines the founding of the Emma Bloomberg Center and the introduction of Graduate School Diversity Initiatives — examples of mission-driven institutional change that have been motivated, shaped, and revised through assessment-driven practices. In both cases, a suite of carefully constructed programs and structures have been established to ensure that all students have the support they need to succeed in their chosen field of study.

Section III considers cultures of continuous assessment, both at the University level and in the micro-climates of individual departments, as they attend to the assessment of student learning and student outcomes to improve educational effectiveness. We complete this section with a survey of four representative departments’ approaches to the assessment of student learning, including the capstone assignments of the Senior Thesis and the doctoral dissertation.

A concluding section offers some summary insights.
I. General Education, Junior Methods, and the Senior Thesis

Consistent with the University’s commitment to a liberal arts education, all students must complete general education requirements to earn the A.B. and B.S.E. degrees at Princeton (Program of Study for the Degree of Bachelor of Arts and Program of Study for the Degree of Bachelor of Science in Engineering). [Standard III.3]

The stated goal of this requirement is exposure; as described in the University’s General Education Requirements in the Undergraduate Announcement:

Princeton’s general education distribution requirements represent different ways of knowing, all of which the University believes are essential for educated citizenship. While each student will concentrate in a discipline, a broad exposure to other kinds of knowledge will enhance students’ ability to discern what questions can be answered through methods native to their own fields and what questions require other methods. … Exposure to a variety of academic disciplines not only helps us identify the right intellectual tools for the task at hand, but also deepens our respect for the variety of ways human beings seek to understand our world. The general education requirements offer students the chance to develop both intellectual rigor and humility by considering the possibilities and limitations of all forms of academic inquiry. (Emphasis added.) [Standard III.5.a]

The current requirements for both A.B. and B.S.E. students therefore span a variety of epistemological approaches, as summarized in Chart G below. [Standard III.5.a and Standard III.5.b]

Chart G: General Education Requirements for Undergraduates

<table>
<thead>
<tr>
<th>A.B. Course Requirements for General Education</th>
<th>B.S.E. Course Requirements for General Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing Seminar</td>
<td>Writing Seminar</td>
</tr>
<tr>
<td>1 course</td>
<td>1 course</td>
</tr>
<tr>
<td>Language through 107/108 level</td>
<td>Humanities and Social Sciences</td>
</tr>
<tr>
<td>up to 4 courses depending on language studied and level at which a student begins</td>
<td>up to 7 courses with at least one course in four of the following areas:</td>
</tr>
<tr>
<td>Culture and Difference</td>
<td>Language at the 107/108 level or above</td>
</tr>
<tr>
<td>1 course</td>
<td>Culture and Difference</td>
</tr>
<tr>
<td>Epistemology and Cognition</td>
<td>Epistemology and Cognition</td>
</tr>
<tr>
<td>1 course</td>
<td>Ethical Thought and Moral Values</td>
</tr>
<tr>
<td>Ethical Thought and Moral Values</td>
<td>1 course</td>
</tr>
<tr>
<td>1 course</td>
<td>Historical Analysis</td>
</tr>
<tr>
<td>Historical Analysis</td>
<td>1 course</td>
</tr>
<tr>
<td>Literature and the Arts</td>
<td>Literature and the Arts</td>
</tr>
<tr>
<td>2 courses</td>
<td>2 courses</td>
</tr>
<tr>
<td>Social Analysis</td>
<td>Social Analysis</td>
</tr>
<tr>
<td>2 courses</td>
<td></td>
</tr>
<tr>
<td>Quantitative and Computational Reasoning</td>
<td>Mathematics</td>
</tr>
<tr>
<td>1 course</td>
<td></td>
</tr>
<tr>
<td>Science and Engineering</td>
<td>Computer Science</td>
</tr>
<tr>
<td>2 courses</td>
<td>1 course</td>
</tr>
<tr>
<td>at least one course must be with laboratory</td>
<td>Physics</td>
</tr>
<tr>
<td></td>
<td>2 courses</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
</tr>
<tr>
<td></td>
<td>1 course</td>
</tr>
</tbody>
</table>

Source: Princeton University Undergraduate Announcement, 2023-2024
In 2016, in connection with the strategic planning process, the President charged the Task Force on General Education with exploring the future role of general education at Princeton, including a range of questions about the effectiveness of Princeton’s model for meeting the goals of the general education program. (Task Force on General Education – Planning for Princeton’s Future) [Standard III.8 and ROA 8]

As detailed in the Task Force Report on General Education, the task force thoroughly reviewed the University’s general education program using a variety of assessment formats, including the following:

- Analysis of data collected from peer institutions.
- A review of course enrollment data from 2010-2016.
- Undergraduate student focus groups.
- Senior Survey data (2016).
- A survey of all graduate and undergraduate students and faculty about the University academic calendar. [Standard III.8]

The task force recommendations, as described in the report and reiterated in the response, General Education at Princeton University: A Statement by President Christopher L. Eisgruber and Dean of the Faculty Deborah Prentice, on February 23, 2017, clustered around four main areas for improvement (pp. 2-3):

- Improve the implementation of curricular requirements, particularly to develop innovative, multi-methods “Sophomore Signature” courses and create writing-intensive methods courses in departments to prepare students for the required independent work.
- Increase flexibility to help students identify overlapping distribution areas and potentially facilitate joint or mixed concentrations.
- Strengthen the study of social and cultural difference.
- Augment ways of knowing with modes of learning, especially those experiences outside of the classroom that invite students into hands-on problem-solving and exploration. [Standard III.5.a, Standard III.5.b, and Standard III.8]

Of these recommendations, two are particularly important for considering the self-study priority of ensuring that all students can thrive in the curriculum: strengthening the study of social and cultural difference; and establishing additional scaffolding to support students in completing their capstone independent work in their major fields of concentration. (The other task force recommendations highlighted in the 2017 review by the President and the Dean of the Faculty were also implemented, but as they are less connected to the priority of ensuring that all students can thrive in the curriculum, a full discussion of those changes is beyond the scope of this report.)

A. The General Education Requirement in Culture and Difference

The Faculty approved the requirement in Culture and Difference (CD) in April 2019. The final proposal was developed after extensive discussion over the preceding two years by the Committee on the Course of Study (COCS) and refined by soliciting feedback from faculty about how the new requirement would best be situated alongside the existing requirements. The
Academic Planning Group discussed and endorsed the COCS recommendations at its January 2019 meeting.

In keeping with the recommendation to increase flexibility for students, the new requirement in Culture and Difference was designed to be fulfilled simultaneously with another distribution area for A.B. students “because the analysis of culture and difference transcends any single disciplinary approach” — a point drawn from listening sessions the Dean of the College held with faculty. (COCS Report on Gen Ed) [Standard III.2]

Culture and Difference was also added as a seventh potential area for B.S.E. students completing requirements in the humanities and social sciences. Clear explanations were provided to then-current students about how these requirements would apply only to future entering classes and, therefore, would not affect their own degree progress. (FAQ about the New General Education Requirements) [Standard III.3]

Establishing the new requirement provided an opportunity to solicit additional faculty engagement, as the proposal stated:

[T]o invite broader faculty input into the consideration and approval of courses that would carry this new designation, the COCS proposes to establish a faculty subcommittee that would review courses that seek to carry the “Culture and Difference” designation. This would invite ongoing faculty investment in this process and ensure that such courses meet the spirit of the requirement in ways that are rooted in rigorous inquiry and not just a particular ideological perspective. (See COCS Report on Gen Ed, p. 4.) [Standard III.2.a]

A subcommittee of the COCS, comprised of two faculty members from the committee, two additional faculty, and the Associate Dean of the College for Curriculum and Assessment, has since reviewed a subset of courses that are proposed to carry the requirement each semester. The courses brought for review were selected intentionally by the Associate Dean to highlight courses that might be considered “tough” cases. This process of faculty-led review and evaluation has helped the COCS continue to refine the requirement. Additional clarifying principles were approved by the COCS and shared with faculty in March 2021 in Criteria for Culture and Difference Requirement. [Standard III.8]

Details on the new requirement — including the departments offering CD courses, their size, and overlap with other general education areas — were shared with the University’s Faculty Advisory Committee on Diversity in February 2022. (See Diversity and the Undergraduate Curriculum, slides 10-13.) [Standard III.8]

This process illustrates how the COCS oversees the undergraduate curriculum in general. The procedure is as follows:

1. An academic department proposes curricular changes — in this example the general education designation for an undergraduate course — and confirms that the offering meets the University’s course credit requirements. (Annual Curricular Proposal Memo)
2. The Associate Dean for Curriculum and Assessment reviews the proposed general education designation on behalf of the COCS to ensure the course content will provide sufficient exposure to the designated methodological/epistemological approach.
3. The course is posted in Course Offerings, publicly available on the University Registrar’s website, with the assigned general education requirement clearly listed. [Standard III.2 and Standard III.3]

In some cases, additional review occurs between steps #1 and #3 above to ensure coherence and consistency in the application of the requirements. For example, the Council on Science and Technology (CST) reviews courses seeking Science and Engineering Non-Lab (SEN) and Science and Engineering with Lab (SEL) designations. Its goal is to ensure that these courses are both rigorous and engaging, such that a student who takes only two of these courses (the minimum general education requirement) will have a strong foundation for applying scientific knowledge and methods in their careers, in their everyday lives, and in society.

In 2020, the CST revised the SEN/SEL learning goals to reflect changes in national science education standards — specifically, identifying common habits of mind in science and engineering. (2020 SEN-SEL Learning Goals) [Standard III.5.b]

In 2022, the CST again revised the criteria to provide greater clarity on the weighting of science and engineering content required for a designation of SEN or SEL, which is particularly important for interdisciplinary courses. To that end, the CST added the language that

To receive an SEN/SEL Designation, most of the course content and assessments must address the Disciplinary Core Ideas and Scientific and Engineering Practices listed below. Faculty are encouraged to incorporate elements of STEM Communication, Societal Applications of STEM, and Attitudes Towards STEM into their courses as well.

Additionally, the CST added language to provide guidance on laboratory courses. (2022-2023 Revised SEN-SEL Learning Goals) [Standard III.5.b, Standard III.8, and Standard V.2.a]

The full process to identify, review, and approve changes to both the undergraduate and graduate curricula, up to and including proposals for new academic entities and degree programs, appears in Chart I in Section III of this chapter.

B. The Junior Methods Course Initiative

Another recommendation from the General Education Task Force was to “emphasize the connection between discipline-specific epistemology and the process of research by encouraging departments to create discipline-specific, writing-intensive methods seminars to be taken for credit in the junior year” (p. 9). This recommendation presented a way to formalize and scaffold key opportunities for developing the skills needed for a successful Senior Thesis experience, particularly for students whose high school preparation may not have prioritized intensive training in research and writing. The task force report elaborated:

Pedagogically, we see the junior year as a critical time for developing successful discipline-specific approaches to writing and analysis. … We believe that all students would benefit significantly from a credit bearing junior methods seminar that would introduce them to the analytical methods of scholarly work in their field and prepare all students for a successful independent work experience in the junior and senior years. (p. 10)

The task force report concluded:
Accordingly, the Princeton Writing Program (PWP) undertook a review the following year, and the Dean of the College presented the results to the Academic Affairs Committee of the Board of Trustees at its June 2017 meeting. (Princeton Writing Program Academic Affairs Trustees Report 5-16-2017) [Standard III.5.b and Standard III.8]

By drawing on students’ narrative evaluations as well as normed evaluations according to the program’s standard rubric shared and applied by all PWP faculty (PWP Grading Standards), this report affirmed that students’ writing improves over the course of the seminars. At the same time, the report concluded that “the seminars don’t complete the teaching that’s needed” (pp. 7-8).

The PWP has increased its efforts in subsequent years to incorporate the distinct language and learning goals invoked in the required writing seminars into the academic departments, where students continue their learning and deepen their disciplinary expertise in their major field of concentration. (A Writing Lexicon and Outcomes Statement) [Standard III.1]

This is demonstrated clearly in the Junior Methods Initiative. Beginning in 2018, the Office of the Dean of the College designated funds from the 250th Anniversary Fund for Innovation in Undergraduate Education for the purpose of assisting departments that wish to either develop new or improve existing Junior Methods courses. The 250th Anniversary Fund is one of Princeton’s institutionalized mechanisms for encouraging and supporting faculty-led pedagogical development in the undergraduate curriculum. [Standard III.2.d]

In this case, funds have been designated annually for a special call for proposals (Methods_CFP_2023) to support a structured program through which faculty create or revise a required Junior Methods course (or in some instances a sophomore course) to help students make the shift from “writing a term paper” (which they practice in their first-year writing seminar and other courses) to undertaking independent work as majors in a department. A cross-disciplinary cohort of selected faculty participate in an intensive symposium co-led by the PWP and the McGraw Center for Teaching and Learning, introducing faculty to writing-centered pedagogy for the purpose of improving educational effectiveness. [Standard V.3.b and Standard V.3.d]

To date, 20 out of 36 departments have participated in the initiative. One example from the Department of African American Studies sought to revise an existing course to more deeply engage the required methods for juniors in the major. (Proposal to Revise AAS 300) Other proposals have addressed the need to offer more writing-intensive courses for sophomores to better prepare them for the Junior Paper (JP). (Proposal to Revise HIS 281) [Standard III.2.d and Standard V.1]

The McGraw Center reviewed outcomes for the inaugural cohort of faculty participants. The study, conducted by the Center’s Assistant Director for Educational and Program Assessment, found the initiative had influenced various aspects of the curriculum, with all of the faculty reporting that they had made “changes to the course structure, schedule, expectations, and/or
format (such as incorporating more draft and revision activities and the shared writing
handouts)” as a result of their participation. (See McGraw Junior Methods Assessment
Memo, p. 2.) [Standard V.5]

C. Assessment of Student Learning: The Senior Thesis

Building on the success and widespread engagement with the Junior Methods Initiative, the
University has continued to focus on ways to improve students’ learning as they conceive and
execute the Senior Thesis. Notwithstanding the University’s designation of this project as
“independent work,” students require engaged and ongoing mentoring from their faculty adviser
to successfully meet the goals established by their departments. The independent work required
of all undergraduates remains a hallmark of the Princeton experience. Given the importance of
the Senior Thesis as the capstone assessment of students in their departments, these revisions are
an essential part of ensuring full access to the undergraduate curriculum.

In AY 2021-2022, the Dean of the College charged the Council on Teaching and Learning (CTL)
“to review the ways the University assesses undergraduate student learning, with a focus on the
independent work students complete in their [majors] during their junior and senior years.”
(CTL-Charge-2021-2022) To this end, the CTL engaged in a year-long assessment; conducted
a census of all Directors of Undergraduate Studies (DUS) regarding department practices;
reviewed the departments’ Independent Work Guides; and met with representative DUSs from
three divisions. (2021-22 DUS Senior Thesis Census, Senior Thesis Appendix – CTL, and
Senior Thesis Census Results Summary Memo – CTL 2022) [Standard V.2]

In response to these data, the CTL generated recommendations for curricular structure, advising
support, and faculty preparation and workload. The CTL Report on Independent Work
affirmed several key points, including (pp. 2-3) [Standard V.2.c]:

- **A.B. departments should formalize a Junior Methods course for their majors.** This
course would provide a shared forum for either writing a fall Junior Paper (JP, in majors
where students are asked to write two independent semester-long JPs) or for writing a
formal proposal for future JP research (in majors that adopt a single year-long JP).
- **Each department should update and distribute an Independent Work Guide to rising
seniors and their advisers annually.** Departments create these guides to clearly convey
the learning goals and assessment rubrics for the Senior Thesis. Each guide should
provide the scaffolding for students to build a senior project and produce independent
work that will form the successful culmination of their chosen major. These documents
are all publicly available to students on the website of the Office of Undergraduate
Research, as well as on individual department websites. (Independent Work Guides
List) [Standard V.1 and Standard V.2.a]
- **The University should systematically collect feedback from graduating seniors and share
it with faculty.**

During AY 2022-2023, representatives from the Office of the Dean of the College met with all
academic departments to discuss the CTL report as well as Senior Survey data that outlined
seniors’ assessments (by department) of key aspects of their advising experience. These
conversations explored each department’s specific student learning goals and how the arc of the
independent work experience helped students to achieve them. In departments that had not yet
established a formal credit-bearing Junior Methods seminar, college deans reiterated the
suggestion and urged departments to consider creating one. Finally, they reviewed each department’s Independent Work Guide and the extent to which the guide helps students understand the expectations of the project as well as the curricular supports available to them in completing this capstone assignment. The Office of the Dean of the College requested revisions, where appropriate, to clarify the key elements. [Standard V.3.a, Standard V.3.b, Standard V.3.c, Standard V.3.f, and Standard V.3.h]

A summary memo that describes the larger themes and take-away conclusions of this campus-wide review is also available. (Summary Report on IW Guide Meetings) [Standard V.2.c and Standard V.5]

One conclusion drawn from this portion of the self-study was that the departments should explore additional ways to promote student access to these guides throughout their independent work experience. Although there is widespread agreement that the guides are essential resources, departments vary widely in how they distribute them to students. Some departments report printing out a hard copy to give students at a required meeting each year, while others prefer to point students to these resources online or on a series of webpages. Departments remain concerned that students are not consulting these guides as often as they might for their full benefit.

Accordingly, the Office of the Dean of the College is embarking on a pilot program in AY 2023-2024 to transition some of these guides into course modules on the Canvas learning management system that would be tailored to each department’s own teaching and advising needs. [Standard V.5]

II. Pathways “To, Through, and Beyond” Princeton

As noted earlier in the Institutional Overview, Princeton has undergone a radical transformation over the past ten years, such that an increasing proportion of undergraduate students now come from first-generation-to-college, Pell-eligible, or other low-income backgrounds. In Fall 2022 (Class of 2026), Princeton’s undergraduate first-year population included 17% first-generation students; 20% of students in the entering class were eligible for Pell grants.

The proportion of students from backgrounds traditionally underrepresented in higher education has increased among the graduate student population as well. As of June 15, 2022, of the doctoral and master’s admitted applicants who accepted an offer of admission for the 2022-2023 cycle, 42% were international students, representing more than 50 different countries. Of the yielded domestic students for 2022-2023, 22% were from racial or ethnic groups that have been historically underrepresented in higher education in this country (prior to 2018, this proportion hovered around 13-18%), and 27% were from first-generation and/or low-income backgrounds.

While the preceding section discussed curricular changes and revisions that have applied to all undergraduate students, this section focuses on a subset of interventions that have been intentionally focused on those students who until recently have been underrepresented on Princeton’s campus. Recognizing the diverse needs of these learners while building structures to support the success of all students has had a significant effect on the University.
A. Establishing the Emma Bloomberg Center for Access and Opportunity

A key early moment in these changes came in 2016, when the Ad Hoc Working Group on the Needs of Low-Income Students formed by the Dean of the College identified the need for Princeton to move beyond providing access to low-income undergraduate students toward promoting equity of academic and co-curricular experience. The working group recommended that the University expand its support for key programs that assist students from first-generation and low-income backgrounds (FLi students), in particular the Freshman Scholars Institute (FSI) and the Scholars Institute Fellows Program (SIFP) that are described in detail below. (Sep 28 Report Needs of Low-Income Students) The Faculty Committee on Undergraduate Admission and Financial Aid (CUFAA) endorsed the report, which the Dean of the College then advanced to the Academic Planning Group. The APG discussed and endorsed the report in October 2016. The Provost subsequently invited the Dean to present and discuss the recommendations at a January 2017 meeting of the Priorities Committee. [Standard IV.6]

Building on this work, the Office of the Dean of the College in 2017 drafted a proposal to establish a University center to better serve low-income, first-generation, and historically underrepresented college students as they move “to, through, and beyond” Princeton. As the Center for Access, Inclusion, and Success proposal explained, “The Center will bring together the offices and programs that currently serve underrepresented students at distinct stages in their education … [and] work to bridge the gaps between those programs to help smooth the transition points and build greater continuity of experience” (p. 1). [Standard IV.1.b and Standard IV.1.c]

The Dean submitted the proposal to the Provost, who advanced it to the Fundraising Priorities Committee for approval. The Committee, described in Chapter 1, authorized a list of giving opportunities in March 2018 for the Office of Advancement. Meanwhile, substantive planning efforts continued, most notably during the Summer APG meetings in 2018.

Established in 2021 with a gift from Bloomberg Philanthropies, the Emma Bloomberg Center for Access and Opportunity (EBCAO) unites the offices and programs that serve underrepresented students at distinct stages in their education. (See Emma Bloomberg Center and EBCAO Presentation_SLHA Trustee Committee — in particular, slide 14 for a summary of “To, Through, and Beyond” programs.) [Standard IV.1.b and Standard IV.1.c]

The Center enhances and expands the University’s commitment to the academic success of students from first-generation, low-income, and underrepresented backgrounds, and addresses disparities in the college experiences of FLi students that have been documented in the wider research literature. The Center’s resources and facilities are available to Princeton students, faculty, and guests of all backgrounds. (See box on the next page and EBCAO Presentation, pp. 11-12.)

Under this umbrella, FSI and SIFP are particularly relevant to the undergraduate portion of this self-study priority. The third program of note is the reinstated Transfer Program, which seeks to make a Princeton education accessible to high-achieving community college students, including veterans and adult learners. Each of these programs contributes to the larger goal of expanding access to the curriculum; we turn now to an assessment of each of these EBCAO initiatives.
The Emma Bloomberg Center for Access and Inclusion
Supporting and empowering students to, through, and beyond college

The Center aims to provide:

- A dedicated office for identifying gaps in the academic and co-curricular experiences of first-gen, lower-income students and other historically underrepresented students and developing innovative programs and policies to help address these gaps.
- A shared space for students to learn to connect with, navigate, and make equitable use of all of Princeton’s resources and become connected to the rich array of Princeton’s opportunities.
- A culture that fosters synergies and shares best practices among its programs.
- A source of best practices to promote equity in education at Princeton.
- A resource for scholars at Princeton and outside to pursue research that might contribute to the national conversation on higher education and access.

1. The Freshman Scholars Institute

Created in 1995, FSI is an optional pre-college invitational program that aims to prepare incoming FLi students for Princeton’s rigorous academic environment while developing a wider community of social engagement and nurturing their demonstrated potential as scholars and leaders before they begin the formal first-year curriculum.

After admission to the University, students are selected for an FSI invitation using holistic criteria such as their high school experiences (e.g., AP courses available to them in high school), family education background and lived experiences, and potential need for a supportive mentorship community. ([FSI File Reading Guide 2022] [Standard IV.1.b and Standard IV.1.c])

As the FLi student population at Princeton has increased, FSI has evolved to offer both a residential and an online version.

FSI residential is an eight-week on-campus summer program. Students immerse themselves in the intellectual, co-curricular, and social life at Princeton prior to their first full semester. Invited students may not have had prior opportunities to engage in immersive lab experiences or rigorous academic coursework, nor with an academic culture similar to Princeton’s. These students tend to benefit from high-touch advising and the two credit-bearing courses they are able to bank toward their progress to degree. Each year, 75-80% of students accept the invitation to participate in the on-campus FSI program. ([Frequently Asked Questions – Freshman Scholars Institute] [Standard IV.1.b, Standard IV.1.c, and Standard IV.1.d])

FSI online is a six-week summer program that serves students unable to attend in person. In Summer 2016, the Office of the Dean of the College launched a non-credit “distance” learning environment, and in Summer 2022, the program was further expanded to include a credit-bearing course offering. This innovation was made possible by the remote and online teaching necessitated by the COVID-19 pandemic, discussed in more detail in Chapter 3, for which Princeton received MSCHE approval in January 2021. ([Action Letter Distance Education] [Standard II.8.c])
While the online environment cannot recreate all aspects of the residential FSI experience, it does allow incoming students an early opportunity to connect in structured exchanges with faculty and student mentors on campus; to participate in critical thinking courses that allow them to reflect on the transition to college scholarship; to participate in targeted social capital-building workshops that help them navigate the resources and unspoken expectations of the University; and to form an online community with fellow first-year students.

Regardless of the delivery mode, the curated set of FSI courses emphasize foundational aspects of Princeton’s curriculum and highlight a liberal arts approach to learning. The current offerings are stable, but they will continue to evolve as the program identifies areas of particular benefit for the students and develops new partnerships with departments across the University. These partnerships are essential for the success of the program as courses are frequently taught by the faculty who offer more advanced versions during the regular term.

2. The Scholars Institute Fellows Program

In AY 2015-2016, the Office of the Dean of the College used term gift funding to launch SIFP as a pilot to integrate and extend FSI mentorship into ongoing support and engagement. SIFP programming has been designed to help students develop skills and strategies for success in their academic program, including mentorship groups, academic and co-curricular workshops and roundtables, networking opportunities, and community-building activities. (2016 CPUC McGraw FSI Presentation) [Standard IV.1.b, Standard IV.1.c, Standard IV.1.d, and Standard V.3.f]

As of Fall 2022, SIFP offers mentorship, academic enrichment, and a welcoming scholarly community to 410 students, which represents roughly 7% of the undergraduate student population. All FSI students are automatically invited to participate in SIFP, along with first-year FLi students who were not invited to FSI residential or FSI Online or who declined that initial invitation. In addition, the program encourages military veterans and transfer students to apply to become SIFP Fellows.

Our self-study observed that EBCAO’s contribution goes significantly beyond hosting workshops for SIFP or coordinating FSI. SIFP and EBCAO also serve as a hub to connect students to other academic and personal well-being resources on campus throughout their time at Princeton. The EBCAO staff actively identifies and cultivates ties with faculty and staff who elect to participate as mentors. Faculty partnerships have helped EBCAO create and pilot innovative academic support structures, such as specialized precepts and learning support tables in the dining halls. Support structures for SIFP students are also integrated via partnerships and co-shared programming with other offices, such as the McGraw Center, the Writing Center, the Residential Colleges, the Center for Career Development, the Office of Religious Life, and Counseling and Psychological Services. (See Chart O Undergraduate Advising Ecosystem at Princeton on p. 86 and Scholars Institute Fellows Program.) [Standard III.4, Standard IV.1.b, Standard IV.1.c, and Standard IV.1.d]

3. The Transfer Program

The 2016 Princeton University Strategic Framework called on University leadership to begin planning for the reinstatement of a transfer admissions program as a way “to attract students with diverse backgrounds and experiences, such as qualified military veterans and students from low-
income backgrounds, including some who might begin their careers at community colleges” (p. 15). The President charged the Dean of the College with program planning and implementation, including identifying staff and budgetary needs.

In AY 2016-2017, the Office of the Dean of the College secured budgetary approval from the Office of the Provost, hired two dedicated staff, and formed a faculty-staff implementation group to provide guidance on building the transfer program, drafting pertinent policy language, and vetting plans through proper channels. [Standard VI.1.3 and Standard V.5] In March 2017, the Academic Planning Group reviewed and advanced proposed academic policies, which the Committee on the Course of Study approved at its April 4, 2017, meeting. (Transfer Program Academic Policy COCS) [Standard IV.1 and Standard IV.2]

The first cohort of transfer students enrolled in September 2018, and the Transfer Program graduated its first seniors in May 2021. (More information about posted guidance to students can be found in Transfer Students Princeton Admission.) [Standard IV.1 and Standard IV.2]

The program has so far relied on time-intensive individual advising and mentorship by program staff, practicable given its small size. [Standard IV.1.c] Ongoing assessment of the program has highlighted ways in which, in practice, the student experience for transfer students warrants more nuanced forms of guidance and support. For instance, a self-study of the Transfer Program in June 2021 recommended expanding the staff support for the transfer student experience outside of the classroom, as well as implementing a set of curricular revisions. (Transfer Student Experience Report) [Standard IV.6]

In response, the Provost approved new positions for an Associate Director for Transfer Programs, effective August 2022, and a Veteran Coordinator, effective August 2023. [Standard VI.4] In addition, in October 2021, the Committee on the Course of Study approved two proposals to improve curricular flexibility. This permitted transfer students to use online courses for transfer credit prior to matriculation and increased the number of course credits that transfer students could transfer in at the time of matriculation — to three courses for first-year students and eleven courses for sophomores (previously, first-years brought in zero credits and sophomores could transfer only nine). (COCS Expanding the Transfer Program) [Standard IV.1.d and Standard IV.2]

B. Approaches to Measuring Undergraduate Student Success

Given the importance of the University’s goal to expand college access in the past decade, the University has been engaged in ongoing monitoring and evaluation of the experiences of FLi students, in addition to Princeton’s established mechanisms of assessing all student experiences. Our self-study summarizes the range of research approaches that have been a part of this consistent approach to self-assessment.

For instance, a series of pre- and post-participation surveys have been administered to FSI students. Because the FSI program combines formal credit-bearing coursework and co-curricular student support, these assessments span Standards III, IV, and V. In partnership with FSI staff, faculty members have also conducted a comprehensive program study. These findings have been shared with key stakeholders across the University and indicate that:
• In comparing pre- and post-survey results, students report that after participating in the program they feel more confident about their ability to ask questions in class, talk to a professor, write a course paper, and to succeed academically in the first year.

• FSI students have reported greater confidence in seeking help — including having a conversation with a faculty member outside of class and participating in a study group outside of class — than low-income students who have not participated in FSI. (Jan 19 BOT Academic Experiences of Low-Income Students) [Standard III.8, Standard IV.6, and Standard V.3.f]

• An experimental study by a faculty member showed that FSI raises students’ academic goals. They more often enroll in non-introductory courses and take courses for a grade rather than pass/fail. (FSI Evaluation 5.29.2023) [Standard III.8, Standard IV.6, and Standard V.2]

EBCAO has also tracked the academic and co-curricular experiences of FLi students (both those who participated in FSI and those who did not) through institution-wide student surveys administered each year by the Vice Provost for Institutional Research. The findings, which have been shared with the wider University community and the Trustees, show that FLi students:

• Are equally represented in co-curricular campus activities.
• Self-report belonging at levels close to those of other students.
• Report using administrative offices at a slightly higher rate than other students (though it is unclear whether this is because they perceive themselves to have greater need of these offices or because SIFP encourages and publicizes these offices).
• Have six-year graduation rates that are generally comparable to other students, although FLi students’ four-year graduating rates are slightly lower. (See EBCAO Presentation SLHA Trustees Committee, pp. 23-26.) [Standard III.8, Standard IV.6, Standard V.3.f, and Standard V.3.g]

Additional University-wide assessments of the academic experiences of low-income students are discussed below in Section III of this chapter.

C. Graduate School Diversity Initiatives

Our self-study also traced the distinct ways in which the Graduate School has recruited and supported a changing population of graduate students as the proportion of students from backgrounds traditionally underrepresented in higher education has increased among the graduate student population.

The Graduate School focuses primarily on doctoral education and a limited number of highly selective master’s degree programs in a small residential atmosphere. A Princeton graduate experience is highlighted by the following key features: academic excellence across all four divisions; a commitment to recruiting and retaining talented individuals from all backgrounds; a structured centralized approach to programmatic growth; a strong emphasis on an outstanding student experience by providing unparalleled access to on-campus housing, facilities, and support resources; and a generous support package.

Doctoral education at Princeton is defined by relatively short program lengths, for the most part five years, with up to two years of additional dissertation completion enrollment (DCE) status. For students who began their Ph.D. programs between 2009 and 2019, more than 94% completed
the general qualifying examination successfully in an average time of 1.8 years. Of the students who entered during this time period, 66% have successfully completed the degree within an average 5.5 years. The Graduate School in general boasts a completion rate of more than 80%. (See Graduate Degrees and Requirements.) [Standard IV.1.d]

Princeton’s requirements for a master’s degree vary greatly by department. Students may complete terminal master’s degrees in ten programs.

Beginning in the 2018 admission cycle but building on prior work, the Graduate School implemented a strategic plan to increase recruitment and retention of U.S. underrepresented populations (URP) applicants as well as to improve the graduate school experience for students from URP backgrounds. (Cultivating and Sustaining a Climate of Belonging: Annual Diversity Report to Trustees) [Standard IV.1.c] At the conclusion of each department’s admissions process, department representatives meet with the Graduate School to discuss their proposed admits. Each department works with the Graduate School through the admission process to facilitate the recruitment, retention, and engagement of a diverse applicant pool. The Graduate School has worked with departments in 2023 to ensure their individual admissions procedures incorporate relevant nondiscrimination principles and policies.

More specifically, to increase the recruitment and retention of URP applicants, the Graduate School began to identify qualified prospective students through conferences, prior multimedia outreach, and partnerships with minority-serving and other institutions. The Graduate School hosts recruitment initiatives, creates professional development programs, supports academic and student life programs for targeted underrepresented populations (but open to participation by all students), and works directly with each of the Graduate School’s 43 individual departments and programs to help them attract and recruit the most talented applicants from all backgrounds.

Programs for Access, Diversity, and Inclusion

Within the Graduate School, the Access, Diversity, and Inclusion mission statement highlights the commitment to a diverse student body:

At the Graduate School, we believe that demographic and intellectual diversity drives innovative research and discovery, it expands our capacity for teaching and learning, and it equips us for lives of leadership in an increasingly pluralistic society. To achieve our academic mission, therefore, requires Princeton to identify, attract, and develop the most promising individuals from as many segments of society as possible. To that end, we aspire to be a truly inclusive community in which individuals of every nationality, religion, gender, race/ethnicity, sexual orientation, ability, political viewpoint, socioeconomic status, and veteran status can flourish. (Access, Diversity, and Inclusion_GS) [Standard IV.1]

The work to advance this mission comprises three pillars: recruitment outreach; admissions access; and inclusive community-building. The goals are to create pathways to a graduate education for URP, first-generation, and low-income scholars, and to support graduate students toward success in their particular area of study once on campus, as demonstrated in the following initiatives, which are open to all eligible participants without regard to identity or other protected characteristics. A prospective student’s race, ethnicity, and national origin are also not considered in the graduate student admissions process.
Prospective Ph.D. Preview (P3). Launched in AY 2018-2019, this program is designed to increase the number of underrepresented graduate students at Princeton and beyond by providing prospective students with an opportunity to learn about graduate education and life at Princeton. The P3 program is open to all interested students, with a preference given to rising juniors, rising seniors, and post-graduates of all levels. The program fully funds a two-day campus visit for those considering graduate study to engage with faculty, administrators, and current graduate students, discuss the application process, tour campus, and learn about student life, finances, and career opportunities. In 2022, 77 students participated. Princeton has consistently admitted between two and twelve P3 scholars each year, a total of 33 in the five years since its creation. (Access, Diversity, and Inclusion_GS) [Standard III.2.d and Standard IV.6]

Pre-Doctoral Fellowship Initiative (Pre-Doc). A one-year, fully funded fellowship that includes an offer of regular admission to the sponsoring doctoral program the following year. The fellowship is intended for students who would benefit from an additional year of study before formally entering the sponsoring department’s Ph.D. program. Launched in 2018 as a pilot program with the Departments of Classics and Philosophy, Pre-Doc has now grown to include departments from all four divisions of the University. (Pre-Doc Fellowship FAQ) [Standard IV.1.b and Standard IV.1.c]

Graduate Scholars Program (GSP). Launched in AY 2018-2019, the program is a scholarly and social community that forms a cohort of first-year graduate students from diverse backgrounds and across multiple disciplines. Admitted graduate students are nominated by departments and the Graduate School and invited to apply to the program in the spring/summer prior to enrollment. Since 2018, approximately 10% of the incoming first-year population has participated in the program. (Cultivating and Sustaining a Climate of Belonging: Trustees Memo) [Standard III.8 and Standard IV.1.c]

Diversity Fellows Program. The Access, Diversity and Inclusion Team seeks graduate student candidates to serve as Diversity Fellows each academic year. Diversity Fellows work together to support an inclusive graduate school community and enhance the cultural, academic, and professional experience of all students, including those from U.S. underrepresented populations and other historically underrepresented backgrounds (e.g., women in certain STEM fields, students from low-income backgrounds and first-generation college students, and LGBTQIA+ students). (Access, Diversity, and Inclusion_GS) [Standard IV.1.c]

Inclusive Academy Symposium (IA Symposium). Launched in 2022, the inaugural IA Symposium is an in-person two-day conference, focused on supporting graduate students and post-doctoral scholars from historically underrepresented backgrounds (but open to students of all backgrounds), on an array of topics related to success in the academy and the job market. [Standard IV.1.d]

D. Approaches to Measuring Graduate Student Success

The Graduate School has developed a series of department dashboards with metrics around admissions, enrollment, completions, outcomes, and diversity. The dashboards make the data easily accessible to both departments and the Graduate School staff. The Graduate School is also devoting attention to developing an assessment model to track progress and ensure that the programming and initiatives around access, diversity, and inclusion are effective and aligned with the three pillars outlined above.
These efforts will be incorporated into the existing systematic review process of the progress of each individual graduate student. All graduate students eligible for continuing enrollment must complete the re-enrollment process, an annual assessment of student progress. The student conducts a self-assessment, which is reviewed and commented on by the adviser and department, and then reviewed by the Graduate School. Students have access to the assessments, and the process provides feedback from the Graduate School to students, advisers, and departments. This process takes place between April and June each year and results in an enrollment and financial commitment to the student for the next academic year. (Sample Re-enrollment Form) [Standard V.2.c] Once graduate students complete re-enrollment, they are invited to complete a survey on their academic and advising experience. The Graduate School draws on these responses alongside course enrollment surveys to provide feedback to departments.

In addition, in partnership with the Office of Institutional Research, the Graduate School systematically gathers detailed data every three years via the Enrolled Student Survey. The questionnaire includes several aspects of students’ experiences at the institution, including their engagement, well-being, interactions with faculty, and the perception of the availability of opportunities. Another important source of detailed data is the Graduate School Exit Questionnaire, which solicits information from all graduating Ph.D. students about their satisfaction with their graduate education and their post-Princeton plans. The survey content is revised and expanded in coordination with the Office of Institutional Research to ensure continuity and relevance to the interests of the School. Survey findings are aggregated and communicated via interactive dashboards that allow staff members to identify potential disparities among populations and to track the progress of students during their studies as well as their career placement after completion. Long-term career outcomes at five and ten years post-degree are also available. (See Department Dashboards for ENG, SPI, MOL, and COS and Ph.D. Long-Term Career Outcomes.) [Standard V.2.b and Standard V.2.c]

As nearly half of Princeton’s doctoral students pursue fields beyond academia, the Report of the Task Force on the Future of the Graduate School made several recommendations in 2015 to “provide a supportive climate, resources, and professional development opportunities to enhance graduate student outcomes both within and outside of the academy.” (Two-Year Impact Report) [Standard IV.1.d] Based on these recommendations, the Graduate School developed GradFUTURES over three Summer Think Tank retreats, with input from all stakeholders. They created a framework of professional development initiatives, with a focus on eight core competencies. In AY 2020-2021 the program had 2,401 unique participants in more than 141 workshops and events. GradFUTURES now serves 51% of first-year graduate students.

The program has also embedded several forms of ongoing assessment:

- GradFUTURES routinely assesses programming with a combination of formative and summative approaches. They use pre-program surveys, learning outcome surveys, polls, written reflections, and capstone projects, to gather feedback from graduate students regarding direct or indirect learning. (Graduate Student Post-Internship/Fellowship Survey, Ivy Plus Graduate Schools Benchmarking) [Standard IV.6]
- Three standard surveys gather graduate student information, including their level of preparation and confidence in each of our eight core competencies prior to beginning their graduate training (Incoming Graduate Student Professional Development)
Questionnaire Summary Report), their overall graduate student experience, as well as their primary career goals and professional development needs (Business Skills for Ph.D.s: Summer 2022 Midpoint Survey). An exit survey tracks the level of professional/career preparation they have received, their career goals, and their first-destination career outcomes. (Business Skills for Ph.D.s: Summer 2022 Endpoint Survey) [Standard IV.6]

- In Fall 2020, GradFUTURES launched the Inclusive Leadership Learning Cohort to prepare students “with inclusive leadership skills as a way to combat systemic racism.” The Assessment Survey Report from the Inclusive Leadership Learning Cohort reflects the experience and learning outcomes of participants in the inaugural cohort. [Standard IV.6]

III. Princeton’s Culture of Continuous Assessment

To this point, the chapter has documented curricular revisions motivated by the University’s 2016 strategic planning process and explored several notable interventions designed to support students from backgrounds typically underrepresented at Princeton. Additional examples of course-level assessments and innovations designed to improve educational effectiveness are

Chart H: Process to Improve Undergraduate Education at Princeton

Source: Office of the Dean of the College
included in the Evidence Inventory (see Sample Inventory of Assessment Projects.) [Standard V.3.a, Standard V.3.b, and Standard V.3.c] In this third and final section of Chapter 2, we survey Princeton’s practices around broad-based, institutional assessment of educational effectiveness that pay particular attention to large swaths of the student population. Chart H illustrates this process with regard to undergraduate education. [ROA 9]

This large-scale view has been essential for helping University leadership track student success and thriving in the aggregate. Even so, an individual student’s academic experience is largely manifest within the chosen major field of study and assessed within an academic department. Therefore, this final section on Princeton’s culture of continuous assessment begins with institution-wide assessment initiatives and ends with a discussion of department-level assessment of educational effectiveness, which in turn feeds into the process to identify, review, and approve changes to the curriculum depicted in Chart I below.

**Chart I: Process to Identify, Review, and Approve Changes to the Curriculum**

A. Undergraduate Outcomes Assessment

The University is developing a systematic and comprehensive approach to monitor the outcomes of undergraduate students for at least ten years post-degree. (See Student Outcomes Project Status Report.) [Standard III.8 and Standard V.2.c] The system draws upon subsequent degree
data from the National Student Clearinghouse, which suggests as shown in Chart J that approximately 60% of Princeton undergraduates complete one or more credentials subsequent to the bachelor’s degree.

**Chart J: Percentage of Undergraduate Class Completing One or More Credentials by Type of Credential as of 2022**

<table>
<thead>
<tr>
<th>Type of Credential</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's Degree</td>
<td>25%</td>
</tr>
<tr>
<td>Business Degree</td>
<td>7%</td>
</tr>
<tr>
<td>Law Degree</td>
<td>9%</td>
</tr>
<tr>
<td>Medical Degree</td>
<td>7%</td>
</tr>
<tr>
<td>Doctoral Research</td>
<td>9%</td>
</tr>
<tr>
<td>Another Credential Type</td>
<td>3%</td>
</tr>
</tbody>
</table>

The subsequent degree data are complemented by professional placement data obtained from public sources for approximately 70% of the bachelor’s degree recipients in a ten-year rolling cohort. The Office of Institutional Research codes these data using standard taxonomies for industry and occupation, enabling linkage to state and federal data; updates them annually; and links them with existing administrative data to enable analysis by demographic characteristics such as major. Taken together, and as shown in Chart K, these data provide a comprehensive picture of student outcomes that speak to an important question of interest not only to the institution but also to current and prospective students and their families. [Standard V.2.b]

The University’s outcomes data demonstrate that the bachelor’s degree provides a solid foundation to explore and pursue robust opportunities. The degree and placement data do not, however, provide insight into key aspects of our academic and co-curricular programming. To explore the appropriateness and quality of University programming as well as the perceived contribution of University programming to student personal development, the Office of Institutional Research has developed an alumni survey that aligns with its existing portfolio of student self-assessment that begin at first matriculation, continue with annual year-end assessments, and culminate with the senior survey. The Student Outcomes Survey has enabled us to understand what skills, knowledge, and abilities are important to Princeton alumni in their current position, as shown in Chart L. [Standard III.5.b]
Given the University’s stated commitments to advancing an education that serves both the nation and the world, preparing students for lives of service, civic engagement, and ethical leadership, it is notable that more than 30% of all graduated cohorts from the past two decades report that they have volunteered or engaged with a non-profit organization in the past year, and that 80% of students in the Class of 2021 say they have joined a local club, served as an officer in a non-profit or business organization, volunteered their time, and/or voted. The same figure for the oldest graduates in the survey, the Class of 2003, is 92%. (See Student Outcomes Project Status Report, p. 32.) [Standard V.2.b]

Chart K: Alumni Insight — Occupations of Art and Archaeology Majors Three to Twelve Years Post-Bachelor’s Degree as of 2022

Source: Office of Institutional Research

Chart L: Student Outcome Survey — Skills and Abilities Very Important (4 pts.) or Essential (5 pts.) to Current Job or Position. Top Ten Mean Scores by Occupational Category

Source: Office of Institutional Research
The survey also asks the alumni for their assessment of the level of preparation provided by the University in these same domains. As shown in Chart M, these data suggest that foundational knowledge and skill domains gained through our curriculum are very important to our graduates in their careers, and that our graduates feel that they were well prepared by Princeton in these domains. [Standard III.5.b]

**Chart M: Student Outcome Survey — Skills and Abilities**

**Importance to Current Job or Position (1=not important to 5=essential).**  
**Preparation Provided by Princeton (1=not well prepared to 5=extremely well prepared)**

<table>
<thead>
<tr>
<th>Importance</th>
<th>Preparation</th>
<th>Skill Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.70</td>
<td>4.46</td>
<td>Think critically</td>
</tr>
<tr>
<td>4.63</td>
<td>4.43</td>
<td>Think analytically and logically</td>
</tr>
<tr>
<td>4.53</td>
<td>3.88</td>
<td>Communicate well orally</td>
</tr>
<tr>
<td>4.52</td>
<td>4.22</td>
<td>Function independently, without supervision</td>
</tr>
<tr>
<td>4.47</td>
<td>4.37</td>
<td>Learn on your own</td>
</tr>
<tr>
<td>4.46</td>
<td>3.93</td>
<td>Evaluate and choose between alternative courses of action</td>
</tr>
<tr>
<td>4.44</td>
<td>3.64</td>
<td>Function effectively as a member of a team</td>
</tr>
<tr>
<td>4.39</td>
<td>4.21</td>
<td>Synthesize and integrate ideas and information</td>
</tr>
<tr>
<td>4.37</td>
<td>4.28</td>
<td>Write clearly and effectively</td>
</tr>
<tr>
<td>4.37</td>
<td>3.99</td>
<td>Plan and execute complex projects</td>
</tr>
<tr>
<td>4.30</td>
<td>3.83</td>
<td>Gain in-depth knowledge of a field</td>
</tr>
<tr>
<td>4.23</td>
<td>3.43</td>
<td>Use techniques, skills and tools specific to my profession</td>
</tr>
<tr>
<td>4.16</td>
<td>3.29</td>
<td>Develop career- or work-related knowledge and skills</td>
</tr>
<tr>
<td>4.11</td>
<td>3.91</td>
<td>Create original ideas and solutions</td>
</tr>
<tr>
<td>3.98</td>
<td>4.22</td>
<td>Judge the merits of arguments based on their sources, methods and reasoning</td>
</tr>
<tr>
<td>3.88</td>
<td>3.80</td>
<td>Understand yourself: abilities, interests, limitations, personality</td>
</tr>
<tr>
<td>3.86</td>
<td>3.37</td>
<td>Lead groups of people</td>
</tr>
<tr>
<td>3.84</td>
<td>3.19</td>
<td>Constructively resolve interpersonal conflicts</td>
</tr>
<tr>
<td>3.83</td>
<td>3.84</td>
<td>Relate well to people of different races, nations, and religions</td>
</tr>
<tr>
<td>3.82</td>
<td>3.29</td>
<td>Develop or maintain self-esteem/self-confidence</td>
</tr>
<tr>
<td>3.76</td>
<td>3.90</td>
<td>Use quantitative reasoning and methods</td>
</tr>
<tr>
<td>3.75</td>
<td>3.59</td>
<td>Have a personal code of values or ethics</td>
</tr>
<tr>
<td>3.40</td>
<td>3.62</td>
<td>Identify moral and ethical issues</td>
</tr>
<tr>
<td>3.16</td>
<td>4.09</td>
<td>Have broad knowledge across a number of fields</td>
</tr>
<tr>
<td>3.16</td>
<td>3.78</td>
<td>Understand the complexity of social problems</td>
</tr>
<tr>
<td>3.10</td>
<td>3.74</td>
<td>Understand the process of science and experimentation</td>
</tr>
<tr>
<td>2.90</td>
<td>3.50</td>
<td>Evaluate the role of science and technology in society</td>
</tr>
<tr>
<td>2.82</td>
<td>3.76</td>
<td>Understand global issues</td>
</tr>
<tr>
<td>2.62</td>
<td>3.77</td>
<td>Place current problems in historical / cultural / philosophical perspective</td>
</tr>
<tr>
<td>2.30</td>
<td>3.96</td>
<td>Conduct scholarly research</td>
</tr>
<tr>
<td>1.70</td>
<td>3.48</td>
<td>Understand art, music, literature, and drama</td>
</tr>
<tr>
<td>1.52</td>
<td>2.79</td>
<td>Read or speak a foreign language</td>
</tr>
</tbody>
</table>

**Source:** Office of Institutional Research

**B. Tracking Major Choice and Curricular Interventions for All Undergraduates**

As Princeton has diversified its student body over the last ten years, it has also tracked major choice (selection and retention) in relation to demographic characteristics. Of particular note is how the University has monitored the intersections of race and income in undergraduate student persistence in STEM fields, given some initial analysis that suggested that low-income students in the cohorts of 2017-2019 (those who entered in 2013 through 2015) lagged behind their higher-income peers in retention in some STEM majors as well as the B.S.E. program. (See Jan 19 BOT Academic Experiences of Low-Income Students, pp. 13-14.)

A key goal for the University is to ensure equity of experience for all students enrolled at Princeton. One measure of effectiveness, therefore, is to track representation of student diversity across the University’s academic programs, along with student performance within them. We measure performance in a variety of ways: grades, persistence (e.g., retention in a student’s planned major), and self-reported satisfaction with their academic experience through the annual
Year-End Assessment of all students, among other parameters. In addition, a study completed by the Associate Dean for Curriculum and Assessment and the Assistant Provost for Academic Studies and Analysis assessed how undergraduates enter into and navigate our curriculum. (Curriculum Project Antiracism Summary Part III) [Standard V.2, Standard V.3.a, Standard V.3.b, and Standard V.3.c]

A feature of the Princeton experience is that students can pursue their degree interests while still gaining transferable skills that are useful in multiple fields after graduation as demonstrated in the Outcomes Survey data discussed above. This is further borne out by the annual reports provided by the Center for Career Development (CCD) that document the diverse paths that students take into various employment sectors post-Princeton, as well as into future graduate and professional study. Post-graduation outcomes are tracked by the CCD annually when it surveys the senior class each May, with a follow-up six months after graduation for those who reported they were still seeking employment or admission to graduate school. Response rates are very high: post-graduation outcomes were obtained for 1,229 (99.5%) of the 1,235 graduates of the Class of 2022. These reports (which are confidential because they include starting salary information and therefore are not included in this report) are shared annually with the Cabinet and in aggregate for academic departments. More student-focused information is provided in the interactive resource “Career Compass.” (See AY 2021-2022 Year End Overview, p. 9.) [Standard V.2.b]

The results of these assessments have been communicated annually to key University stakeholders, most notably the Faculty Advisory Committee on Diversity. (2022 Feb 2 FACD Diversity and ODOC FACD Presentation 01.19.2023) [Standard V.3.f]

Of particular interest in these large-scale analyses has been the potential for divergent experiences and achievements according to students’ demographic characteristics, particularly race, ethnicity, and income status. Our self-study provided an opportunity to aggregate and review these findings, in some cases conducting additional analysis to synthesize the data and explore follow-up questions inspired by the takeaway conclusions. Some notable findings include the following:

- Clear patterns correlated with race are present in the planned majors of incoming students, and these differences remain evident when students graduate. For instance, first-year students who identify as Asian plan to major in engineering departments at a disproportionately higher rate. The same holds for Black students in the life sciences, sociology, and African American studies, and for white students in humanities fields.
- Undergraduates do switch intended majors — as many as 50% major in a department other than their first interest — though there is substantial variation across divisions and departments. As a liberal arts institution, we welcome and encourage exploration and change.
- The likelihood of changing majors is not correlated with racial or socioeconomic demographics. It is, however, correlated with performance in introductory courses (though our data show that grades in introductory courses are not determinative of persistence in a department).
- A September 2022 analysis of student performance in first-year writing seminars shows only small lags in performance among FLi students or those who identify as members of historically underrepresented groups. The average grade for all students in the first-year
WRI seminar is a B+ (3.3), while students from the lowest income bracket, students who identify as Black, Hispanic, Native American, or Pacific Islander, and first-generation students each average a 3.2. (Writing Seminars Grading Distribution) [Standard III.8]

- In surveys, students report the importance of introductory courses for their choice of majors, though there is variation by race in which introductory courses students gravitate toward. For instance, in the long-standing four-course sequence in Western Humanities, our institutional analysis shows that the representation of historically underrepresented students in the four courses dropped by about half between AY 2020-2021 and AY 2021-2022, some of which may be attributable to online learning during the pandemic. In previous recent years (available data begin with AY 2017-2018), URP undergraduates were present in the humanities sequence at rates nearly equal to their presence in the student population. When we consider income rather than race, we find that students from the lowest income category have been consistently underrepresented in the humanities sequence, typically by a couple of percentage points, but by a wider margin in the most recent academic years. The number of students enrolled is small — the sequence courses enroll an average of 55 students in the fall, dropping to an average of 36 in the spring, so measurable drops in representation may be caused by the decisions of just a few students. Still, this discrepancy is notable and worth following over a more extended time span. (See 2022 Numbers in Introductory Humanities Sequence. EBCAO has worked with the Humanities Council and humanities departments to institute annual events that provide students opportunities to learn more about the disciplines and to form relationships with faculty.) [Standard III.8]

- Students’ self-reported satisfaction with their chosen major is high, regardless of race or socioeconomic background. In 2022, for instance, when students were asked about their satisfaction in their major, with 1 being “Very Dissatisfied” and 5 being “Very Satisfied,” the mean for lowest-income students was a 4.1, compared to a mean of 4.2 for students not receiving any aid. Black and Hispanic students in the same survey reported satisfaction means of 3.9 and 4.0, which were only slightly lower than the mean for white students, at 4.2. Notably, these differences are smaller than the differences reported by students’ division of major. Humanities majors report the highest mean levels of satisfaction with their major, at 4.4, with engineering students reporting a mean of 4.0.

Our self-study uncovered opportunities for improvement. In particular, through a review of department requirements as well as interviews with faculty from selected STEM departments, the self-study team concluded that less prepared students do face ongoing challenges pursuing a major in STEM fields. This does not necessarily contradict the institutional data that show relatively strong rates of persistence; after all, persistence can also mean persevering in the face of difficulty.

For instance, some STEM majors presuppose a strong high school background. We learned from our interviews that almost all students who declare a math major place into 200-level, proof-based math courses as first-years. Similarly, relatively few students who become physics majors take the standard introductory sequence; most take PHY 105-106, for which a strong AP-level high-school physics course is a prerequisite.
Recognizing these potential academic challenges, we note that Princeton has introduced several interventions to support all undergraduate students in their chosen path of study. These interventions promise to particularly benefit those students who come to Princeton having had less access to rigorous pre-college coursework. (See, for instance, 2016 CPUC McGraw FSI Presentation, SEAS Freshman Year Sequence, and FSI Evaluation Summer Bridge Program.) [Standard V.3.a, Standard V.3.b, Standard V.3.c, Standard V.3.g, and Standard V.3.h] These changes include introducing more flexibility into our curriculum, developing innovations in course sequences and placement, and continuing to offer all undergraduates academic support. Below we discuss each of these interventions in turn, along with how it has been assessed.

1. Introducing Greater Curricular Flexibility

We have long seen the summer months as a valuable time for students to make up for a dropped course or take an extra one to stay on track for their plan of study. Although Princeton does not have a formal summer term, our institutional analyses show that almost 40% of undergraduates take summer courses during their Princeton careers, many transferring credit for courses taken at other universities. Summer courses are frequently needed to address a deficiency toward degree progress: in the 2014-2021 cohorts, almost half of the students who had failed to graduate as of November 2021 had ended one or more terms “course deficient.” (See Summer Course Data COCS, slide 7.) [Standard V.3.g and Standard V.3.h]

Recognizing the importance of these courses for lower-income students, and in response to the recommendations from the 2016 Ad Hoc Working Group on the Needs of Low-Income Students to expand support for summer opportunities for FLi students, new summer opportunities were established in 2016. Specifically, a SIFP Summer STEM program was established in 2016 to increase funding for low-income students to access external courses for transfer credit. (The University’s transfer course policies can be found in Overview of Approval Process for Courses Taken at Other Institutions and Transfer Course Approval Form and Approval for Course at Another Institution Process Map.) [Standard IV.2]

In December 2018, the Dean of the College submitted a formal proposal to the APG to expand slots for rising sophomores and juniors in the SIFP program to take or retake over the summer “funded foundational coursework (e.g., Introductory Physics, General Chemistry, Organic Chemistry, Calculus) necessary for successfully completing their degree requirements and/or for maintaining normal progress to degree at local universities (i.e., Rutgers and The College of New Jersey).” The APG discussed and approved this request at its December 19, 2018, meeting. (Memo re: SIFP Summer Scholar Program) [Standard V.3.e]

Additionally, during the pandemic-restricted summers of 2020 and 2021, the University itself offered several new online courses in economics, math, and physics, which were fully funded for all participants. With lowered barriers to entry, the number of low-income students taking summer courses of any kind increased throughout 2016-2020. (See Summer Course Data, slides 11-12.)
Both initiatives have continued, providing avenues for students to access courses off-campus with financial assistance, along with a small suite of on-campus courses in math and physics. Students on aid are still able to take these courses free of tuition. Beginning in Summer 2023, the University instituted a standardized tuition rate for Princeton summer courses and standardized financial assistance to be consistent with term-time levels. The summer math offerings include standard 100- and 200-level courses, and the physics course allows students to extend the standard two-course sequence in calculus-based physics from two semesters (PHY 103-105 or PHY 104-106) to three terms, with the third course concluding in the summer (PHY 103-109-110). As we continue to explore other similar interventions, the summer period could be a critical opportunity for providing more students this kind of flexibility.

2. Innovations in Placement and Curriculum

With growing enrollment in the School of Engineering and Applied Science (SEAS) and its B.S.E. degree program, new attention has been paid to designing alternative “on-ramps” for prospective students in these quantitative fields.

For instance, recognizing that students often encounter challenges in foundational math courses, math faculty revised the starting course, Calculus Foundations (MAT 100), to better prepare students who need additional work in precalculus prior to entering Calculus 1. (See Math document for advisers 8 14.) This also required that the department revise its approach to placing students in the correct starting math course at the beginning of their studies, since many students might balk at being advised to begin in a lower course, even if it would benefit their studies in the long term. [Standard IV.1.b]

To develop this more student-focused placement system, math department faculty worked with Office of the Dean of the College staff to develop a new system designed to improve student trust in math placement recommendations, improve first-year experience within introductory coursework, and emphasize transferability of foundational skills across the curriculum. The result is an entirely new placement workshop for both 100-level and 200-level math courses, as well as new messaging to students about how to approach the placement process. (Student Version MAT INFO and MCCCT and MAT INFO1 and INFO2 and Math FAQs from ClassPath2022) [Standard IV.1.b, Standard IV.1.c, and Standard III.3]

Accordingly, enrollments in MAT 100 have risen since 2019, when the new placement process was instituted. In 2020, only 33 students were enrolled in the course; by 2023, that number had almost doubled, to 64. (See ODOC FACD Presentation 01.19.2023, p. 7.) [Standard IV.6]

Other interventions have focused on developing entirely new course sequences. In Fall 2017, SEAS introduced a new five-course engineering sequence in collaboration with the Council on Science and Technology and the Keller Center for Innovation in Engineering Education. The sequence was designed to introduce engineering concepts early in a student’s academic career while strengthening community between B.S.E. students and faculty and addressing concerns about attrition out of engineering, which the University had observed were slightly higher among URP, female, and lowest-income students who entered in 2013-2015. (See 2018 Jan19 BOT Academic Experiences of Low-Income Students, slide 14.)
The first four courses (EGR 151-154) are taken in the first year and fulfill the same B.S.E. prerequisites as traditional math and physics courses (the fifth course, EGR 156, was later developed for sophomores). These sequences were first made available to students entering in 2017 (cohorts of 2021 and beyond).

An external team evaluated the course sequence from Fall 2017 through Spring 2019. (Princeton EGR Report_final) It found that relative to their counterparts in the traditional math and physics courses, EGR sequence students, prior to taking the courses, showed significantly lower confidence in their abilities in areas such as assessing the credibility of scientific claims and using quantitative reasoning when making decisions. Comparing a pre- and post-participation survey, EGR sequence students reported improvements in their attitudes, understanding of concepts, and engineering skills. Focus group participants further described their increased confidence and engagement, particularly in their problem-solving abilities. Participants also believed that they could apply knowledge and skills gained in the sequence that would help them persist in their engineering majors in spite of new challenges. [Standard III.8, Standard V.3.a, Standard V.3.b, and Standard V.3.f]

The EGR sequence has been refined over the years, and its efficacy is evident. Our most recent internal assessment of the sequence found that this approach has been remarkably successful in encouraging students to persevere in the B.S.E. program. Among students who have taken EGR 150, almost two-thirds, on average, have declared engineering majors, with higher proportions observed in the two most recent cohorts — 76% in the Class of 2023 and 82% in the Class of 2025. (Summary EGR Sequence for Self-Study) [Standard III.4, Standard V.3.b, and Standard V.3.g]

Similarly, an institutional analysis of STEM retention conducted for the Faculty Advisory Committee on Diversity in January 2023 compared two curricular interventions: the revised calculus foundations course (MAT 100) and the five-course EGR sequence that puts the emphasis on cohort-based, applications-focused teaching by ladder faculty. The analysis demonstrates a higher retention rate in SEAS for URP and lower-income students who take the engineering sequence. Among students who participated in MAT 100, on the other hand, only about half had declared a STEM major, and only 14% declared economics. (ODOC FACD Presentation 01.19.2023) [Standard III.8]

3. Offering All Students Academic Support

At Princeton, support in foundational academic skills is available centrally and at no cost to students, primarily through the McGraw Center for Teaching and Learning and the Writing Center. The McGraw Center provides both group and individual tutoring for introductory STEM courses, which is intended to supplement, not replace, instruction. (Tutoring Objectives) The Writing Center trains undergraduate and graduate students as fellows who can assist their peers on various portions of their academic writing. (The Writing Center Princeton Writing Program) In addition, peer-led tutoring is also coordinated by the residential colleges (in certain languages and statistics, for example) and a number of departments. [Standard IV.1.b, Standard IV.1.c, and Standard IV.1.d]
The academic support provided by the University helps students adjust to the pace and rigor of a Princeton semester with an emphasis on developing metacognitive skills, recognition of deep patterns, and skills transfer. At the heart of the programming and messaging developed, practiced, and refined by these units is a philosophy that views academic support as a resource that all students should use and from which all students can benefit; that is, academic support is never framed as a remedial resource. Princeton rules also prevent students from using external tutoring services that are unauthorized by the Office of the Dean of the College, a policy that aims to make tutoring equally accessible to all students, regardless of socioeconomic status.

The McGraw Center has implemented a holistic approach to assessment, including reviewing survey results, developing focus groups, soliciting written reflections, and carefully tracking use and capacity. (Memo on McGraw ULP Services and Resources) The McGraw Center has observed significant variability by course and term in the percentage of students who engage in tutoring. The analysis in Tutoring Data from September 2022 found, on average, 20% participation by the students enrolled in the courses for which tutoring is offered, which points to the institutional importance of the program, particularly in STEM courses. The range includes General Chemistry I (CHM 201), for which an average of 40% of the students took advantage of tutoring at least once, and Introduction to Cellular and Molecular Biology (MOL 214), for which an average of 10% of the students in the course attended tutoring.

This same study did not find any significant differences in participation in tutoring by income group or first-generation status. It did, however, demonstrate that Black, Hispanic, Native American, and Pacific Islander students are on average slightly more likely (5%) to engage in tutoring than Asian, white, and international students. This analysis invites further questions, but it does suggest that URP students perceive the McGraw Center as part of the ecosystem of advising and academic support. [Standard IV.6]

C. Cultures of Department Assessment

Finally, our self-study took care to review and document how individual departments assess student learning. The remainder of this section highlights one example from each of the University’s four divisions of the culture of assessment as it is carried out in the micro-climate of an individual department. Here, we discuss the remaining criteria for Standard V that have not yet been thoroughly explored in the preceding narrative.

The Dean of the College periodically asks all departments to report on how they assess student learning. In support of this self-study, the working group for Priority 1 asked the Dean to have departments respond to the following prompts:

- What are the curricular learning goals for students majoring in your department? In other words, what habits of inquiry, modes of reasoning, methods of research, and forms of communication will your department’s majors accomplish by the time they’ve concluded their required work?
- Describe your department’s process for assessing your learning goals, both on a yearly basis and, as needed, periodically, in the form of a broader, department-wide review.

Departments and programs were also reminded to review their “Goals for Student Learning” as stated in their listing in the Undergraduate Announcement, and to codify the goals for the
capstone Senior Thesis in their Guide to Independent Work, along with a corresponding rubric
that outlines how the Senior Thesis will be assessed. [Standard V.1 and Standard V.2.b]

All of the University’s 36 undergraduate academic departments submitted a formal assessment
report in conjunction with the self-study process. Below, we highlight one department from
each division and survey how each assesses student learning and uses that assessment to improve
educational effectiveness and nurture continuous improvement. Together, these representative
eamples illustrate Princeton’s ongoing assessment culture. (See Department Assessment
Plans for ENG, SPIA, MOL, and COS.) [Standard V.5]

1. Division I/Humanities: English

The Department of English is the University’s largest humanities department with around 40
undergraduate majors every year and approximately ten graduate students in each cohort.

Goals for Undergraduate Student Learning

The English department’s curriculum enables students to develop crucial transferable skills,
including:

- Analytical, critical, and interpretive skills — students develop these faculties through
close attention to the structures of arguments, specific aspects of language and
expression, and conceptual synthesis.
- Excellent writing — students develop the ability to communicate in clear, efficient, and
elegant prose, and to write deliberately with a specific audience in mind.
- The ability to read closely and carefully, to attend to historical, rhetorical, and
grammatical aspects of English.
- Attention to translation — many students work with texts in other languages, comparing
them with their English translations, to comprehend how English relates, stylistically and
historically, to materials in other languages.
- Research skills that will enrich and improve these reading and writing skills — for
instance, students acquire tools and methods for archival research, to understand the
history of books and book production, how to read data and various modes of expression
and interpretation, and the histories of aesthetics and literary criticism.
- The ability to understand, engage, and assess relevant critical work (secondary sources
that comprise the discipline or interdisciplinary fields like American Studies, African
American Studies, Asian American Studies, etc.).
- The exercise of these skills with an understanding of historical developments of English-
language literatures, demonstrating an ability to situate a text, movement, or style in
relation to broader aspects of period or genre.
- The exercise of these skills with an understanding of how particular English-language
literatures and theories address, and are implicated in, historical operations of power and
empire.
- The ability to propose a subject for sustained research, analysis, or critical interpretation,
and to see the project to effective completion.
- The ability to recognize, use, and assess a variety of critical and theoretical perspectives.
[Standard V.1]
Core Curricular Assessments

The independent work required in the junior and senior years are critical inflection points for undergraduates in English. This includes the department’s Junior Seminar (the methods course required of all juniors) along with the year-long Junior Paper and the Senior Thesis. With the ongoing attention of a faculty adviser who evaluates the student’s writing from first drafts to final essay, the Senior Thesis is at once a sustained critical endeavor for majors and a report to the faculty about how well its goals are being met. In addition to the primary adviser, each thesis is assigned a second reader; together they provide extensive written feedback and decide on a single grade based on grading standards made available in the department’s guide to independent work. (ENG IW Guide) [Standard V.2.a and Standard V.2.c]

Majors must also complete a senior department exam. Both the thesis and the exam serve diagnostic functions for the faculty, allowing them to see whether and how the department’s pedagogical goals are met. The current exam format draws upon faculty and student feedback to develop a final assessment more geared to metacognition; the new format was officially approved for the Class of 2023. [Standard V.5] The revised exam consists of both a written reflection paper and an oral examination that together ask the student to reflect about their learning in the major, drawing connections between their coursework and independent work. (Senior Department Examination, 16 February 2023) [Standard V.3.a, Standard V.3.b, and Standard V.3.c]

Goals and Assessment for Graduate Students

The goal of the graduate program in English is to produce well-trained and field-transforming scholars, insightful and imaginative critics, and effective and creative teachers. To determine that these goals are being achieved, the department uses a series of evaluations, exams, benchmarks, requirements, and reviews to track (and confirm) the progress of its students. Every student takes two years of graded courses, which must meet a set of distribution requirements. (See ENG Graduate Handbook, p. 13.) During those two years, students must also pass exams to show research proficiency in two foreign languages. In the third year of the program, students must pass a general exam and a proposal defense exam, and must receive a passing grade in a practical seminar about pedagogy; students also begin to fulfill their teaching requirements. [Standard III.6 and Standard V.2.a]

The remainder of the program focuses on the successful completion of the dissertation and teacher training. Each year, students must complete at least one satisfactory dissertation chapter and meet at least once with their full dissertation committee. The dissertation defense is the student’s final exam and the department’s concluding way to ensure the program’s goals have been met. This series of evaluations, exams, benchmarks, requirements, and reviews complements the Graduate School’s annual re-enrollment process. This high-touch, individualized assessment of each individual graduate student allows them to further tailor their graduate experience in conversation with the Director of Graduate Studies (DGS) as well as their faculty advisers. (Sample Re-Enrollment Form) [Standard V.2.a and Standard V.3.a]

Ongoing Curricular Improvement

The focus on continuous improvement is evident in the department’s curricular changes over the past six years. In response to an academic review conducted in 2017-2018, the department has
developed more courses for first-year students and sophomores, such as ENG 259 “Film and Media Studies: Animation,” ENG 275 “American Television,” and ENG 317 Historical Fiction/Fictional History.” (See 2017-2018 English Academic Review, p. 15.) [Standard V.3.b, Standard V.3.d, and Standard V.3.g]

The department has also continued to review and refine the structure of the required Junior Methods seminar to include shorter, more scaffolded writing assignments that meet the needs of a new generation of learners. With the support of a grant from the 250th Fund for Innovation in Undergraduate Education, the current DUS will create new materials to ensure that each Junior Methods seminar provides common guidelines, clarifies expectations for student work, and affords students the same resources for their research. (ENG 300 250th Summary) [Standard III.2.d]

Between 2020 and 2022, the department implemented a series of reforms to the graduate program based on discussions between faculty and graduate students, concluding by adding a graduate orientation seminar, updating teaching requirements, and increasing the options for the language exams. These changes will undergo further evaluation as a routine aspect of the DGS’s responsibilities. [Standard V.3.b and Standard V.3.c]

2. Division II/Social Sciences: Princeton School of Public and International Affairs

The major offered by Princeton’s School of Public and International Affairs (SPIA) is a multidisciplinary liberal arts major designed for undergraduate students interested in public service and in becoming leaders in public and international affairs. The major continues to be one of the most popular A.B. fields of study, with approximately 150 majors each year. SPIA has approximately 86 master’s students and eight doctoral students in each cohort.

Goals for Undergraduate Learning

The goals for learning for undergraduate SPIA majors are conveyed through the following:

- Prerequisite courses meant to provide basic social science literacy and a foundation for studying and analyzing public policy, and domestic and international affairs.
- Core courses to introduce the practical art of policymaking, and further emphasize analytical tools and theory that students will need to understand, evaluate, engage with, craft, and/or implement public policy and international affairs. The core prepares students for junior and senior independent work through thematic or disciplinary depth.
- Electives designed to encourage disciplinary breadth required in public and international affairs; intellectual depth by discipline or policy area; and a regional focus that recognizes relationships, institutions, and effects that cut across national borders.
- Independent work in which students explore a public policy problem informed by the research literature, work with evidence to propose and test hypotheses, and use suitable research methods to draw evidence-based conclusions that apply to the relevant public policy debate. [Standard V.1]
Core Curricular Assessments

At the individual student level, learning in SPIA is assessed primarily through the independent work requirements. Junior independent work is designed to teach students to think analytically about a public policy problem; to critically review evidence about such problems and their potential solution; to present evidence in a clear, logical, and well-organized manner; to evaluate solutions that have been proposed or tried, and potentially develop new solutions; to clearly and concisely summarize the evidence and the alternatives; and to make recommendations to stakeholders on how best to address a public policy problem. [Standard V.2]

As explained in the SPIA Guide to Independent Work, SPIA seniors draw on their core and elective coursework to produce clearly written, well-organized, methodologically sound, and substantively defensible Senior Theses on a current and significant public policy issue. Each thesis identifies a knowledge gap or public policy research question; generates a logical and testable hypothesis; identifies or collects evidence that allows the student to test hypotheses, apply appropriate research method(s) to analyze data, and draw evidence-based conclusions from their analysis that apply to the relevant public policy debate.

Two faculty members read each Senior Thesis; the adviser and a second faculty member assigned by the department to be an independent reader. Both provide written comments to the student. Senior independent work also includes an oral examination by the two faculty readers, which is evaluated on the basis of the quality of the presentation, taking into account the clarity, facility with the material, and competence in the specific subject matter. The oral examination grade is separate from the written thesis grade. [Standard V.2.a]

Goals and Assessment for Graduate Students

SPIA is distinct from the other three departments surveyed here in that it administers both a Ph.D. program and two master’s programs, with the master’s programs being considerably larger. The primary goal for the doctoral program is to train doctoral students to produce high-quality, original, policy-relevant research. Students demonstrate that capacity by writing a dissertation that consists of multiple pieces of original research that are worthy of publication in highly regarded, peer-reviewed journals appropriate to the students’ fields of study. Each student has a primary faculty adviser (some students are co-advised) and creates a dissertation committee to guide the student in the development and execution of their Ph.D. (SPIA Masters Programs Overview) [Standard III.6]

SPIA offers two master’s degrees: a Master’s in Public Affairs (MPA) and a Master’s in Public Policy (MPP). The goal of the MPA is to provide interdisciplinary training to prepare students for international and domestic public policy careers, which is largely provided through a series of courses in politics, economics, psychology, and statistics. All MPA students must also complete a minimum ten-week internship; past placements have included the United Nations, World Bank, U.S. State and Treasury Departments, and a variety of nonprofits. Both the students and internship supervisors complete an evaluation at the end of the summer that is shared with the Office of Graduate Career Development. [Standard V.2.a and Standard V.2.b]

The MPP is a mid-career one-year degree, instituted 25 years ago, in AY 1997-1998. The MPP program provides rigorous training in economics, politics, statistics, and policy analysis, including qualitative as well as quantitative analysis. The goal is to prepare those who complete
the degree to assume leadership positions in an increasingly complex public service environment. In addition to coursework, each MPP candidate is required to give a talk about their professional experience at least once during their year in residence. These are usually arranged over lunch on Fridays during each semester, and have contributed to an enhanced sense of community among SPIA graduate students. [Standard V.2.a and Standard V.2.b]

Ongoing Curricular Improvement

SPIA recently revised its undergraduate curriculum in response to a review commissioned and completed during AY 2021-2022 at the direction of then-dean Cecilia Rouse (and then-acting deans Mark Watson and Nolan McCarty) and current Dean Amaney Jamal. The curricular revision aimed to recognize the impact that eliminating selective admissions to the major has had on SPIA and the resulting dramatic increase in undergraduate majors in the program. (SPIA had been the only undergraduate department with selective admission; starting with the Class of 2015, students simply need to complete the set prerequisites to enter the department.)

The 2021–2022 undergraduate review committee illustrates how a Princeton department uses systematic assessment to improve educational effectiveness. The group reviewed past curriculum materials, debated the architecture of the proposed curriculum, articulated requisite core competencies for SPIA’s undergraduate degree program, reviewed specific courses and syllabi, and weighed programmatic objectives against administrative feasibility. In the context of a large school with a faculty drawn from twelve departments, the committee was mindful of balancing breadth and depth. The committee met with and consulted faculty both inside SPIA and in closely aligned departments (Politics, Economics, History), current students, and alumni. The resulting revisions to the undergraduate curriculum, as well as a description of the larger assessment process, are described in detail in the proposal as approved by the COCS. (SPIA UG Proposal) [Standard V.3.b, Standard V.3.c, Standard V.3.f, and Standard V.3.h]

SPIA regularly assesses the effectiveness, relevance, currency, and quality of its curriculum. SPIA-specific courses and courses from other departments that meet SPIA requirements are reviewed each semester by the SPIA Curriculum Committee. Members of this committee include full-time faculty, full-time lecturers, the Senior Associate Dean for Academic Administration, and the faculty chair of the program. [Standard V.2.c]

3. Division III/Natural Sciences: Molecular Biology

Molecular Biology is one of the larger majors at Princeton, with 50-60 sophomores entering the department each spring and approximately 27 graduate students in each cohort.

Goals for Undergraduate Learning

The undergraduate program in molecular biology is designed to equip students with the knowledge and skills they need to explore the central questions of 21st-century biology. The curriculum provides broad foundational knowledge in core disciplines including molecular, cellular, and developmental biology, biochemistry, and genetics. Students acquire depth by pursuing subdisciplines of interest in greater detail and sophistication in upper-level elective courses, which emphasize current topics and readings from the primary literature. Because the best way to learn science is by doing science, students conduct original research at the frontiers
of modern science for their independent work. In addition to becoming a scholar in their chosen fields, students will become adept at formulating testable hypotheses, planning and executing well-controlled experiments, analyzing and interpreting data, and formally presenting their findings both orally and in writing. [Standard V.1]

Core Curricular Assessments

All department juniors engage in a fall junior tutorial in which they practice scientific writing, and then complete their independent work in the spring semester with the Junior Paper, a formal research proposal that is modeled on a typical grant proposal. All Senior Theses frame and summarize the research question(s), place the results in the context of existing knowledge, analyze the strengths and weaknesses of the research, and suggest future directions for research in that area. Evaluation of independent work is done by use of detailed rubrics that describe specific areas in which students are expected to have achieved mastery. The Senior Thesis is read and evaluated by three faculty readers, including the adviser, according to a grading rubric. In addition, the two non-adviser readers conduct an oral exam during which the student presents and discusses the thesis work. (MOL Independent Work Guide) [Standard V.2.a and Standard V.2.c]

The rubrics for evaluating undergraduates’ independent work are re-evaluated and updated on a continuing basis by the Undergraduate Studies Committee (USC). The USC is chaired by the Director of Undergraduate Studies (DUS) and its members are chosen by the DUS and Chair. The compiled scores for junior and senior independent work and the oral exam are examined by the USC to determine grades and student performance. The overall score per question, averaged over all students, is used to assess whether students have achieved the department’s learning outcomes. The results of the analysis are presented to and discussed by the entire faculty at the final spring faculty meeting. [Standard V.2.a and Standard V.2.c]

Goals and Assessment for Graduate Students

The graduate program in Molecular Biology has the following objectives:

- Foster the intellectual and creative development of our trainees in multidisciplinary scholarship and research through rigorous coursework and vibrant research experiences.
- Provide training in professional skills required for students to become scientific thought leaders, including critical thinking, science communication, leadership, and ethical conduct.
- Develop the next generation of scientific teachers and mentors by providing both training and opportunities to utilize these skills during their Ph.D. studies in professional and outreach activities.
- Enhance diversity and inclusion in science through recruitment and retention of a diverse graduate student population and education of our community in fostering an inclusive environment.
- Decrease time-to-degree duration and increase the productivity and retention in scientific careers. [Standard V.1]

The Ph.D. program in Molecular Biology includes a core curriculum that covers both traditional areas of research as well as the research methods that produce cutting-edge scientific progress.
Other recent developments of note include a new course on practical skills in molecular biology (established in 2022), and a new workshop on transferable professional skills that covers topics such as time management, collaboration, mentoring, and project management. (See MOL Grad Information, p. 4.)

Evaluation of graduate student learning comes in the form of the general exam (generally taken in December of the second year), a three-hour exam conducted by three faculty members who are not the student’s thesis adviser. Following the general exam, assessment of student learning is conducted through the student’s dissertation as well as the final public oral exam. The student’s ongoing progress on the thesis is evaluated by a committee of three faculty chosen by the student, and through an annual written evaluation in conjunction with the annual re-enrollment period. The final public oral exam takes the form of a seminar given by the student, at which at least three faculty must be present in addition to the student’s primary mentor. At least two of those faculty must not have been principal dissertation readers and thus serve as the thesis examiners. (MOL Grad Information) [Standard II.6, Standard V.2.a, and Standard V.2.c]

Ongoing Curricular Improvement

The USC oversees and reviews the curriculum on an ongoing basis to keep pace with scientific progress and evolving student needs. The department has updated upper-level elective course offerings to reflect the evolution of the field and to respond to alumni survey results indicating strong interest in computational/data analysis electives. As research areas in the department become more quantitative, the department introduced a data analysis course option to fulfill a department requirement. [Standard V.3.b and Standard V.3.c]

In 2013-2014, a special curriculum committee led by the DUS undertook an extensive evaluation of the department’s undergraduate program. The committee successfully surveyed not only faculty but also recent graduates (Classes of 2009-2013) to determine the extent to which department courses provided students with the intellectual resources and skills needed for science-related careers of the 21st century. The committee also reached out to faculty and deans at peer institutions, investigated relevant curricula at a wide variety of institutions, and delved into current science education literature and recent thinking on concepts and competencies that biology students should possess. The findings were collated in a report that was presented to the department faculty at a special faculty meeting. (Mol 2014 Curr Com Report) [Standard V.3.b and Standard V.3.f] The ensuing discussion prompted a major revision of the curriculum that included engagement with the Physics department and the Statistics and Machine Learning program to create two new courses specifically tailored for biology students, prior to advancing the proposal to the Faculty Committee on the Course of Study and, ultimately, the full Faculty for approval. (MOL Curriculum Proposal) [Standard V.3.b, Standard V.3.c, Standard V.3.e, Standard V.3.f, and Standard V.3.h]

4. Division IV/Engineering: Computer Science

Because of the broad range of topics within the department and the diverse interests of undergraduates, students may major in Computer Science through either the A.B. or B.S.E.
degree programs. Computer Science is the only department in the University with this flexibility, though the B.S.E. program continues to be the more popular of the two options and is currently the largest major at the University. The growth in popularity of this field over the past decade has been pronounced and steady — there were only 52 COS majors in 2012. Among the Class of 2022, 172 students out of 1,253 (almost 14%) graduated with a major in computer science. COS has approximately 24 master’s students and 42 doctoral students in each cohort.

Goals for Undergraduate Learning

The department has established the following student learning objectives. Specifically, students will:

A. Be able to read and comprehend technical literature in computer science.
B. Be able to plan and complete a one- or two-term project in an area of computer science of their choice.
C. Be able to identify, isolate, and solve important technical subproblems that lead to a solution to a more significant problem.
D. Be able to present technical ideas in computer science clearly, both orally and in written form.
E. Be able to identify and assess related work in their area of study.
F. Demonstrate an ability to work independently in accomplishing all of the above goals. [Standard V.1]

Core Curricular Assessments

The Department of Computer Science uses its independent work program to assess the progress of individual students and their learning as a whole in the department. All students in Computer Science complete at least one term of independent work (the A.B. program requires four terms and the B.S.E. program requires one, though many take more). (See COS AB Guide to Independent Work and COS BSE Guide to Independent Work.) [Standard V.2.a]

Students acquire many of these skills through the department’s required coursework. Nonetheless the independent work program is critical, for this is where students demonstrate their cumulative skills. They are assessed through the following sequence of activities:

- Students meet regularly with faculty advisers. Faculty provide guidance on viewing technical literature and developing a project proposal. Faculty assess planning skills. (Learning objective A)
- Students write progress report summaries at predetermined intervals. These progress reports are reviewed by their adviser and the Independent Work Coordinator (IWC) appointed by the Associate Chair. Planning skills, execution skills, research progress, and writing are assessed. (Learning objectives B, C)
- Students are required to attend information sessions on “How to Write an IW Paper” and “How to Give an IW Talk,” which are led by the IWC. (Learning objective D)
- Students give oral presentations to their faculty adviser, who assesses their presentation skills, planning skills, and sub-area knowledge. (Learning objective D)
Students turn in their thesis or IW final report. The adviser assesses technical writing and overall student performance. (Learning objectives D, E)

• Faculty submit summaries of their assessments to the IWC via the IW portal. IWC and faculty collaborate on the assignment of final student grades. (Learning objective F)

• At the end of each term, the IWC deliberates on program successes and failures. Changes and improvements are discussed at the computer science department faculty meetings when deemed necessary. [Standard V.1, Standard V.2.a, and Standard V.2.c]

Goals and Assessment for Graduate Students

The Department of Computer Science also offers an M.S.E. degree as well as a Ph.D. The M.S.E. is a two-year program that requires four semesters of coursework, including three core courses and three elective courses. The final requirement for the M.S.E. is submission of an original thesis which is supervised by a faculty adviser and reviewed and graded by the student’s adviser as well as an additional faculty reader. Students present their findings in a public seminar, in which the student receives preliminary feedback prior to submission of the final thesis.

The degree of Doctor of Philosophy (Ph.D.) in Computer Science is conferred on candidates who have demonstrated to the satisfaction of their adviser, the department, and the Graduate School the successful completion of a substantial body of scholarship, the ability to perform an independent investigation, and the ability to present the results of such research, in the field of computer science. To qualify for the Ph.D., students are required by the Graduate School to pass the general examination in their subject; present an acceptable dissertation; and after receiving approval of the advanced degree application from the department and the Graduate School, to pass the final public oral examination. (COS Graduate Programs) [Standard III.6, Standard V.1, and Standard V.2.a]

Ongoing Curricular Improvement

The department has several different channels through which to discuss and assess learning goals and curricular issues. For instance, an ad hoc committee chaired by Prof. Sanjeev Arora completed a major revision of the Computer Science curricular undergraduate requirements in 2021. The committee received opinions and feedback from all faculty members and studied requirements at peer institutions. The new requirements link a not-for-credit “junior research workshop” (JRW) with each of four junior-level methods courses: Computer Systems (COS 316), AI/Machine Learning (COS 324), Functional Programming (COS 326), and Computer Architecture (COS 375). The JRWs are now taught or co-taught by the faculty teaching the methods course, but focus on guiding students through the steps of developing and writing their own research proposal, which they could then carry out in the spring term to complete their junior independent work.

An evaluation of the first implementation of the revised methods courses was conducted by the department in August 2022 and provided a number of conclusions and recommendations. (Innovation in COS Methods Courses and Junior Research Workshops) In response to this feedback, the department developed a week-by-week template of potential assignments and
learning goals for other JRW instructors to use, informed by this feedback and students’ comments about the pacing of the work. [Standard V.3.a, Standard V.3.b, Standard V.3.c, Standard V.3.f, and Standard V.3.g]

The department has an external Advisory Council consisting of former graduates of the department who are now recognized as leaders in industry and academia, as well as colleagues from other top computer science departments. About every two years the Advisory Council meets separately with different constituencies: representatives of the undergraduate and graduate students; assistant, associate, and full professors; department leadership; and University administrators. They provide assessment and feedback on topics ranging from curriculum and policy through non-curricular “quality of life” initiatives at both the undergraduate and graduate levels. [Standard V.5]

Conclusion

This chapter has traced the wide-ranging ways by which various units within the University have prioritized ensuring that students from all backgrounds have full access to the curriculum. In taking stock of these efforts and related assessment projects, a number of strengths emerge alongside opportunities for improvement. We conclude by summarizing those here.

Strengths

- The University’s rates of retention and degree completion for both undergraduate and graduate students remain extraordinarily high. We have a uniquely strong foundation upon which to expand our current access initiatives, and to continue offering all students highly personalized advising and individualized assessment in the form of the Senior Thesis and the doctoral dissertation.

- The self-study shows that FSI and SIFP have created a remarkably successful model of robust support for first-generation, low-income students. Institutionally, EBCAO staff have helped identify opportunities to meet the curricular challenges and financial constraints that first-generation, low-income students face. These interventions are also important touchpoints for ensuring equitable educational access more broadly.

- A range of curricular interventions has been initiated in recent years that illustrate Princeton’s culture of continuous improvement, specifically the University’s commitment to developing alternative pathways for students in STEM as well as refined training within departments for all students as they prepare for the Senior Thesis.

Opportunities for Improvement

- Many new initiatives have not yet generated enough data to allow for structured analysis and evaluation. For instance, some initiatives around access, diversity, and inclusion at the Graduate School are in the early stages and, given the regular program lengths of five years beyond the initial Pre-Doc year, the Graduate School is still several years away from accruing meaningful data around retention, degree completion, and outcomes for students who participate in the program. These are areas of opportunity for innovative development given that some of the initiatives are relatively small and benefit from the
close interaction with the Access, Diversity, and Inclusion staff. Importantly, the Graduate School benefits from a centralized environment that facilitates novel data collections and the subsequent dissemination of the findings.

• With the institutional commitment to ensure the success of all students, including those from low-income, first-generation, or historically underrepresented backgrounds, it is important to create consistent review processes. Available data are dispersed across multiple departments, which makes regular review more difficult. We need to understand whether the experiences and educational opportunities across campus are in fact equally accessible to all, for instance in study abroad, utilization of summer programming, internships, and research partnerships with faculty.

• As FSI and SIFP expand to accommodate the planned growth of the undergraduate student body, there may be room for enhancing ties and collaboration with academic departments, identifying faculty who may want to teach FSI courses or develop educational spaces for SIFP students, and developing appropriate institutional incentives for faculty to participate. A consultative committee comprised of faculty and EBCAO administrators could be a way to formalize faculty involvement, and EBCAO could benefit from the methodological and conceptual expertise of Princeton faculty.
Chapter 3: Respond to Technology’s Impact on Research and Education

Another priority for our self-study was to assess and account for how the University has incorporated and responded to the myriad ways in which technological change is transforming teaching, learning, and research. As noted in the 2016 Princeton University Strategic Framework:

To maximize its value and influence as a great liberal arts university, Princeton must seize the opportunities and confront the challenges arising from the effects of technological advancement, which has transformed the questions researchers want to investigate, the ways students learn, and the patterns and practices people and groups use to organize their activities. (p. 18)

Within a few years, in a manner completely unanticipated by the strategic framework, the COVID-19 pandemic would upend many aspects of higher education as we knew it. Our examination of this priority invited us to consider how the remote teaching required by the pandemic has fostered new forms of technological and pedagogical innovation while also re-affirming our commitment to the benefits of in-person, residential learning. A closer evaluation of technology-enabled teaching and learning during the pandemic also offers a case study of how and why Princeton was able to uphold the core mission of the University during an unprecedented period of remote teaching, learning, and research.

In October 2020, Princeton submitted to MSCHE a Substantive Change Request for Distance Education, documenting how teaching modalities were adapting to the emergency, which was subsequently approved. Simultaneously, the University joined the National Council for State Authorization Reciprocity Agreement (NC-SARA) to offer interstate distance education in SARA member states. [Standard II.8.c, ROA 1, ROA 4, and ROA 6] Princeton’s performance during the months before and after these submissions shows how our robust staffing and infrastructure, processes for managing digital technology, and pedagogical expertise enabled us to provide appropriate support for students and faculty for continuity of teaching and research during this global emergency.

Taking a broad view of teaching with technology prior to, during, and in the wake of the pandemic, this chapter will consider the extent to which the University meets the following Middle States standards: design and delivery of the student learning experience [Standard III] and planning, resources, and institutional improvement [Standard VI].

The narrative proceeds as follows:

Section I outlines the strategic planning, assessment, and implementation of the University’s shift to Canvas, a new learning management system (LMS). This investment in the institution’s technological infrastructure turned out to be crucial to our successful supervision of the subsequent period of remote learning demanded by the pandemic.

In Section II, we turn to AY 2020-2021 to describe how this infrastructure was mobilized and expanded to provide students and faculty the key technological resources that would be necessary to complete a year of courses taught primarily online. This section also considers how
these innovations have been assessed as well as their impact on instruction after courses returned to in-person formats.

Finally, Section III explores how the University has used technology to support and expand research for faculty as well as undergraduate and graduate students. We also show how some of these research initiatives connect with Princeton’s outreach efforts.

I. Identifying and Adopting a New Learning Management System: Canvas

Students increasingly learn with and through information technology, and the University has long recognized the importance of a learning management system for harnessing these opportunities. The decision to review and update Princeton’s LMS was jointly made in 2018 by the Office of Information Technology (OIT), the McGraw Center for Teaching and Learning, and the Office of the Dean of the College. At that time, Blackboard had announced plans to phase out Blackboard Learn, the LMS Princeton had used for almost 20 years. Blackboard’s new offering was sufficiently different to require a substantial investment of the University’s time and resources to make the shift. In addition, the LMS landscape had changed considerably since Blackboard Learn was adopted, and OIT and the Office of the Dean of the College collaborated to consider alternatives.

An evaluation team comprised of members from OIT, the McGraw Center, the Office of the Dean of the College, and the Princeton University Library (PUL) was assembled to plan and conduct the LMS review. [Standard VI.2] The assessment process was inclusive, consultative, and thorough. It included security, usability, and accessibility vetting of the top products, as well as input from undergraduate students, graduate students, faculty, and staff. The assessment-driven work of the evaluation team fell into four phases (see the detailed overview provided in LMS Findings and Recommendations Report):


Phase 2: Information Gathering and Definition of Evaluation Criteria (January-March 2019). Met with faculty, graduate students, undergraduate students, and staff to understand how Blackboard was used and to identify teaching and learning needs for Princeton’s next LMS.

Phase 3: Identify Top Two Vendors (March-May 2019). Evaluated the three vendor responses to the Requests for Proposals, based on the degree to which the products fulfilled a set of functional and technical criteria; qualitative feedback from the team; and an accessibility review. Decided to move forward with Canvas and Brightspace.

Phase 4: Identify Recommended Vendor (June-July 2019). Engaged campus groups and offices in a more in-depth analysis of the two finalists. Both products were given an architecture and security review. Each vendor presented face-to-face demonstrations of their products to faculty and staff. The McGraw Center hosted a half-day faculty evaluation workshop. Students and staff completed a comparative evaluation of the two products. The evaluation team met with five higher education peer references for each product, and the team produced cost comparisons. [Standard VI.2, Standard VI.3, Standard VI.6, and Standard VI.8]
In July 2019, the evaluation team formally recommended to the Dean of the College that Princeton adopt Canvas as its next LMS.  (LMS Executive Memo Canvas Decision)  [Standard VI.5]

The subsequent Canvas implementation was approved and funded by the Strategic Advisory Group on Information Technology (SAGIT), which advises the Provost on budgetary matters related to information technology systems and supports one-time investments in associated hardware, software, consultant expenses, and labor.  The committee is chaired by the Provost and includes the Executive Vice President, Dean of the Faculty, Vice President for Finance and Treasurer, and Vice President for Information Technology and Chief Information Officer.  [Standard VII.4.f]

In the SAGIT Proposal for LMS Implementation, about 20% of the funding was devoted to purchase the software, 24/7 system support plan, and two incremental purchases: Ally, which checks content accessibility of uploaded images and documents, and an archive license to Blackboard to ensure no previous LMS content would be lost.  The remaining 80% of the total project outlay funded a large “surge” implementation team to provide high-touch support throughout the process.  The McGraw Center hired seven instructional designers in two-year term positions in AY 2019-2020; OIT hired one support and training analyst.  [Standard VI.5 and Standard VI.6]

Based on the assessments conducted earlier in the LMS Findings and Recommendation Report, the Canvas Implementation Project Management Team, comprised of representatives from the McGraw Center and OIT, set the following four goals for the Canvas implementation.  [Standard VI.2]

First, the implementation provided an opportunity to reinvigorate the use of digital educational technology on campus.  Given the central role an LMS plays in teaching, even on a campus where teaching predominantly takes place in person, the functional ownership of Canvas was moved from OIT to the McGraw Center.  [Standard VI.5]  By grounding the implementation and support among staff with pedagogical expertise, the Dean of the College sought to engage the campus community in conversations about how an LMS can advance teaching goals, expand learning activities, improve assessment strategies, and encourage collaborations.

The instructional design team therefore was to serve as a principal pedagogical resource for faculty and their teaching teams, helping them to make both creative and effective use of Canvas.  To this end, the instructional designers developed and updated a set of best practices for faculty and staff, designed and taught workshops, and held individual consultations.  [Standard III.2.d]

Second, the implementation plan adopted a deliberately high-touch approach to ensure that faculty and staff received the support they needed to make the transition.  Each faculty member was paired with an instructional designer for individual consultations and assistance, and McGraw’s Canvas team offered numerous group training sessions.  [Standard III.2.d]

The McGraw Center learned that individual support remained important for faculty after completing the basic Canvas training: roughly two-thirds of the faculty supported by the McGraw Center have continued to reach out to their instructional designer for assistance.  In addition, recognizing that graduate student teaching assistants and administrative staff are
typically involved in running a course site, the McGraw Center offered numerous training sessions for graduate students and administrators.

Third, the implementation was designed to be consultative and inclusive. To ensure a consultative approach and clear communications to anyone affected by the change, the implementation team established a faculty advisory group, a graduate student advisory group, an undergraduate student advisory group, and a project advisory group with representation from administrative offices around campus. Each group met regularly during the implementation phase and provided the implementation team with helpful feedback and advice. [Standard VI.2]

Finally, the implementation team created a phased and flexible approach to implementation so they could incorporate feedback from early adopters to refine and streamline the user experience for others. For the most part, the early adopters were enthusiastically positive. Their feedback made clear, however, that Canvas was not always intuitive to use and that faculty relied on the help from the instructional design team to both set up their course sites initially and then troubleshoot issues during the semester. Based on this feedback, the Canvas “early adopter” group helped the implementation team refine communications, training, and support processes in preparation for the full rollout. [Standard III.8]

Initially, the McGraw Center planned to implement the shift to Canvas across five semesters, starting with a small group of “early adopters” in Spring 2020 and then moving roughly one-quarter of faculty to Canvas each semester thereafter, wrapping up in Spring 2022. (Canvas@Princeton Project Initiation Plan) The unexpected shift to remote teaching caused by COVID-19 in the middle of the Spring 2020 semester led to two important modifications of this plan. In Fall 2020, any faculty who were not prepared to move to Canvas could opt out; perhaps more important, all faculty could opt in at any point — a shift that produced a surge of faculty demand. [Standard VI.6]

In light of widespread voluntary adoption, the implementation team recommended an acceleration of the original implementation timeline. This recommendation also stemmed from conclusions drawn by the implementation team’s work over the previous semester. For instance, the team concluded that Canvas was a more robust and intuitive tool for online teaching and learning, integrating better with third-party teaching tools like Gradescope, Zoom, and Panopto. Moreover, it found that simultaneously supporting two platforms during this period of entirely remote teaching was more resource intensive than initially projected. Finally, the team observed that having courses spread across two platforms led to confusion for students and department staff. With a large and capable team in place to support the Canvas implementation and the digital tools required to teach online, the McGraw Center was able to adapt to a new mode of teaching without sacrificing its high-touch, consultative approach. (9-29-20 Canvas Implementation Memo) [Standard III.2.d]

Accordingly, as shown in Chart N below, the accelerated Canvas transition was completed by Fall 2021, one semester earlier than the original plan, with almost double the planned adoption rate during the first semester alone. As noted above, this accelerated shift reflected widespread faculty choice, particularly as faculty recognized the benefits of teaching remotely with the new platform.
II. Remote Teaching and Pandemic Response

On March 9, 2020, President Eisgruber announced that Princeton would shift to fully remote teaching, effective two weeks later. Students were sent home at spring break and asked not to return, employees were instructed to remain off-campus whenever possible, and the second half of the spring semester was conducted entirely online. The pedagogical style adopted in Spring 2020 might most appropriately be called “emergency remote teaching.”

Given Princeton’s emphasis on in-person, interactive, classroom-based instruction — and the relatively limited use of online components in extant courses — there was simply not enough time to thoroughly redesign midstream every Princeton course for an online format. Online teaching intended ab initio for this goal requires deliberate course design and specific teaching strategies, and under the circumstances this was impossible. Despite the short timescale, however, Princeton responded to the challenges that the remote shift demanded, drawing on existing expertise and processes, developing creative solutions to novel problems, and allocating resources in bold ways.

For instance, within a week of the President’s announcement, the McGraw Center created a website for Teaching During Periods of Disruption (later renamed Teaching Remotely), which offered guidance on using digital tools and other alternatives to traditional, in-class methods. It advised faculty to focus on course goals, review their course policies on attendance, late submissions, and participation, and to anticipate issues related to access and inclusion, including digital accessibility. The McGraw Center’s existing expertise in digital, blended, and online pedagogy, as well as the “surge” staff that had been approved through SAGIT for Canvas implementation, made it possible to provide swift and appropriate support for faculty and instructional staff. [Standard III.2.d]

OIT partnered with the McGraw Center to deploy additional resources to support the rapidly expanding technical demand on both Canvas and Blackboard. First, OIT integrated Zoom as a direct plug-in on both platforms, allowing faculty to quickly adopt videoconferencing capability. In addition, OIT immediately created a technology loaner program for faculty that provided camera equipment, microphones, personal computers, and other equipment to support remote teaching.

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Chart N: Canvas Adoption Rates by Course, Spring 2020-Fall 2021

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<th>Spring 2020</th>
<th>Fall 2020</th>
<th>Spring 2021</th>
<th>Fall 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>courses (Bb &amp; Canvas)</td>
<td>1,429</td>
<td>1,285</td>
<td>1,147</td>
<td>1,283</td>
</tr>
<tr>
<td>Total number of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>courses in Canvas</td>
<td>43</td>
<td>543</td>
<td>846</td>
<td>1,283</td>
</tr>
<tr>
<td>Percentage of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>courses in Canvas</td>
<td>3%</td>
<td>42%</td>
<td>74%</td>
<td>100%</td>
</tr>
</tbody>
</table>

* 207 course sites had no activity in either LMS.

Source: McGraw Center for Teaching and Learning
instruction. OIT reassigned more than 25 staff members to respond to questions about how to use Zoom, the Campus VPN, and other software. (OIT Annual Report 2021) [Standard III.2.d]

Despite the unprecedented nature of these developments, all students were offered instructional continuity throughout the pandemic to remain on track to degree, and the Class of 2020 was able to graduate. Equally significant, the University communicated clear policies and procedures in Summer 2020 for students who wished to take a leave of absence in the coming academic year. Ultimately, 12% of returning students elected to take a leave, and 17% of newly matriculating students opted to defer admission.

Although the course of the pandemic was highly uncertain, plans for the Fall semester began immediately. In April 2020, then-Provost Debbie Prentice constituted an Ad Hoc Committee on Online Teaching Excellence. Co-chaired by the Vice President for Information Technology and the Director of the McGraw Center, with representation from faculty and senior leadership across the University, the committee was tasked with devising ways to make online instruction more engaging, dynamic, and interactive. They prioritized assessment of student and faculty experiences through the back half of the spring term. (See, for example, 2020 Virtual Teaching Faculty Survey Results.) [Standard III.8]

Several themes emerged in the May 2020 Final Report of the Teaching Remotely Working Group. Significantly, students who had had regular contact with individual faculty, over email or Zoom, had a much more positive experience with remote learning. More broadly, a variety of instructional formats, clear guidelines, emotional comfort, collaboration, and community were critical components for maintaining engagement. Faculty were naturally concerned about their ability to successfully transform their courses to an online format, and faculty teaching labs and studio courses deliberated about how to replicate collaborative, equipment-based, and space-based learning. [Standard VI.2]

Based on these findings, the committee advanced recommendations that formed the basis for teaching and learning during the following academic year. [Standard III.8] These included:

- **Adjust course offering to a remote format.** Faculty were encouraged to:
  - Create a credit-bearing, research-intensive, project-focused and/or community-engaged experience focused on COVID-19 or other community-based problems.
  - Adjust their course meeting patterns, such as breaking one three-hour meeting into two 80-minute meetings each week to combat “Zoom fatigue.”

- **Enhance interactions between faculty and students,** for instance:
  - Cap precepts to between six and nine students, rather than the usual twelve.
  - Allow faculty to precept for one another for teaching credit.
  - Encourage team-teaching among tenure-track faculty.

- **Form an instructional task force** to respond to faculty needs and minimize divergence in course technologies, techniques, and expectations.

- **Encourage faculty to adjust course design** based on best practices for online pedagogy, including segmenting the course, designing interactive elements, “flipping” courses by pre-recording lectures, redesigning assessments, and implementing community-building practices into courses at the start of the semester.

In late May 2020, the Dean of the College wrote to department chairs and program directors to share the recommendations from the Ad Hoc Committee on Online Teaching Excellence and to
ask each department to submit plans for remote teaching in Fall 2020. (Plans for Remote Teaching) [Standard III.4] The Dean noted that the Academic Planning Group had formed a small working group to support their fall planning. This working group, comprised of the Deputy Provost for Resource Planning, the Deputy Dean of the College, and the Associate Dean of the Faculty for Academic Affairs, focused initially on 15 departments and programs that preliminary data analysis suggested would require significant numbers of additional sections or substantial rethinking of which courses to offer and how. After meeting with each of these departments, the group wrote to all department chairs and program directors in June 2020 to offer further guidance on reducing course section sizes and additional funding for lab kits or other course needs. (Additional Guidance for Teaching Plans) [Standard III.8]

The recommendations of the Final Report of the Teaching Remotely Working Group provided key guideposts for remote teaching during AY 2020-2021, which was ultimately offered in a primarily online/remote format. Accordingly, the McGraw Center, OIT, the Princeton University Art Museum, and the Library mobilized to provide faculty with the resources to teach remotely. [Standard III.4 and Standard VI.4] These included the following pedagogical resources and support from the McGraw Center (see also Faculty Curriculum Matrix):

- An online teaching website with course design templates for different course formats, including lectures, seminars, and labs.
- Individual consultations with McGraw staff with pedagogical experience with online teaching.
- More than 60 workshops and training sessions on a variety of topics, including: “Strategies for Creating Lecture Videos,” “Adapting Your Lab to a Virtual Format,” “Delivering Assessments Remotely with Gradescope,” and “Teaching Interactively with Zoom.”
- Two video production hardware kits created by the McGraw Center, OIT, and Instructional Support Services. The first included a set of devices for enhancing teaching with Zoom, and the second included equipment that allowed for high-quality video and audio recording without using a computer. The McGraw Center offered instructors individual consultations on how to use the kits in their teaching. [Standard III.2.d]

At the same time, OIT continued to support the technical needs of faculty and students in ways that prioritized equity of access regardless of where students were learning. These steps included the following:

- Increased the ability of faculty, staff, and students to connect to campus by deploying a new high-speed Virtual Private Network system.
- In partnership with the McGraw Center, developed an extensive equipment loaner program for faculty and students to ensure each had a reliable computer and adequate internet access. This included laptops, tablets, document cameras, and extra monitors. OIT provided over 150 loaner laptops during the pandemic, including 36 for students.
- In partnership with the McGraw Center, acquired and distributed specially configured video production kits (described above) to faculty and graduate students for instruction.
- Provided online access to course-specific software such as STATA and RStudio through a web-based virtual desktop application.
• Deployed an application (TigerSpeed) to allow students to test their network connectivity, with specific instructions for troubleshooting poor performance.

The Council on Science and Technology and the Lewis Center for the Arts coordinated efforts across departments and programs to mail out 652 lab kits and 250 studio kits to students enrolled in science and arts courses in AY 2020-2021.

Combined, these initiatives enabled the University to provide essential technical and pedagogical supports that ensured continuity of its core teaching and learning mission during the pandemic emergency, which required more than a year of remote instruction. They also helped to ensure that students could effectively access the curriculum regardless of where they were living during the period of remote teaching, an expression of the University’s commitment to equity.

In Fall 2020, undergraduates were not permitted to be on campus, with the exception of approximately 200 students who were eligible for on-campus housing due to exigent financial need and/or personal hardship, and a small number of seniors who needed access to on-campus labs for Senior Thesis research. [Standard I.3]

In Spring 2021, all undergraduate students were invited back to campus. Instruction remained online during the spring, with the exception of 53 courses (34 undergraduate, 19 graduate), which were offered in person. Graduate courses were offered online in both fall and spring semesters, although graduate students were permitted to remain on campus for research. This was particularly important for STEM-focused students for whom access to labs, computer clusters, and core facilities were critical to degree progress.

Informed by recommendations from the COVID Coordinating Committee, a Cabinet-level committee co-chaired by the Provost and the Executive Vice President, the University decided to bring all students back to campus for in-person teaching for AY 2021-2022. This decision was made through careful modeling of the potential impact of the pandemic on student, faculty, and staff health, as well as recognition of the challenges to learning and research — and thus, the University’s mission — due to remote teaching. Classroom pedagogy also necessarily shifted, as students needed to re-habituate to in-person teaching. (For the first- and second-year classes, much of their experience of Princeton teaching was remote.) In addition, students who tested positive for COVID (symptomatic or asymptomatic) had to be isolated and could only participate in courses through Zoom, with all the defects of that model for our current infrastructural setup.

In a May 20, 2021, message to the University community, President Eisgruber wrote, “We expect enrolled students to be in residence; we expect teaching to be in person; we expect to have a full roster of extracurricular and co-curricular activities; and we expect the University’s staff to resume on-campus work and operations.” He continued, “Our teaching and research mission requires that we seize the opportunity that the vaccines have given us. We must do everything possible to restore the full and vibrant Princeton community we so cherish.” (May 2021 Message) [Standard I.2]

A. New Directions and Continuous Institutional Improvement Post-Pandemic

We have learned a great deal about teaching with technology from the pandemic experience, which led the University to accelerate and expand its use of technology for teaching and learning. As we move forward, our strategic planning has shifted toward how to bring
pandemic-inspired innovations to the in-person classroom, while also reaffirming the benefits of in-person instruction. Similarly, our post-pandemic assessments have also spurred us to institute new structures to ensure that decisions about technology are made in ways that cultivate a culture of continuous assessment and institutional improvement.

One example of the University’s commitment to using assessment for continuous improvement is the comprehensive review of its pandemic response anticipated to be completed in early 2024. (Executive Summary EHS Assessment of Pandemic Response) [Standard III.8, Standard VI.9, and Standard VII.5]

The format of this after-action report (AAR) is based on a template developed by the Federal Emergency Management Agency (FEMA) and highlights strengths, areas for improvement, and recommendations. To develop the report, the University emergency management program, under the auspices of the Office of Environmental Health and Safety, conducted more than 40 interviews with a wide variety of campus stakeholders. The AAR process also included a survey for stakeholders who were not able to be interviewed, as well as a comprehensive review of data, communications, and meeting materials. [Standard VII.4.f]

The AAR examined many elements of the response including, but not limited to, incident management, decision-making, information-sharing, and the relationship of University senior leadership to the operational response team. [Standard VII.5] The report also considered how the University developed and implemented public health policies, focusing on successes and challenges related to monitoring compliance and integrity. Finally, the report also looked at the ethical framework for public health decision-making and what approaches may make sense for future public health emergencies. [Standard II.9]

1. Assessing Remote Teaching and Learning

The University has also continued its efforts to gather feedback from students and faculty about how they experienced remote instruction and the adequacy of the University’s response. A 2021 OIT survey of computing resources showed that a majority of faculty (74%) agreed that they had the IT resources they needed to be successful in teaching. Among undergraduate students, 85% agreed or strongly agreed that they had the IT resources necessary to succeed in their academic work. For graduate students, that number was 84%. (SurveyStats 2021 OIT Campus Voice Survey Results) [Standard III.8]

These findings do not necessarily mean that faculty and students were satisfied with remote teaching and learning. A subsequent assessment initiative led by the Council on Teaching and Learning (CTL) and an instructional support working group in the McGraw Center concluded that the overall experience with online teaching was mixed. (CTL Memo Post Pandemic Pedagogy) [Standard III.8 and Standard VI.9]

Most notably, the change to remote instruction disrupted the carefully curated residential structures on campus that help the University deliver equity of experience. Faculty noted that teaching on Zoom made them more aware of the complexity of their students’ home lives and observed that the virtual format posed heavy cognitive demands on students. They also noted that lack of access to physical campus services such as laboratories, printers, and quiet and communal spaces posed problems for students. Faculty observed that some course types —
especially STEM, studio, and arts courses — were particularly difficult to translate to a remote format.

Finally, faculty noted that teaching remotely affected the feedback loop between them and their students, reducing their ability to gauge student learning. They also expressed concerns about academic integrity. Untethered from the in-person community that upholds the University’s Honor Code, faculty were concerned that students were accessing impermissible resources online while completing their tests and assignments away from campus.

At the same time, the CTL affirmed how remote teaching had presented opportunities for new forms of interactivity and increased flexibility. Faculty appreciated that the use of digital tools such as whiteboards, text-based chat functions, discussion boards, and polling tools can broaden in-class participation. They observed that new digital assignment types can allow students to work creatively and collaboratively and that teaching over Zoom allowed faculty to more easily invite guests to class, conduct office hours, teach during inclement weather, and create smaller group discussion through the “break-out group” feature.

One significant finding of this assessment exposed the difficulties inherent in teaching using a “hybrid” model, in which some students are present in a classroom while others join on Zoom. Although such courses were a minority of those offered in AY 2020-2021 (of the 56 courses that were taught in-person during the spring semester, about half were taught in a hybrid format), this evaluation emphasized the notable challenges of the hybrid format. In a survey conducted by the McGraw Center on the experience with in-person and hybrid teaching in Spring 2021, faculty teaching hybrid courses reported that, compared to in-person students, the remote students had much less engagement with one another, with the in-person students, and with the instructor. Faculty also noted that audio remained a challenge. In sum, the responses to the survey indicated that the hybrid format is both deeply challenging to good pedagogy and learning and potentially inequitable. (Spring 2021 Survey Results Memo) [Standard III.8 and Standard VI.9]

2. Continuing Assessment of Canvas

The McGraw Center annually surveys faculty about Canvas. In December 2022, they surveyed faculty and Assistants in Instruction (AIs) on how well Canvas worked for commonly performed tasks, like communicating with students, sharing course materials, and administering assessments. The survey also included questions related to tools integrated with Canvas. Overall, faculty reported that Canvas works quite well for common tasks related to communication, sharing course material, and assessment. The survey also confirmed that integrations such as Gradescope and Ed Discussions are valuable tools, and are in fact preferred to Canvas’s native assessment and discussion tools.

However, qualitative feedback from faculty indicates that important usability issues persist. Seemingly small matters, like not receiving a copy of an announcement sent to students, can generate large frustrations. The McGraw Center is addressing these issues by working with the Customer Success Manager and the Strategic Account Manager in Instructure to convey faculty feedback directly to the Canvas product team. Princeton’s Canvas Steering Committee, which has representatives from OIT, the Office of the Dean of the Faculty, the Graduate School, the Office of the Provost, Princeton University Library, and the School of Engineering and Applied Science, has also met with chief executives from Instructure to emphasize the importance of continued resources to core Canvas functionalities. Finally, the McGraw Center provides
tailed guidance and support for faculty based on the feedback, through newsletters, support documentation, and training sessions. (Canvas User Survey Fall 2022) [Standard IV.6 and Standard VI.2]

3. Other Improvements

Princeton has used pandemic-era technological innovation to create other forms of continuous institutional improvement. For instance, we now include a careful architecture and security review (ASR) of all applications that faculty would like to integrate with Canvas. The ASR also includes an accessibility review. This helps ensure that software for teaching and learning is secure, protects student data, and is accessible for students with disabilities. [Standard II.8]

In addition, an early August online advising session for first-year students, initially developed due to pandemic restrictions on in-person meetings, has become standard since Summer 2020 (first-years then enroll in classes after they arrive on campus). In tandem with this move to an earlier advising schedule, the Registrar’s office has modified the way it manages pre-enrollment course queues approved by advisers in PeopleSoft. Now the Registrar can pull data from those proposed queues and communicate with departments about likely over-enrollment. This is a promising first step toward giving departments earlier information about enrollment patterns.

In reporting on the results of the College’s meetings with Directors of Undergraduate Studies, Dean Dolan noted that the first-year registration timetable will be further revised to enable the Registrar’s office to assign classrooms and precepts earlier, and to allow departments to assign AIs. (See 2022 APG Memo Dolan, p. 2.) [Standard IV.6] The Registrar is also exploring automating certain processes that have usually been managed on an ad hoc basis. For example, they are undertaking a project to code in “hard prerequisites” where appropriate, so that students cannot self-place into courses for which they are underprepared. These technological innovations are promising.

III. Technology, Research, and Outreach

A. Digitization and the Princeton University Library

An important example of how the University has expanded its use of technology research can be found in the strategic approach to the digitization of collections by the Princeton University Library (PUL). The past eight years represent a significant shift in how the PUL works with its constituencies to support and create opportunities for online research with special collections. In the broadest terms, this period can be summarized as a weaving of technology into an expanded and ever-growing fabric of services. This approach also allowed PUL to meet students’ research needs during the COVID-19 pandemic.

PUL has a relatively long history of digitizing collections, going back to the late 1990s. From that time up through the present, projects have involved both internal and collaborative digitization projects that ranged from single items to thousands and tens of thousands. While the Library lacked a comprehensive and documented digital/digitization strategy until 2020 (PUL Digitization Strategy, as discussed further below), major initiatives to support activities included strategic digitization of special collections, preservation through digitization of both Princeton and third-party collections, facilitating remote access for patrons who were unable to visit Princeton, and supporting exhibitions. In addition, mass digitization through initiatives
such as Arabic Collections Online, the Google Books partnership, and Hathi Trust have become one of the Library’s principal operations.

In addition to the tens of millions of images that the Library has amassed and made accessible over this time, staff growth demonstrates the shift in scale of this commitment: in 2004, PUL had four staff dedicated to digitization and related work (one photographer and three software developers, two of whom were not in permanently funded roles). In 2014, this number had grown to 14 (seven photographers and seven developers, all permanently funded). As of this writing, there are 26 staff: nine photographers and 17 IT staff, including developers, operations staff, and project managers. PUL is seen as a global leader in this area, as evidenced by its hosting of the code4lib conference in 2023 (Code4lib Conference 2023), the foundational role it played in the creation of the International Image Interoperability Framework (IIIF Consortium), and its ongoing commitment to the Samvera community, including Board membership. [Standard I.3]

PUL took the unique approach of creating a repository that ensured that digitized content was made available through existing platforms — primarily the Library’s catalog, finding aids, and digital exhibitions platform — instead of a bespoke digital library application that users would need to search separately. PUL’s digital repository is focused on workflows that prioritize creating and managing digitized content. Critically, this means that a digitized item can be viewed in more than one of the aforementioned applications. This approach is unique to PUL and allows anyone at Princeton to access the Library’s digitized materials anywhere they want with little or no mediation. [Standard VI.4]

This approach positioned PUL particularly well to handle the COVID-19 pandemic. By late April 2020, PUL had staff on-site, often as many as 30 at a time drawn from across all Library departments — always mindful of New Jersey and University regulations about de-densification — scanning articles, book chapters, and sometimes entire books that were unavailable online. The scope and scale of their accomplishments during this period speaks to the strength of the Library’s technical infrastructure, ability to plan and adapt, and the depth and quality of the Library’s research collections. Between April 2020 and April 2021, Library staff photographed or scanned more than 3 million images. (Often a single image would include more than one page, so the page count could be as much as 50% higher.) Since 2018, the average growth under normal circumstances has been approximately 1.8 million images per year. Efforts such as these were critical to sustaining active research during the COVID-19 pandemic. [Standard VI.4]

As further evidence of the Library’s ability to respond to changing needs, two new and important services were built and offered quickly. The first was a system to support limited access to digitized books that were in copyright but inaccessible due to the Library being closed to patrons. Princeton was among the first — if not the first — of its peers to offer such a service at scale. Hundreds of otherwise inaccessible books were available to Princeton students and researchers by Fall 2020, often for course reserves, on a basis whereby the number of concurrent users could not exceed the number of physical copies owned by Princeton. In September 2022, more than 2,500 books that would otherwise not be available digitally were available through this service. The second is PUL’s “Virtual Reading Room” (VRR) service. The VRR was critical to courses that depended on collections that were inaccessible during the pandemic and is now an enhancement available to any course that involves teaching with collections.
For instance, in Fall 2020, with classes continuing to be conducted virtually due to COVID-19, then-Assistant (now Associate) Professor of English and African American Studies Autumn Womack encountered such a challenge as she planned her course “Topics in African American Literature: Reading Toni Morrison.” In the past, her students regularly visited the Library to work directly with the Toni Morrison papers, which include Morrison’s research material, manuscripts, and drafts. Through the VRR, students could access the digitized materials securely, in keeping with the PUL’s agreements with the Morrison estate. (Virtual Teaching with Special Collections: “Reading Toni Morrison”) [Standard VI.4]

The Library continues to evolve to meet the changing needs and expectations of Princeton students in an increasingly digital environment, with an outreach program that has been expanded in the wake of the pandemic. In January 2022, the Library’s Digital Projects Operation Group noted explicitly that “The pandemic of 2020-21 forced us to rethink how users interact with library resources and propelled us to work under the assumption that so often, and for so many people, digital access is the only access. We have been agile as we have responded to new demands, and we must now extend this agility into reconsidering our workflows and approaches to our digitization program.” (PUL Digitization Strategy) [Standard VI.1]

Another notable recent development is the 2020 founding of a new Digital and Open Scholarship unit, which serves to connect existing services from the Library and other campus departments (e.g., OIT, the McGraw Center, and the Center for Digital Humanities) and offer new opportunities to learn to use new digital tools.

This unit has its origins in the 2019 founding of the Princeton Research Data Service (PRDS), a partnership initiative between the Library, the Office of the Dean for Research, and OIT to provide expertise and infrastructure to support effective research data management and open data practices, including open data publishing, curation, and long-term preservation of data created by Princeton researchers. This unit was developed in response to a mutually identified need to provide campus support in this area and was strategically positioned and funded with input from faculty and consultation from peer institutions. Shortly after starting, the inaugural director of PRDS, Wind Cowles, began strategic planning of services and infrastructure in consultation with the executive sponsors and a faculty advisory committee, including planning of the Princeton Data Commons by a working group with members from the three partner offices. (Princeton Data Commons Report 2020) [Standard VI.6]

The Research Data and Open Scholarship unit was formed in 2020 to align research data services with open access and publishing services. In 2021, RDOS expanded to include digital scholarship in response to an assessment of library strengths and services with respect to data and computationally inflected research that identified digital scholarship as a strategic area of need, especially a group that could serve as a coordinative hub and source of functional expertise both directly to researchers and to subject-matter experts within the library and research supporting units (Digital Scholarship Internal Report 2021). In response to this report and proposal, a strategy was developed to build out services and staffing within the Library and in collaboration with campus partners in the Center for Digital Humanities, the McGraw Center for Teaching and Learning, and Research Computing, resulting in a new, funded initiative to build out services and infrastructure to advance digital projects, especially those that involve new approaches to humanities scholarship as well as nontraditional forms of scholarly outputs from all disciplines. [Standard III.2.d and Standard VI.2]
B. Evolution of Research Computing and Data Science

Princeton has long recognized that computational infrastructure, including hardware, software, and people, has become an indispensable tool for research and for instruction. In the early 2000s, the University established the Princeton Institute for Computational Science and Engineering (PICSciE) with the mission of developing a central computing resource for campus that mirrored the national computing infrastructure supported by the National Science Foundation and the Department of Energy. The University recognized early on that this resource should be deployed in a manner that was faculty-driven and available to everyone on campus.

The University demonstrated its commitment to PICSciE by building a state-of-the-art data center specifically designed for Research Computing. The High-Performance Computing and Research Center (HPCRC) was commissioned in 2010 and has served as the home for an ever-expanding portfolio of computer hardware and storage.

PICSciE is led by a Faculty Director and is governed by a steering committee composed of faculty members that represent different computational users on campus. The steering committee sets policy on the types and uses of resources made available on campus. OIT is responsible for implementing and administering the hardware and software available through PICSciE. [Standard VI.5]

In 2014, OIT completed a strategic planning effort that emphasized developing a “world-class computational core for research” as one of the key pillars of the plan. (OIT Long Range Plan Cabinet Presentation) In that plan, OIT identified the need to support growth in three main areas: software performance, training and outreach, and cyber infrastructure. Cyber infrastructure was a broad term that included new computing architectures like GPUs, peta-scale storage infrastructure, and a redesign of the campus network to facilitate high-performance data transfer. [Standard VI.4]

Through investment by the central administration, by OIT, and by individual faculty contributors, PICSciE was able to expand both its human and technical resources dramatically. In 2019, PICSciE conducted a review of its progress on the plan and found that as a result of the investments made, more researchers and students were using the resource more intensively. (Research Computing Overview) [Standard VI.2]

As proposed by the plan, staffing increased to support the new infrastructure as well as an expanded training program. Additionally, the University created and launched a Research Software Engineering (RSE) program to support faculty in developing sophisticated algorithms that could take advantage of the new capabilities of GPUs and other parallel computing technologies. By the end of 2019, the number of full-time staff supporting research computing had tripled. [Standard VI.4]

In 2022, the University completed another campus-wide IT Strategic Planning process (IT Strategic Plan), which articulated the goal of positioning Princeton as “the world’s premier university for innovative faculty to conduct ground-breaking research that benefits humanity” (p. 12). The plan then identified five areas of concentration over the subsequent years:
• *Research Software Engineering* to support faculty and to enhance training and outreach.
• *Research Technology and Design Service* to help researchers make their work accessible through the web.
• *TigerData* to support research through a curation-driven strategy for large-scale datasets.
• *Secure Research Infrastructure* to provide a platform for meeting funding agency demands for enhanced data protection.
• *HPCRC2* to evaluate the data center facility needs for GPU-driven computing. [Standard VI.2]

These goals have been met with designated resources and staff support, including anticipated growth in staff that will more than double by 2027 to be able to support faculty with essential training and skill-building. Another feature of this strategic plan is collaborations within and across units, for instance in helping researchers make their work more publicly accessible (discussed below) and providing large-scale data storage. [Standard VI.4 and Standard VI.6]

1. **Improving Technological Literacy and Research Computing Skills**

Research computing training and infrastructure are essential to graduate and undergraduate education and our students’ ability to complete independent work. Various programs support students’ and faculty’s use of computing resources in their research.

For example, the Council on Science and Technology offers courses and workshops that improve technological literacy across campus. At the intersection of humanities and technology, the Center for Digital Humanities provides workshops, lectures, and symposiums for students and faculty. For instance, their “The Humanities + Data Science Faculty Institute” seeks to empower Princeton scholars from humanities to engage with the conceptual, practical, and ethical aspects of data science. [Standard III.4]

Centers with deep expertise in technology and research computing, like PICSciE, provide highly subscribed and more advanced courses, mini-courses, and workshops to undergraduate and graduate students, as well as faculty and researchers. These comprehensive training programs equip students with the skills that they need to use computational tools in support of their research and scholarly work.

Recognizing that computation is a crucial tool for discovery in the sciences, engineering, and humanities, PICSciE also offers a graduate certificate program in computational science and engineering. The two core courses include software engineering for scientific computing and numerical algorithms for scientific computing. Supplemental training and workshop offerings begin with foundational skills in scientific computing (e.g., data management, computer programming, and how to use high-performance computing clusters), continue through specific methods (e.g., GPU programming, deep learning), and then expand into subject-specific applications (e.g., Machine Learning in Python, Graph Neural Networks for Your Research, Big Data in the Social Sciences, and Secure Computing in the Life Sciences).

Some of these training sessions are taught virtually (especially during the pandemic) but mostly in person throughout the year in coordination with academic departments and other campus partners. From January 2020 through December 2022, 1,085 undergraduates and 3,491 graduate
students registered and participated in these workshops and training sessions covering more than 26 topics, ranging from Python programming and data analysis to machine learning, visualization, research computing fundamentals, and continuous integration and automated software testing.

During the break periods, PICSciE organizes hackathons and workshops on a wide range of topics such as GPU programming, parallel programming, good practices for research software engineering, and cloud computing in collaboration with industry partners like NVIDIA, Intel, AWS, Google, and Microsoft.

The High-Performance Computing clusters are widely used by students on campus. During calendar year 2022, 711 graduate students and 288 undergraduates used the clusters, representing 37% of the graduate student population and 15% of the undergraduate population, respectively. All of the resources of our systems, including programming languages, statistical packages, and modeling tools, are available free of charge to students. All students automatically receive accounts to our publicly available clusters. For our larger, specialized clusters, accounts are created upon sponsorship by faculty. [Standard III.4]

2. Community-Facing Digital Projects

Princeton has developed a number of community-facing digital projects that connect the University and its students to the broader community. (Digital Projects Summary) [Standard I.1.b] Some of these, like Sociology Professor Matthew Desmond’s Eviction Lab, are intended to help both scholars and policymakers by using data, interactive tools, and published research to understand the landscape of the eviction crisis. The long-running Trenton Project, a collaboration between the History Department’s Professor Alison Isenberg and the School of Public and International Affairs’ Purcell Carson, is an ongoing collaborative documentary investigation of the nearby city of Trenton. Both the Trenton Project and African American Studies Professor Ruha Benjamin’s Ida B. Wells Just Data Lab, which maintains the Pandemic Portal, are built out of intensive curricular projects. In Benjamin’s lab, students learn about data, digital citizenship, and how to marshal data for social justice.

The Center for Digital Humanities teaches critical data literacy and advanced computational methods for the humanities and social sciences, and also points students toward out-of-the-box digital tools and methods. As research assistants, students collaborate with faculty and graduate students to create data-rich sources for academic research including the Princeton Prosody Archive, The Shakespeare and Company Project, and The Geniza Project. The Geniza Project collaborates with e-Scriptorium, an online digital paleography initiative that allows community members across the world to participate in improving the transcriptions of the Cairo Geniza. Similarly, Princeton is a long-time participant in the ongoing transcription project of Douglass Day, in which students and communities across the world participate in transcribing sources using the Zooniverse platform.

The Princeton University Library hosts several community-facing projects. The Romus Broadway photo collages project, for example, is devoted to enriching Princeton’s connection to the local community. In collaboration with the Princeton Histories Fund, Center for Digital
Humanities student collaborators have created web apps to highlight the invisible histories of Princeton: (In)visible and the Lenapehoking History Project are community-facing projects that reckon with Princeton’s past. The long-running Princeton and Slavery Project similarly invites students and community members to explore Princeton’s historical ties to the institution of slavery. Though not an entirely digital project in the sense of a public-facing website, the Center for Digital Humanities supports undergraduate interns as they work to create sustainable wireless mesh networks in the Philadelphia area.

Finally, student research is often displayed in numerous community-facing digital projects. Between the library, the McGraw Center, and course projects that require students to develop digital skills by developing simple web interfaces and design projects during coursework, Princeton students have the opportunity to understand how the digital world allows them a more robust connection to the surrounding area and the world at large.

Conclusion

This chapter has narrated the findings of our self-study into Priority 3: responding to technology’s impact on teaching and research. Many of these technological innovations were already in process before the pandemic arrived, in keeping with the University’s commitment to this priority as articulated in the 2016 Strategic Plan. The shift to a new LMS, for instance, and PUL’s digitization efforts were strategic projects initiated prior to 2019. Even so, the sudden switch to remote learning in Spring 2020 required the University to activate its existing infrastructure for planning, resource allocation, and assessment so as to ensure continuity of the University’s core commitments to teaching and research. In this way, the pandemic formed a “stress test” of precisely these areas, which have highlighted a number of strengths as well as areas for improvement.

Strengths

- In instances of planned technological adaptation, such as Canvas, stakeholders were identified early and integrated into the decision process, and resources were applied throughout to adequately train all users (faculty and students) of the system. This yielded minimal disruption at what turned out to be a very challenging moment (the pandemic).

- The University’s response to the pandemic was characterized by strong ethical principles: first, to ensure the health and safety of students, faculty, and staff by shifting to a virtual pedagogical environment; and second, to make special efforts to render online teaching and learning as close as possible to Princeton’s traditional in-person instruction. Given the very short lead time for planning these transitions, the grounding principles and robust resource allocation helped the institution to weather the pandemic comparatively smoothly. (The Library’s shift to digital resource provision is an illustration of this point.)

- During the period of remote instruction, the cooperative leadership of the McGraw Center and the Office of Information Technology helped to ensure equity of experience in the online curriculum. These initiatives were particularly important to ensure that students from less-resourced backgrounds were able to learn remotely. (Separately, the
University implemented a process for providing on-campus housing to students with documented exigent need and/or financial or family precarity.

- The University has invested heavily in technology as a critical component of research, and is well-positioned to continue providing outstanding resources that support data storage, computational research, and a plethora of accessible training opportunities. Faculty are also using digital platforms to engage with audiences and communities beyond Princeton, whether by sharing data with other researchers or making findings from faculty and student research easily accessible and usable by external audiences.

- Ongoing projects at the nexus of teaching, research, and technology are supported by cross-campus collaborations that promote efficiency and sustainability that will position these initiatives for long-term impact and effectiveness.

**Opportunities for Improvement**

- We certainly hope that we do not experience another pandemic and an abrupt shift to remote teaching. The experience, however, produced a wealth of lessons learned that could be implemented should a similar event occur in the future. In spite of all efforts to facilitate consistent excellence, faculty reports on their remote teaching experiences revealed the limits the entirely virtual setting imposes on Princeton’s pedagogical approach, and the challenge of preserving equity when students are living in vastly disparate circumstances.

- Continuing assessment of the Canvas implementation points to ongoing opportunities to improve training for faculty and other instructional personnel — particularly graduate student assistants in instruction. In some cases, seemingly small challenges within the learning management system can feel like significant pedagogical obstacles.

- While the pandemic and associated remote teaching harnessed the benefits of technological innovation, its downsides for Princeton’s approach to teaching and learning were also revealed during the remote semesters. Faculty reported losing the essential feedback loop from their students and frequently expressed concerns about academic integrity. These challenges point to a continuing need to address these aspects of our on-campus learning culture now that students are back on campus.
Chapter 4: Stewarding the Expansion of the Undergraduate Student Body

In the 2016 Princeton University Strategic Framework (pp. 14-15), the Trustees announced plans to expand the undergraduate student body by 500 students (125 per class). The plan called for the additional students to be admitted over four years, beginning with the Class of 2026, who would enter Princeton in Fall 2022.

The impetus for this expansion was solely mission-driven. Unlike universities that enroll more students to increase revenue, Princeton aims through expansion to provide exceptional experiences and opportunities to more learners, with a special focus on increasing opportunities for students from lower-income or first-generation backgrounds. [Standard VI.1]

To this end, the 2016 Princeton University Strategic Framework anticipated the construction of a seventh residential college and noted that “a key feature of Princeton’s undergraduate program is its commitment to a vibrant and immersive residential experience” (p. 11). Through extensive planning processes, the University ultimately decided to build two additional residential colleges, instead of the one initially envisioned, thereby providing swing space for dormitory renovations in the short term and potential for further expansion in the longer term. The two new colleges would afford the opportunity to shift from the current mix of two- and four-year residential colleges to a model of exclusively four-year colleges, creating capacity for upper-class housing in all colleges and allowing students to reside continuously within their residential college throughout their undergraduate experience.

These plans were unavoidably disrupted by the COVID-19 pandemic. In AY 2019-2020, the administration staged various expansion-related planning discussions, but the evacuation of campus in March 2020 demanded an immediate focus on currently enrolled students. Crisis response and urgent policy adjustments interrupted some aspects of the carefully mapped longer-term planning process for expansion.

Nevertheless, Yeh College and New College West opened in Fall 2022, which coincided with the arrival of the first expanded class of first-year, first-time undergraduates (the Class of 2026). In addition, the Transfer Program, which has enrolled 9-15 transfer students per year since 2018, is now authorized to double its enrollment. Expansion has therefore begun in earnest, fulfilling the promise to offer the “distinctive character and value of the Princeton experience” to as many students as possible. (See 2016 Princeton University Strategic Framework, p. 14.)

Yet, due to the pandemic, the expansion is also taking place in a substantively different context than initially envisioned; some of the assumptions that guided the University’s initial planning have been challenged in ways that we could not have anticipated before Spring 2020. In this chapter we are therefore transparent about how some of the initial plans for expansion required refinements by the time the first larger class arrived in Fall 2022.

In discussing expansion planning and implementation, this chapter considers how the University assessed the financial and budgetary implications of undergraduate student expansion, the
organization and expansion of both academic and non-academic student support services, as well as the University’s physical infrastructure and academic personnel. In the process, it considers the extent to which the University meets the following Middle States standards: ethics and integrity [Standard II]; support of the student experience [Standard IV]; and planning, resources, and institutional improvement [Standard VI].

Section I begins by outlining the University’s goals and planning process for expanding the undergraduate student body.

Section II focuses on the University’s assessment processes for ensuring that residential and teaching infrastructures were prepared for additional students, and that financial aid resources would be appropriately deployed to support them.

Section III addresses how well-prepared the University is to ensure that faculty, advising, and academic support matches the interests and needs of an expanded student body. The department resources for advising independent work receive particular emphasis here.

This final chapter brings our self-study to a close in the present moment, in which the lingering effects of the pandemic motivate us to think even more intentionally about how we cultivate academic and social thriving at Princeton among a larger student body. We conclude with a frank assessment of priorities that the University will need to embrace to meet this goal in the future.

I. Goals and Planning for Expansion

As set forth in the 2016 Princeton University Strategic Framework, the Trustees primarily anchored their expansion decision in response to concerns about increased demand and scarcity, writing, “Princeton now turns down a higher number, and a higher percentage, of qualified applicants for undergraduate admission than at any point in its history” (p. 14). They cited the importance of college degrees for social mobility, noting, “A Princeton education is beneficial to a wide range of students, but the contribution that Princeton can make to students from low-income families is especially transformative and profound” (p. 15). We have recently begun to explicitly test these assumptions. Early indications suggest the outcomes of first-generation students are very similar to those of students whose parent(s) have at least a bachelor’s degree.

At the same time, the strategic framework noted that expansion must preserve “the distinctive character and value of the Princeton experience,” describing it as “a vibrant and immersive residential experience on a campus with a distinctive sense of place that promotes interaction, reflection, and lifelong attachment” (p. 3). The Trustees reiterated their commitment to Princeton’s long-standing holistic admissions philosophy, which admits students with the “academic talent to benefit from Princeton’s rigorous course of study and who possess a range of other characteristics and values that enable them to have a positive impact on one another and on society” (p. 15). The University intended to increase the share of students on aid with expansion, and not increase the number of recruited athletes nor the percentage of students whose families had attended Princeton. (See 2021 Priorities Committee Expansion Read-Ahead, p. 4.) [Standard VI.1]
The expansion’s tight link to the University’s mission is visible at every level. For instance, the Office of Undergraduate Admission continues to build and maintain its relationships with college access groups, such as Questbridge, that support lower-income students, first-generation students, and students from underrepresented racial and ethnic backgrounds. President Eisgruber co-chairs the steering committee of the American Talent Initiative, a national effort to expand college access and opportunity for talented low- and moderate-income students. The strategic framework also endorsed reinstating the University’s dormant Transfer Program (discussed more fully in Chapter 2).

A. Planning Process Overview

The key challenge presented by expansion was preserving the critical elements of the University’s “high-touch” approach to teaching and advising, as well as the social experiences that are hallmarks of a Princeton education. Planning efforts University-wide proceeded with the goal of maintaining these distinctive features while also anticipating pressure points that would come about with the addition of 500 undergraduate students.

Following the Trustees’ approval of the strategic framework (discussed more fully in Chapter 1), the Provost established an ad hoc working group to gather preliminary information on the potential impact and resource needs of expansion. (For a succinct timeline of this University-wide planning process, see p. 7 of 2021 Priorities Committee Expansion Read-Ahead.) [Standard VI.2, Standard VI.3, and Standard VI.6]

The multi-year expansion planning process included the following stages and assessments:

- The ad hoc working group reviewed data and gathered input from each Cabinet officer on the expansion’s anticipated administrative impact, then provided the Provost with preliminary estimates of the anticipated increased operating costs. In the process, it also identified administrative and space-related issues for further consideration. (For an overview, see Deputy Provost 2023 Memo. This work was preliminary, as the discussions had not yet engaged individual academic units; nonetheless, the Provost’s working group concluded early on that the University had sufficient capacity in most academic and administrative units to accommodate the additional students.) [Standard VI.2]
- The Provost used these results to identify and share key needs, including staff for an additional residential college as well as expanded capacity in a number of areas, including Access and Inclusion programs, Admission and Financial Aid, the McGraw Center, and other campus units. (Undergraduate Expansion 5.14.2019) [Standard VI.2]
- The Dean and Deputy Dean of the College held extended discussions with each academic department about anticipated academic issues and resource needs related to expansion, working with the Dean of the Faculty as necessary. These included departments’ anticipated needs for course support and advising, especially independent work advising, and highlighted some of the ways in which expansion might put pressure on some aspects of the University’s traditional curricular model. (Cabinet Retreat ODOC Expansion 9-4-19.v2) [Standard VI.1]
They summarized results in a report to the Academic Planning Group for review in January 2020. (Jan 14 Expansion Report) [Standard VI.2]

- The Dean of the College worked with the Vice President for Campus Life and the Vice President for University Services to coordinate planning across these critical student-facing units. (See 2021 Priorities Committee Expansion Read-Ahead, p. 8.) [Standard VI.5]

- Key campus groups and committees received regular updates on expansion planning. Accordingly, the Cabinet-level Committee to Strengthen University Management and Resources (SUMAR) identified the expansion of the student body as an area for strategic focus in AY 2020-2021. (See Priorities Committee Report 2020-2021, p. 14.) [Standard VI.8] Not surprisingly, assessing budgetary needs related to expansion was a key initiative for the Priorities Committee. (See Priorities Committee Report 2021-2022, pp. 8, 18; and Priorities Committee Report 2022-2023, pp. 3–4, 7–9, 11–12, and 19.) [Standard VI.3]

- Finally, the Provost established a process for receiving and considering expansion-related resource proposals related to faculty and staff growth and other budget needs. (Student Expansion Request Process FAQ October 2021) [Standard VI.2 and Standard VI.4]

B. Planning for Student Experience and Support

The expansion process also recognized the importance of students’ well-being and mental health, and made several proactive investments in preparation for a larger student body. For example, the Provost’s 2016 ad hoc working group that set the initial framework for expansion planning (referenced above) concluded that McCosh Health Center/University Health Services and Stephens Fitness Center/Dillon Gymnasium were already at or near capacity and thus must be modernized to accommodate expansion. (Deputy Provost 2023 Memo) In response to this assessment, the University prioritized enlarging and renewing both buildings. (See Princeton University Campus Plan: A Framework for Development through 2026 and Beyond, pp. 63-65, with discussion of sustainability beginning on p. 103.) [Standard VI.4 and Standard VI.6]

Further measures included:

- The 2020 Campus Life Strategic Plan included prioritizing health and well-being as a strategic objective for 2020-2025.

- The new University Health Services building illustrates the University’s goal to advance a culture of health and well-being among Princeton students. In addition, the University has continued to increase staffing at Counseling and Psychological Services over the past several years to ensure access.

- In Summer 2022, representatives from Campus Life and University Health Services collaborated with Princeton’s Undergraduate Student Government to assess University mental health resources and to enhance awareness on campus and beyond (Exploring Mental Health Resources at Princeton 2022 Report).

- In tandem with this review, the University launched several initiatives to increase access to mental health services, including funding to assist students paying for mental health treatment, and created the position of TigerWell Outreach Counselors to provide drop-in counseling services around campus, making it easier for students to connect with
counselors outside of McCosh Health Center. [Standard IV.1.c, Standard IV.4, and Standard IV.6]

- More generally, numerous campus units focused on student well-being received staff and budgetary increases. These include increased staffing and/or resources for the Office of the Dean of Undergraduate Students (ODUS), Campus Recreation, the Pace Center for Civic Engagement, Religious Life, Wintersession and Campus Engagement, Career Development, and the Office of Diversity and Inclusion. A complete review is under way of the staffing levels in University Health Services to guide any necessary adjustments when its renovation is complete. (Deputy Provost 2023 Memo) [Standard VI.4 and Standard VI.8]

Administrative units presented expansion-related staffing and resource plans to the Provost in Spring 2022, and subsequently met with staff in the Provost’s office to discuss their needs. This funding route was designated for expansion needs only, with all other requests to follow the regular budgeting process. These efforts updated and revised projections and assumptions from earlier stages of planning, such as the Provost’s 2016 ad hoc working group. The Office of the Dean of the College, Campus Life, University Services, Facilities, Disability Services, Public Safety, Environmental Health & Safety, Human Resources, and the Office of Information Technology submitted plans and related budget requests.

To date, the Provost has approved the addition of more than 72.3 staff FTE ($5.9 million) plus at least an additional $2.4 million of non-personnel budget increases to these units. (See Deputy Provost 2023 Memo, p. 5.) [Standard VI.4] This represents the first (and likely largest) phase of administrative budget adjustments related to undergraduate expansion. The Provost’s office anticipates some additional budget requests as the full enrollment increase phases in over the next several years.

II. Living-Learning Spaces and Undergraduate Financial Aid

A. The Residential Colleges

In the 2016 Princeton University Strategic Framework, the Trustees anticipated that expansion would necessitate the construction of a seventh residential college, given the requirement that all first- and second-year undergraduate students live and dine on campus. They also encouraged forward thinking about potential future increases in the undergraduate student body and the consequent need for additional housing, so that the University would be able to plan strategically for both near-term and later expansions (p. 15).

Residential colleges are living-learning communities integral to student life at Princeton, so building the new residential colleges was a strong focus of the preparation for expansion. The colleges serve as the nexus for integrating academic and co-curricular life, offering an array of academic and social programs to enhance the undergraduate experience. All incoming first-year students are randomly assigned to a residential college where they live during their first two years on campus and sometime for all four years. Pre-major advising is embedded within the residential college, and the advising staff within them are often the first source of support and
intervention when students encounter difficulty. The colleges are truly the hub of the Undergraduate advising ecosystem shown in Chart O below. [Standard IV.1.c]

Chart O: Undergraduate Advising Ecosystem at Princeton University

This ecosystem also helps to integrate students’ academic and co-curricular experiences, facilitating a sense of belonging and promoting growth across their academic and extracurricular pursuits. The University surveys students annually about their experience of belonging and community on campus, and almost 80% of students report a significant sense of feeling “a part of the Princeton campus community.” Equally important, less than 8% of all student demographic groups say that they don’t share this sense of belonging on campus. In the residential colleges in particular, students report high rates of belonging in the small advising groups that make up their living community in their first and second years. About three-quarters of first-year students have reported that they feel “a part of my current RCA group.” Similarly, only 10-12% of students say they don’t feel a part of their residential college community. In both cases, these figures are comparable across all demographic groups, including women, recruited athletes, students who are low-income, or who identify as a member of a historically underrepresented group. (2017-2018 Advising Survey Overview) [Standard II.2]
The relationship between academic well-being, personal growth, and engagement with campus resources has been a subject of shared interest for both the Office of the Vice President for Campus Life and the Office of the Dean of the College, and self-assessments show that there is a strong and persistent relationship between academic performance and undergraduates’ sense of belonging and self-reported engagement on campus. Since 2019, Senior/Year End Assessment surveys have included wellness measures that demonstrate that student engagement is strongly correlated with belonging, community, thriving, and general well-being. (Campus Life Strategic Measures and Growth, Development, and Engagement) [Standard IV.6]

As part of the strategic planning process, Princeton convened a task force to study our approach to residential college life and to develop evidence-based recommendations regarding the colleges’ future. The 2016 Report of the Task Force on the Residential College Model envisioned residential colleges serving as “a nexus of intellectual and social life on campus”; a community that provides “a sense of belonging for all students in an environment where different backgrounds and viewpoints are represented, respected, and welcomed, and where students are able to engage the full spectrum of diversity at the University”; and a healthy environment to “support individual health and well-being and enable social, intellectual, and personal growth, including opportunities and space to reflect on service and leadership in meaningful ways” (p. 5). [Standard II.2 and Standard IV.6]

The task force was comprised of a cross-section of the University community and undertook a range of assessments that informed University planning, including:

- Student surveys and focus groups drawn from a wide range of student organizations and communities across campus.
- Institutional analysis of housing and dining patterns as well as space analysis.
- Conversations with Young Alumni Trustees and the Trustee Committee on Student Life, Health, and Athletics.
- A review of previous University task forces, such as the 2002 Report of the Four-Year College Program Planning Committee and the 2011 Report of the Working Group on Campus Social and Residential Life.
- An analysis of peer institutions along with select interviews and site visits to three schools. [Standard VI.2 and Standard VI.8]

The assessment-driven recommendations in this report have since guided the planning for and building of what eventually became two new “sister” colleges. Tracing the impact of the task force recommendations illustrates University-wide processes of incorporating assessment results into strategic plans. This is particularly clear in the task force’s recommendations regarding physical infrastructure. In their 2016 Residential College Response to Task Force, the President, Provost, and Executive Vice President promised to engage the Campus Planning Steering Committee “to take the task force’s recommendations about the location of a future college into account,” including “co-locating colleges to support the establishment of thriving residential communities” as well as creating opportunities to renovate older facilities, such as the Forbes annex and then-Wilson College (pp. 4-5). [Standard VI.2, Standard VI.5, and Standard VI.6]
As noted in the President’s 2019 State of the University Letter (p. 2), the University ultimately decided to build two new residential colleges to emphasize the stewardship and revival of the University’s central campus. The University located the new colleges on Poe Field at the south of campus, where the recreational open space would promote interaction, engagement, and a strong sense of community. (See Princeton University Campus Plan: A Framework for Development through 2026 and Beyond, p. 23.) [Standard VI.2 and Standard VI.6]

The value proposition of constructing two new residential colleges also drew from the recommendations of the Residential College Task Force, stating that the central goals of the project would be

To design a new residential college that will serve the “vision of the future” and support an increasingly diverse cross-section of undergraduate students at Princeton, with an eye toward creating a closely knit, collaborative community of living, learning, socializing, and dining. The residential college design will consider how each of these spheres enhances one another — that is, how the dining hall offers a place to exchange ideas; how dorm rooms become places of intellectual and social encounter; and how the college might house spaces of creativity and serendipitous collision. (See February 2018 New Residential Colleges: Project Definition Document, p. 1.) [Standard VI.1]

The project definition document also outlined specific facilities needs and a preliminary estimated cost of more than $136 million (see pp. 7-8, 13). [Standard VI.3, Standard VI.4, and Standard VI.6]

Other innovations intended to increase opportunities for student belonging, engagement, and community in the residential colleges were timed to coincide with the arrival of the first expanded class in Fall 2022. Chief among the strategic priorities was the creation of a true four-year college model, rather than the previous mix of two-year and four-year colleges. (See 2016 Report of the Task Force on the Residential College Model, p. 8.)

The four-year college model would allow students to remain affiliated throughout their time at Princeton with the same college they were assigned to as first-years. Students would benefit from uninterrupted academic advising and social support from the same Residential College Dean, Assistant Dean for Studies, and Assistant Dean for Campus Life. Upper-class students would be given an opportunity to continue living in their college of origin, without having to participate in a University meal plan (which was required under the old model). Opportunities to build community across first- and second-year students and upper-class students would multiply, enhancing the academic and co-curricular experiences of all undergraduate students.

The anticipated benefits of a true four-year residential college model for students’ sense of belonging were reiterated in a March 2017 memo to the Board of Trustees from the Dean of the College, Vice President for Campus Life, and Vice President for University Services. The 2017 Mar 21 Board of Trustees Admin Report on Residential Colleges provided data that tracked the increase in the proportion of students choosing to live in residential colleges that offered four-year housing and to elect a meal plan. Their recommendation, drawn from this analysis, was that the University decouple housing from dining — a step that the task force had endorsed.
as a key milestone in the transition to a four-year college model. (See 2016 Report of the Task Force on the Residential College Model, pp. 11, 23.) [Standard VI.2 and Standard VI.5] To ensure that students may decide where and with whom they wish to live independently of where they will have their meals, dining and lodging were decoupled in Fall 2022, and there are no additional Board plan requirements for those choosing to live in a residential college as a junior or senior.

The design of the new colleges included attributes that upper-class students have identified as important, including single dorm rooms at the end of a residence hall that could be configured around common areas to resemble a suite. Kitchens were added proximate to upper-class rooms, so that older students might be able to more easily cook for themselves. The new colleges’ shared dining hall located the ID swipe station centrally, so that the Yeh and NCW dining halls could become open gathering and study spaces for all students, enhancing the sense of cross-campus community.

In addition, the new colleges were designed to include significant transparency at the ground level and visibility into the student program and social spaces both inside and outside the buildings. The residents also benefit from easier community building with dedicated lounge spaces for each advisee group, door hardware that allows for hall doors to be propped open and still be alarmed for fire, as well as inclusive restroom options for everyone throughout the buildings.

In the ensuing years, the following changes have flowed from this process of assessment and planning:

- Two new residential colleges (Yeh College and New College West, totaling 485,000 square feet) opened in August 2022, with capacity to house 500 students each and a shared dining facility. The first group of residential students arrived in Fall 2022.

- The University completed the shift to a four-year model by Fall 2022. Every residential college now includes juniors and seniors as residents.

- Junior and senior students can now live in a residential college or in unaffiliated upper-class housing. Regardless of where they choose to live, all students retain their connection to their initial residential college for advising purposes.

- The extra space afforded by building two colleges instead of one permitted the construction of the new Hobson College, expected to be completed in Spring 2027.

- Coincident with the arrival of the first expanded class, the University added a Residential Life Coordinator (RLC) to each residential college staff. These professional staff live in their affiliated residential college to support and promote the health, safety, and well-being of students.

The successful planning and construction of the new residential colleges has highlighted some structural inequities with the more historic residential colleges. Rockefeller and Mathey
Colleges are composed of buildings built during approximately 1877-1933 and lack air conditioning. Forbes College’s main building was built in 1924, acquired by the University in 1970, and renovated in 1984. All three of these colleges suffer from limited physical accessibility as well, necessitating an uneven balance of accommodations being addressed with newer colleges. Additionally, on-campus summer programs are expanding, and more students with high financial need or housing precarity now apply to live on campus year-round. This has resulted in greater numbers of students living on campus throughout the summer, necessitating climate-controlled living spaces.

Most of the existing residential colleges were constructed before the University had developed its current understanding of healthy built environments. The February 2018 New Residential Colleges: Project Definition Document includes specific program goals and design principles that align with such best practices. For example, “[A]ll dorm rooms and social spaces should have generous natural light, which should also enliven hallways and corridors. Even below-grade space should provide natural light” (p. 9). It further recommends: “The design should inspire a profound sense of belonging, identity, orientation, security, and a powerful psychological anchor” and “provide a sense of meaning to diverse communities” (p. 9).

Consequently, as noted in the June 2023 Update to the strategic framework:

The board agreed with the administration that renovating the University’s older residential colleges would have significant benefits to inclusivity and belonging, enabling the University to better support the well-being of the University’s students of all backgrounds, groups, gender identities, and physical abilities. The board accordingly approved the administration’s recommendation to prioritize those projects in its planning. The board also noted that it would be essential for the University to preserve “swing space” in its residential stock so that it has the capacity to continue the renovation of current stock, including upperclass dormitories, in the future. (p. 7)

B. Teaching and Learning Spaces

Using two complementary assessment strategies, the University also considered how the undergraduate expansion would affect the availability of classroom space. As noted earlier, in 2019, the Dean of the College completed discussions with academic departments regarding anticipated concerns around course demand, classroom capacity, and other needs. The University also commissioned Rickes Associates, Incorporated, to conduct an instructional space utilization analysis of teaching space, excluding teaching laboratories. Their April 2019 report summarized classroom utilization from AY 2017-2018 and provided projections about classroom utilization through 2025, given the planned enrollment increases and scheduled construction for current spaces. (Princeton Instructional Space Utilization Analysis Revised Draft Submitted 4.19.2019)

The Rickes Associates report concluded (p. 50):

- Having completed renovations to Green Hall and Princeton University Art Museum/McCormick, Princeton returns to a total of 235 “A” classrooms (scheduled by
the Registrar) and “B” classrooms (scheduled by the Registrar in conjunction with individual departments) available for

- Compared to this total, the University has a calculated need for between 157 and 176 classrooms, depending on when and how they are scheduled.
- The calculated needs fit within the current supply of classrooms with the exception of demands in two capacity ranges: classrooms that seat 1–20 and those that accommodate 101–125. The report noted that “the ‘surplus’ demand generated for rooms with 1–20 seats can be accommodated in the 21–30 range and even larger rooms, as needed.” Similarly, it stated that the rooms needed in the 101–125 range could be accommodated in rooms with larger capacity and/or through instituting higher rates of daytime classroom utilization. [Standard VI.2, Standard VI.4, and Standard VI.8]

As described in the 2021 Priorities Committee Expansion Read-Ahead, the University drew on this report to conclude that it did not need to create additional traditional instructional spaces to accommodate expansion. Instead, the University intended to target pressures on specific classrooms, exploring ways to spread more courses across the day (p. 5).

At the same time, the Priorities Committee report anticipated that increasing enrollments would likely place stress on classroom availability in critical ways:

- Large courses might need to be broken into multiple sections or find alternative locations.
- The number of lab sections offered might need to be increased given the fixed number of spaces in existing teaching labs.
- Courses tend to be offered in a concentrated window of time, which means that existing spaces are not used efficiently.
- Administrators observed increased demand for interactive instructional spaces, such as “large flat-floor classrooms with modular and moveable furniture” (p. 11). [Standard VI.2, Standard VI.4, and Standard VI.6]

The Rickes Associates report was a useful tool for assessing in broad strokes the availability of traditional classroom spaces. However, the work undertaken in this self-study has underscored the importance of follow-up analysis.

For instance, the Rickes report proposed some solutions to these challenges, such as scheduling classes at different times of the day to ease known pressures in the most popular time slots. But generating widespread buy-in for this shift will take time and a concerted administrative push, especially to shift courses to less popular hours in which classrooms are currently under-utilized, such as evenings and Fridays.

Our assessments conducted for this self-study also highlight new opportunities to elucidate the relationship between faculty teaching needs and existing space resources. The Rickes report proposed that the anticipated shortage of 1–20 person rooms might be overcome by simply moving those courses into larger rooms. However, the pedagogical intentions of relevant classes may not align well with those teaching spaces. For example, it is difficult to conduct a seminar focused on peer discussion in a room that does not offer flexible seating. Connecting the
expressed teaching needs of faculty to the resources of our physical infrastructure presents us with a future opportunity for continuous improvement.

The University Registrar is evaluating classroom assignment challenges and overhauling a faculty survey used to assess needs. In a Summer 2023 memo to the APG, the University Registrar further observed:

If courses are assigned to classrooms based on capacity first and guidelines are in place to prevent most adjustments, we would have enough space to house everyone appropriately, but with the inevitable re-assignment, instructional need triumphs over capacity placement every term and places extraordinary demand on a subset of classrooms rather than the full available inventory.

The University may also need to evaluate the capacity of its teaching laboratory spaces, last completed in 2015. Student choice and pandemic impacts have disrupted the baseline, “steady-state” assumptions that guided earlier analyses, which presumed a consistent proportion of students declaring STEM majors, stable placement rates across and into foundational course sequences, and a steady proportion of course selection for equivalent courses.

Finally, the Committee on Classrooms and Schedule undertook an examination of course passing time in AY 2022-2023, noting that the existing classroom scheduling grid may no longer provide students adequate time to travel across campus between classes, as our geographic footprint continues to grow. In combination, these developments underscore that the time is ripe for a new, campus-wide analysis of classroom use that incorporates these changed assumptions.

C. Financial Aid

The 2016 Princeton University Strategic Framework reaffirmed Princeton’s “signature commitment” to affordability and noted: “The University must be ready to invest as needed to ensure that Princeton’s aid program meets the needs of its students” (p. 12). In their June 2019 Update, the Trustees encouraged “the administration to build upon these successes. Princeton’s financial aid program should be not only generous, but emphatically and visibly so — indeed, the University should seek ways to improve what is already a best-in-class program” (p. 3).

In 2021-2022, the Office of the Provost led extensive planning efforts to strengthen and expand the financial aid program for undergraduates, as well as to guarantee five years of financial support to doctoral students. We discuss each of these efforts in turn below. In each case, administrative working groups developed proposals for the Priorities Committee (described in more detail in Chapter 1), which met with the Board Committee on Finance to review preliminary recommendations and then endorsed the changes in its annual report to the President. (Priorities Committee Report 2022-2023) Each proposal required and received approval by the Board. (See Bylaws of the Trustees of Princeton University, Chapter 15.6.) [Standard VI.3 and Standard VII.2.d]
1. Undergraduate Financial Aid

Beginning in 2001 with the ground-breaking decision to eliminate loans from undergraduate financial aid packages, Princeton has focused on ensuring that talented people from all backgrounds can afford a Princeton education. The institution has made a concerted effort to increase socioeconomic diversity among undergraduates, meeting full financial need with grants that do not need to be repaid. The results are significant. Whereas only 7.2% of the Class of 2008 were eligible for federal Pell grants, that number rose to 20.1% for the Class of 2026. (See Institutional Overview, Chart B and Admission, Cost & Aid.)

In Fall 2023, the University introduced several notable changes to its undergraduate financial aid structure. These changes were implemented to address pressure points felt by families across the income scale as student charges continue to rise; to ensure that students can make academic and opportunity choices, including how they use their summers, regardless of financial need; and, to simplify financial aid packaging, which remains a complicated “black box” to many families.

Two main elements guided the change. First, parental contributions were simplified to a straightforward equation, and income levels for full financial aid eligibility were increased. Most families with incomes $100,000 and below now receive grant aid to cover tuition, housing, food, books, and personal expenses. Second, the $3,500 student contribution expectation was eliminated for all students and replaced with more than $10 million in additional grant aid. (Princeton Will Enhance Its Groundbreaking Financial Aid Program) Cost estimators are available on the University website to facilitate transparency regarding the implications of these changes. [Standard II.7.a and Standard II.7.b]

As a result, a typical family applying for aid will find the amount they pay to Princeton each year reduced by more than $10,000, although the impact varies across income and asset bands. We estimate that more than one-quarter of undergraduate students will pay $0 under the new methodology. Internal models estimate that enhanced financial aid will entail an additional budgetary cost to the University of $32 million, representing nearly a 15% increase to the financial aid budget. The change in financial aid methodology resulted from an in-depth analysis by a working group comprised of the Deputy Provost, the Dean of the College, the Director of Financial Aid, the Vice President for Finance and Treasurer, and the Assistant Vice President for Planning, Budget, and Analysis, which formulated detailed recommendations and modeling to support a revised financial aid methodology. The Priorities Committee reviewed the proposed changes in Fall 2021 and approved their implementation effective with the start of AY 2023-2024. (See Priorities Committee Report 2022-2023, p. 10.) [Standard VI.3]

These changes seek to encourage a greater swath of middle-income students to attend the University and to introduce equity of experience on campus among our expanding student population. Students who may earlier have had to work to contribute to their education can now explore other interests, such as summer or in-term study abroad. In addition, the University made small but meaningful enhancements to ensure equity not just in access, but in opportunity. For example, the University will increase the annual personal and book allowance used in financial aid packages from $3,500 to $4,050 to provide greater flexibility for students. For
students with the highest financial need, Princeton will pay travel expenses to allow two family members to come to campus for first-year move-in and for senior year Commencement.

2. Financial Support for Graduate Students

Ph.D. students are offered full tuition and stipend funding throughout their regular program enrollment and may also apply for additional funding for two years of Dissertation Completion Enrollment (DCE) support. (Financial Support – Graduate School) The accessibility of this financial support, along with information for prospective students, is consistently well-publicized. [Standard II.7.a and Standard II.7.b]

The Priorities Committee endorsed a 25% average increase in graduate fellowship and stipend rates for AY 2022-2023, the largest one-year increase in University history. This move was the culmination of other strategic planning and assessment processes. As the Priorities Committee Report 2022–2023 noted on p. 13, this shift followed “directly from internal strategic reviews of the University’s sponsored research and graduate student support programs,” including the 2016 Task Forces on Sponsored Research and on the Future of the Graduate School. (Final Report of the Committee on Sponsored Research and Report of the Task Force on the Future of the Graduate School) [Standard VI.1, Standard VI.2, Standard VI.3, and Standard VI.5] The initiative also discontinues the charging of graduate tuition and student health plan charges to external grants, effective Fiscal Year 2023. [Standard II.7.a and Standard II.7.b]

III. Faculty Resources and Academic Support

As outlined above, the early planning for the undergraduate expansion concluded that the University would have sufficient capacity in most academic and administrative units to accommodate the additional undergraduate students. The number of faculty, staff, and graduate students had already grown by 16%, 18%, and 19% respectively during the preceding decade, while the number of undergraduate students had grown by only 3%. In addition, expansion was planned under the core assumption that the new cohort of 500 students would have academic interests similar to past and current students, although it anticipated that “student interests at the time of expansion will also reflect current trends.” (See 2021 Priorities Committee Expansion Read-Ahead, pp. 4-6.) [Standard III.2.c]

The University expected that the additional students would be served adequately by the existing faculty and staff population, but that they would not necessarily distribute themselves evenly across the curriculum. The popularity among incoming students of fields like computer science, economics, and engineering would necessarily affect departments unevenly. Basic modeling also confirmed that a larger undergraduate class would necessitate increased sections of required writing and language courses, as well as the expansion of STEM sequences that serve as prerequisites for a number of A.B. and B.S.E. departments.

Beyond those known needs, the University took a wait-and-see approach. As President Eisgruber explained in his 2019 State of the University Letter, “Though in exceptional cases (such as those requiring renovations to teaching laboratories) resources may be provided in advance of expansion, we will in general follow the same protocol as when we opened Whitman
College: the provost will allocate resources as we see how the new students distribute themselves across courses and programs.” Accordingly, the Provost has now incorporated a budget-planning placeholder to accommodate lecturer/instructional needs not otherwise covered by faculty growth for other purposes. (Deputy Provost 2023 Memo) [Standard III.2.c]

These guiding assumptions have in large part been borne out, although growth in STEM fields has increased perhaps even faster than expected (the University’s response to these shifts is explained more fully below). Even so, because much of the planning took place before the pandemic, we are also learning iteratively about the impact of expansion in tandem with other large-scale social changes shaping how our students come to college and how they learn once they arrive. Like students at colleges and universities across the nation, we are seeing an increasing heterogeneity of experience among our students in the wake of the pandemic, including learning loss, changes in how students socialize, and concerns about mental health and student well-being.

A. Teaching Faculty

As President Eisgruber emphasized in his 2022 State of the University Letter, “The size of the University’s faculty has grown significantly since we last increased the undergraduate student body. Indeed, the student-faculty ratio after the expanded classes arrive will be about the same as when I took office nine years ago.” [Standard III.2.c] Accordingly, new faculty to support the expansion would be added strategically rather than across the board.

The 2021 Priorities Committee Expansion Read-Ahead explained that non-tenure track faculty or lecturers would be added to support vital instructional needs, whereas recruiting tenure-track faculty would continue to be aligned with investments in the strategic framework and other priority areas. Specifically, additional lecturers would be hired as needed to teach in the Writing Program, language sequences, introductory computer science, and mathematics (see pp. 5, 9). This approach would allow the University to address surge capacity gaps with just-in-time hiring to respond quickly to enrollment increases in designated classes or programs.

Some departments — notably Computer Science, by far the largest department by number of undergraduate concentrators — already make significant use of non-tenured instructional faculty. In a 2020 feature on the department website, the story highlighted the “dedicated educators who share the formal job title of ‘lecturer.”’ (Teaching Faculty: The Key to ‘Opening the Door’) [Standard III.2.a, Standard III.2.b, and Standard III.2.d] These lecturers develop and manage large introductory courses, with a focus on developing pedagogy and support to make these courses accessible to a wide swath of undergraduates. The department’s innovative course staffing structure has enabled it to keep tenure and tenure-track faculty as the instructors of record teaching large lecture courses. Fully half of all Princeton undergraduates take COS 126, the introductory course, and the teaching faculty have developed longer sessions for students new to coding. Unlike in many departments, Computer Science lecturers serve as B.S.E. and A.B. faculty advisers for first- and second-year students, and also advise independent work in the junior and senior years. The lecturers serve on department academic committees, and many undertake research on education-oriented questions.
The Jan 14 Expansion Report, submitted to the Academic Planning Group in 2020 by the Dean of the College, notes that the University could draw upon this model to respond to the pressures of expansion and create more consistency across departments. In the Computer Science model, the teaching lecturers are permanent and integrated members of the faculty, able to participate fully in the educational mission of the department. Language departments, too, have a well-developed culture of support and community for non-ladder faculty. In other departments and programs, however, untenured lecturers only staff introductory classes and do not have the opportunity to teach upper-level classes or to advise independent work (p. 4).

Depending on a “just-in-time” demand-based model of hiring lecturers poses its own challenges. Particularly for core first-year classes that introduce students to the distinct academic culture at Princeton, there is a long runway of course preparation, and recruiting excellent teaching faculty takes time. Language departments and introductory STEM sequences operate with narrow margins built into their staffing plans even as the courses they offer are requirements that first-year students must fulfill. Quick pivots and ad hoc solutions are not sustainable. Therefore, in Spring 2023, the Academic Planning Group established a review process to consider department requests for incremental lecturer lines to respond to expansion-related pressures.

Lecturers can also assist with another growing source of unpredictable needs. As early as Fall 2019, several departments voiced concerns about a shortage of graduate student instructors to lead precepts. By Fall 2022, the Dean of the College gleaned additional details on this growing issue through its regular meetings with department Directors of Undergraduate Studies. (Fall 2022 DUS Meetings notes) [Standard III.8 and Standard VI.9]

Fortunately, the University was well-prepared to gather additional data in order to help the Academic Planning Group understand and respond to emerging gaps and temporal fluctuations. Further analysis showed that this was not a problem of insufficient teaching budget FTE, but rather insufficient bodies to fill the needed teaching positions. As a result, some departments have instituted or increased graduate student teaching requirements. Others have sought to convert existing AI hour allowances to lecturer appointments. [Standard III.8, Standard VI.3, and Standard VI.8]

B. Academic Support and Accommodations

The Office of the Dean of the College has collected concerns from departments about the increasing administrative burden associated with large classes, which were shared with the APG in 2020 (just before the pandemic hit) and 2022. (Jan 14 Expansion Report, pp. 1, 3; 2022 APG Memo Dolan – Note from Expansion, pp. 3-4.) [Standard VI.2]

The 2022 update, based on the regular meetings that the College convenes with the Directors of Undergraduate Studies, provided an early view of how expansion was being felt across all departments as well as how they were responding to students in the post-pandemic era. Departments reported pandemic-related learning gaps along with new challenges meeting the needs of an increasing number of students with documented disabilities.
For example, some faculty reported that in a course of 100+ students (37 of 1,019 class sections as shown in Chart D in the Institutional Overview), an instructor must coordinate the requirements of dozens of individual accommodations for documented disabilities as well as unpredictable requests to reschedule exams or assignments due to illness or other emergencies. A small number of courses are allotted a Head Assistant in Instruction to help with administrative tasks, but this is not widespread practice. Uniquely, Computer Science has dedicated Course and Program Administrators, staff members who help administer the 100- and 200-level courses with enrollments routinely ranging from 150 to 350.

In a 2023 report to the Trustee Committee on Student Life, Health, and Athletics, the Vice Provost for Equity and Diversity reported that the number of undergraduate and graduate students registered with the Office of Disability Services (ODS) had more than tripled over the last decade. For instance, in AY 2021-2022, ODS worked with 778 students, which represented a 90% increase over the number in AY 2019-2020. (See Trustees SLHA ODS Accommodations 1-18-23, p. 1.) [Standard IV.6 and Standard VI.8] As the expanded student body becomes established through all four years of the curriculum, we anticipate that course-based academic administrative support will be increasingly necessary to manage very large classes.

Instructors are also worried about the mental health of their students and are regularly asked to make academic adjustments for students outside of the process organized by the Office of Disability Services. Greater heterogeneity of high school preparation also acutely affects some departments. While this has been a factor for several years, the confluence of increasing class size and increasing socioeconomic diversity means that faculty are seeing larger numbers of students who may be less prepared to engage with the curriculum as it stands.

Many departments have also noted the rise in numbers of students needing more foundational coursework, especially in math. We expect those to increase in the context of pandemic-era deficits in student learning. Meeting these needs will fall entirely to the University, as University policy specifies that a student will be “subject to disciplinary action if that student makes use of any paid or unpaid tutor, tutoring service or facility other than that regularly authorized by the Office of the Dean of the College,” a policy that aims to make tutoring equally accessible to all students regardless of socioeconomic status. (See Rights, Rules, Responsibilities, Section 2.4.5.) [Standard IV.1.b]

At the same time, some of the University’s learning support programs described in Chapter 2 have encountered challenges in hiring peer tutors.

In Fall 2019, the McGraw Center offered on average 118 individual tutoring appointments per week for mathematics, chemistry, economics, and physics during weeks 2–5 of the term (for the 3,100 students enrolled in the courses supported by McGraw). During the same period in Fall 2022, the combined enrollment in McGraw-supported courses was approximately 3,250; however, difficulty hiring peer tutors meant the McGraw Center could only offer a maximum of 27 individual appointments per week, with some weeks having half this availability. Motivated by this shortfall, the McGraw Center secured approval from the Provost for two new full-time
positions that will allow for more consistent learning support in STEM fields. [Standard IV.6 and Standard VI.8]

Writing support across all disciplines and years is offered by the Writing Center, under the umbrella of the Princeton Writing Program. The Writing Center holds more than 5,000 individual meetings with students per year, serving nearly 30% of undergraduate students. During the busiest weeks of the term, after the first arrival of an expanded cohort, they have regularly been unable to meet demand (in week 4 of Fall 2022, for example, 205 appointments were offered with an additional 465 names on a waiting list).

The Writing Program also experienced difficulty hiring trained fellows this past year. In AY 2020-2021 and AY 2021-2022, the Writing Center had 23 grad fellows, while in AY 2022-2023, there were only nine. As a result, the PWP is exploring new staffing structures to address this need.

Given Princeton’s commitment to help all admitted students succeed in our rigorous curriculum, the Office of the Dean of the College is evaluating the possibility of more consolidated tutoring services and the adequacy of a peer-led model.

C. Department Advising and Independent Work

Finally, the impact of expansion will also need to be monitored in the context of independent work requirements, as well as junior and senior advising. After sophomore year, advising and course selection shifts to departments, though students are still supported with advising at the residential college level, making communication between department and extra-department advisers particularly important. Expansion of the student body may have a very different impact at the department level. Some departments already need multiple faculty to serve as Directors of Undergraduate Studies; others have split the management of independent work advising and approving coursework extensions from other DUS duties.

As discussed more fully in Chapter 2, all Princeton undergraduates are required to complete independent research. For A.B. students this includes a substantial project in both the junior and senior years. This work has typically been accomplished with the mentorship and advising of tenured or tenure-track faculty, and has long been a cherished part of the Princeton experience. The University’s strategic planning process has cautioned that expansion might strain this tradition, a concern that has been threaded throughout the University’s expansion planning. (See, for instance, Undergraduate Expansion 5.14.2019, p. 5; Cabinet Retreat ODOC Expansion 9-4-19.v2, p. 4; Jan 14 Expansion Report, p. 3; 2021 Priorities Committee Expansion Read-Ahead, p. 10.) Now that expansion has begun in earnest, these new needs must be addressed within the coming year, when members of the Class of 2026 prepare to select a major and anticipate their independent work.

In some departments, the gap between student advising needs and faculty resources has existed for some time due to a disparity between students’ interests and the areas of tenured faculty research expertise. (See Jan 14 Expansion Report, p. 3, and Summary Report on IW Guide Meetings.) Although faculty capacity may exist in the aggregate, certain departments, courses, and even individual
faculty will bear a disproportionate share of expansion’s weight. To sustain the level of academic quality Princeton expects of student independent work, careful planning will be required. See the recommendations of the **CTL Report on Independent Work** on how curricular structure, advising support, and faculty preparation and workload might be systematized.  (These recommendations are taken up more fully in Chapter 2.)  [Standard IV.6]

**Conclusion**

Throughout this chapter, we have summarized the University’s comprehensive planning for the expansion of the undergraduate student body, a process that began in 2016 and has started to become a reality with the arrival of the Class of 2026. Although much of this analysis has documented the strengths of Princeton’s assessment and planning structure, the unprecedented disruption of the COVID-19 pandemic also means that expansion has arrived in a markedly different social and cultural context than initially planned. Moreover, the University had an over-yield of first-time, first-year students in the Class of 2026 (1,500 versus a planned 1,425). We conclude by noting what our self-study of this priority has revealed about both the University’s strengths and areas for continuous improvement.

**Strengths**

- The structures put in place to steward the undergraduate expansion illustrate the efficacy of Princeton’s mission-driven planning processes and highlight the University’s steadfast commitment to providing students with outstanding living-learning communities.

- The surprising over-yield of the incoming class in Fall 2022 generated a “stress test” of the residential college system. The system proved adaptable to the change, but underscored the importance of using a more aggressive waitlist in the admissions process to ensure that disruptions to student life and study are minimized.

**Opportunities for Improvement**

- The planning process for expansion adopted a wait-and-see approach to the student body in terms of areas of disciplinary interest and course enrollment patterns, as the number of faculty and graduate students had grown over time while the undergraduate population had remained constant. The dramatic shift toward STEM fields nationwide has been further accentuated by the preferences of an expanded FLi student body who are more attracted to these disciplines. This has produced some imbalances in staffing and classroom capacity that must be addressed. More dynamic modeling of future student bodies would help with this issue, and classroom needs should be assessed with an eye toward current trends as well as future growth.

- Both the mental health crisis that was exacerbated by the pandemic and the documentable learning loss that has accompanied it cast shadows over the present. They remain challenges for all institutions of higher education. Princeton must continue to develop additional strategies and devote further resources to support students’ well-being and mental health as well as academic success.
During the past few years, individual departments have proposed creative and agile solutions to the pandemic and changes in student enrollments. As the student population (and the campus) expands, we must move beyond ad hoc responses grounded in the goodwill of individual faculty and departments. Systemic processes will be necessary to “crosswalk” important decisions and to include stakeholders — especially faculty — early in planning processes, to better anticipate downstream effects. As we grow, we must keep a focus on the areas where the high-touch aspects of a Princeton education continue to define our University.
## APPENDIX A: Table of Standards, Requirements of Affiliation, and Chapter Discussions

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APPENDIX B: Accreditation Steering Committee and Working Groups

Accreditation Steering Committee

Co-Chairs

- Elizabeth L. Colagiuri, Deputy Dean of the College, Office of the Dean of the College
- Michael D. Gordin, Rosengarten Professor of Modern and Contemporary History

Members

- Craig B. Arnold, Vice Dean for Innovation, Office of the Dean for Research, and Susan Dod Brown Professor of Mechanical and Aerospace Engineering
- Michael Avanti Lopez, Assistant Vice President for Facilities, Office of the Vice President for Facilities (through 9/30/2023)
- Anne W. Caswell, Dean of New College West
- Mona C. Fixdal, Senior Associate Director for Digital Learning and Design, McGraw Center for Teaching and Learning
- Agustín Fuentes, Professor of Anthropology
- Rebekah Peeples, Associate Dean for Curriculum and Assessment, Office of the Dean of the College
- Stacey A. Sinclair, Professor of Psychology and Public Affairs and Head of Mathey College
- Katherine A. Stanton, Senior Associate Dean of the College and Director, McGraw Center for Teaching and Learning

Working Group 1 – Ensure That Students from All Social, Economic, and Academic Backgrounds Will Thrive in the Curriculum

Co-Chairs

- Agustín Fuentes, Professor of Anthropology
- Katherine A. Stanton, Senior Associate Dean of the College and Director, McGraw Center for Teaching and Learning

Members

- Joshua H. Billings, Professor of Classics
- Margot Canaday, Dodge Professor of History and Associate Chair, Department of History
- Kate M. Fukawa-Connelly, Director, Health Professions Advising, Office of the Dean of the College
• Claire F. Gmachl, Eugene Higgins Professor of Electrical Engineering, Associate Chair, Department of Electrical and Computer Engineering, and Head of Whitman College
• Andrew M. Hakim, Director College Success, Programs in Access and Opportunity, Emma Bloomberg Center for Access and Opportunity
• Geoffrey B. Hill, Associate Dean for Academic Affairs, Office of the Dean of the Graduate School
• Seth A. Perry, Associate Professor of Religion
• Michael A. Strauss, Professor of Astrophysical Sciences and Chair, Department of Astrophysical Sciences
• Carolina Tamara, Assistant Provost for Academic Studies and Analysis, Office of the Provost
• Deborah J. Yashar, Donald E. Stokes Professor of Politics and International Affairs and Director, Princeton Institute for International and Regional Studies

**Working Group 2 – Steward an Expansion of the Undergraduate Student Body**

*Co-Chairs*

• Stacey A. Sinclair, Professor of Psychology and Public Affairs and Head of Mathey College
• Anne W. Caswell, Dean of New College West

*Members*

• Kimberly K. Betz, Executive Director, Center for Career Development
• Calvin R. Chin, Director, Counseling and Psychological Services, University Health Services
• Rosina A. Lozano, Associate Professor of History
• Shawn L. Maxam, Associate Provost for Diversity and Inclusion, Office of the Provost
• Pedro Meira Monteiro, Arthur W. Marks ’19 Professor of Spanish and Portuguese and Chair, Department of Spanish and Portuguese
• Anna M. Shields, Gordon Wu ’58 Professor of Chinese and East Asian Studies and Chair, Department of East Asian Studies
• Sankaran Sundaresan, Norman John Sollenberger Professor in Engineering and Chemical and Biological Engineering
Working Group 3 – Respond to Technology’s Impact on Research and Education

Co-Chairs

- Craig B. Arnold, Vice Dean for Innovation, Office of the Dean for Research, and Susan Dod Brown Professor of Mechanical and Aerospace Engineering
- Mona C. Fixdal, Senior Associate Director for Digital Learning and Design, McGraw Center for Teaching and Learning

Members

- Jeremy I. Adelman, Henry Charles Lea Professor of History and Cotsen Faculty Fellow (through 8/31/2023)
- Sigrid M. Adriaenssens, Professor of Civil and Environmental Engineering
- Jay Dominick, Vice President for Information Technology and Chief Information Officer (through 12/31/2023)
- Adam N. Elga, Professor of Philosophy and Director, Program in Linguistics
- Sami Kahn, Executive Director, Council on Science and Technology
- Laurel Lorenz, Lecturer in Molecular Biology
- Meredith A. Martin, Associate Professor of English and Director, Center for Digital Humanities
- Christine F. Murphy, Associate Dean for Academic Affairs, Office of the Dean of the Graduate School (through 11/30/2023)
- Jaswinder P. Singh, Professor of Computer Science, Technology and Societal Change
- Jon P. Stroop, Deputy Dean of Libraries, Office of the Deputy University Librarian

Working Group 4 – Evidence Inventory

Co-Chairs

- Michael Avanti Lopez, Assistant Vice President for Facilities, Office of the Vice President for Facilities (through 9/30/2023)
- Rebekah Peeples, Associate Dean for Curriculum and Assessment, Office of the Dean of the College

Members

- Ruthie Boyce, Program Coordinator, McGraw Center for Teaching and Learning
- Kelly Godfrey, Assistant Director for Educational and Program Assessment, McGraw Center for Teaching and Learning (through 12/8/2023)
- Andrew J. Kane, Associate Vice President, Office of the Vice President for University Services
• Marianne King, Financial and Administrative Assistant, Office of the Dean of the College
• Jonathan R. LeBouef, Associate Registrar for Reporting and Institutional Research, Office of the Registrar
• Jed Marsh, Vice Provost for Institutional Research, Office of the Provost
• Steve H. Semenuk, Assistant Vice President for Planning, Budget and Analysis, Office of the Vice President for Finance and Treasurer

Working Group 5 – University Mission, Governance, and Administration

Members
• Nakia W. Barr, Assistant Vice President for Institutional Affairs, Office of the President
• Elizabeth L. Colagiuri, Deputy Dean of the College, Office of the Dean of the College
• Andrew J. Kane, Associate Vice President, Office of the Vice President for University Services
• Michael Avanti Lopez, Assistant Vice President for Facilities, Office of the Vice President for Facilities (through 9/30/2023)

Core Administrative Team

Chair
• Elizabeth L. Colagiuri, Deputy Dean of the College, Office of the Dean of the College

Members
• W. Rochelle Calhoun, Vice President for Campus Life
• Cole M. Crittenden, Vice Provost for Academic Affairs, Office of the Provost
• Erin R. Firestone, Director of Campus Communications, Office of Communications
• Anne E. Jarvis, Dean of Libraries and Robert H. Taylor 1930 University Librarian, Office of the University Librarian
• Chad L. Klaus, Vice President for University Services
• Hilary A. Parker, Vice President and Secretary, Office of the President
• Lisa M. Schreyer, Deputy Dean of the Graduate School, Office of the Dean of the Graduate School
• Emily A. Shandley, Registrar
• Toni Turano, Deputy Dean of the Faculty, Office of the Dean of the Faculty
Student Perspectives Working Group

Chair

- Michael D. Gordin, Rosengarten Professor of Modern and Contemporary History

Members

- Stephen Daniels ’24
- Austin L. Davis ’23
- Anna Jacobson GS
- Sydney Johnson ’24
- Mutemwa Masheke ’23
- Alice McGuinness ’24
- Sullivan Meyer ’24
- Nolan Musslewhite ’25
- Srista Tripathi ’25
- Nicole Williams ’23
**APPENDIX C: Alphabetical Reference Sheet of Abbreviations and Terms**

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<th>Abbreviation</th>
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<td>A.B.</td>
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<tr>
<td>AAMG</td>
<td>Academic and Administrative Managers Group</td>
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<tr>
<td>AAR</td>
<td>After-Action Report</td>
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<tr>
<td>AI</td>
<td>Assistant in Instruction</td>
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<tr>
<td>AMG</td>
<td>Academic Managers Group</td>
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<td>APG</td>
<td>Academic Planning Group</td>
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<td>ASR</td>
<td>Architecture and Security Review</td>
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<td>AY</td>
<td>Academic Year</td>
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<td>B.S.E.</td>
<td>Bachelor of Science in Engineering</td>
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<td>Board</td>
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<td>C/3</td>
<td>Faculty Advisory Committee on Appointments and Advancements</td>
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<td>C/9</td>
<td>Faculty Advisory Committee for Appointments and Advancements in the Lecturer Ranks</td>
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<td>CCD</td>
<td>Center for Career Development</td>
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<td>CDH</td>
<td>Center for Digital Humanities</td>
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<td>CeDAR</td>
<td>Center for Data, Analytics, and Reporting</td>
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<td>COCS</td>
<td>Committee on the Course of Study</td>
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<td>CST</td>
<td>Council on Science and Technology</td>
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<tr>
<td>CTL</td>
<td>Council on Teaching and Learning</td>
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<td>CUFAA</td>
<td>Committee on Undergraduate Admission and Financial Aid</td>
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<td>DCE</td>
<td>Degree Completion Enrollment (Graduate Students)</td>
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<td>DGS</td>
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<td>DOF</td>
<td>Dean of the Faculty</td>
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<td>DUS</td>
<td>Director of Undergraduate Studies</td>
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<td>EBCAO</td>
<td>Emma Bloomberg Center for Access and Opportunity</td>
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<td>ERM</td>
<td>Enterprise Risk Management</td>
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<td>FACP</td>
<td>Faculty Advisory Committee on Policy</td>
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<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
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<td>FERPA</td>
<td>Family Educational Rights and Privacy Act</td>
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<td>First Gen</td>
<td>First Generation to college. At Princeton one is considered a First Generation student if neither parent has completed a Bachelor’s degree.</td>
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<td>FLi</td>
<td>First Generation to college and Low-Income background</td>
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<td>Freshman Scholars Institute</td>
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<td>FY</td>
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<td>GPU</td>
<td>Graphics Processing Unit</td>
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<td>GS</td>
<td>Graduate School</td>
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<td>HEOA</td>
<td>Higher Education Opportunity Act</td>
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<td>HURB</td>
<td>Historically underrepresented backgrounds include U.S. underrepresented populations, women in certain STEM fields, students from low-income backgrounds, first-generation college students, and LGBTQIA+ students.</td>
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<td>HPCRC</td>
<td>High Performance Computing and Research Center</td>
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<td>International Student</td>
<td>A student whose U.S. Citizenship Status is Temporary U.S. Resident</td>
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<td>Abbreviation</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>IWG</td>
<td>Independent Work Guide</td>
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<td>JRW</td>
<td>Junior Research Workshop</td>
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<td>LMS</td>
<td>Learning Management System</td>
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<td>NC-SARA</td>
<td>National Council for State Authorization Reciprocity Agreement</td>
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<td>ODOC</td>
<td>Office of the Dean of the College</td>
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<td>ODUS</td>
<td>Office of the Dean of Undergraduate Students</td>
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<td>OIT</td>
<td>Office of Information Technology</td>
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<td>Ph.D.</td>
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<td>PICSciE</td>
<td>Princeton Institute for Computational Science and Engineering</td>
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<td>PRDS</td>
<td>Princeton Research Data Service</td>
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<tr>
<td>Precept</td>
<td>Small discussion groups that meet weekly to further explore course readings and topics</td>
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<td>PriCOM</td>
<td>Priorities Committee</td>
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<tr>
<td>PRINCO</td>
<td>Princeton University Investment Company</td>
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<td>PUL</td>
<td>Princeton University Library</td>
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<td>PWP</td>
<td>Princeton Writing Program</td>
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<tr>
<td>RCA</td>
<td>Residential College Adviser</td>
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<td>RDOS</td>
<td>Research Data and Open Scholarship</td>
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<td>RSE</td>
<td>Research Software Engineering</td>
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<td>SAGIT</td>
<td>Strategic Advisory Group on Information Technology</td>
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<td>SEAS</td>
<td>School of Engineering and Applied Science</td>
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<td>SIFP</td>
<td>Scholars Institute Fellows Program</td>
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<td>STEM</td>
<td>Division III (the Natural Sciences including Math) and Division IV (Engineering including Computer Science)</td>
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<td>SUMAR</td>
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<td>UDO</td>
<td>University Data Officer</td>
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<td>URP</td>
<td>Residents who self-identified as Black or African American, Latino/Hispanic, American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, or two or more races provided one is included in this definition.</td>
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<td>USC</td>
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### Course Codes

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<td>History</td>
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<td>Molecular Biology</td>
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### General Education Designations

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<tr>
<td>EC</td>
<td>Epistemology and Cognition</td>
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<td>EM</td>
<td>Ethical Thought and Moral Values</td>
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<td>HA</td>
<td>Historical Analysis</td>
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<tr>
<td>LA</td>
<td>Literature and the Arts</td>
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<tr>
<td>QCR</td>
<td>Quantitative and Computational Reasoning</td>
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<td>SEL</td>
<td>Science and Engineering with Laboratory</td>
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<tr>
<td>SEN</td>
<td>Science and Engineering without Laboratory</td>
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<tr>
<td>SA</td>
<td>Social Analysis</td>
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