

**"Any Person ... Any Study"
within One University**

Comprehensive Self-Study Report submitted to the
Middle States Commission on Higher Education

February 9, 2011

Executive Summary

“Any Person ... Any Study” within One University

Self-Study for the Middle States Commission on Higher Education

Submitted by

Cornell University

February 9, 2011

This comprehensive self-study of Cornell University, undertaken a decade after the previous Middle States accreditation, takes as its theme the productive tension between Cornell’s historical (and still cherished) goals of accessibility and breadth and its need to function with unity, focus, and efficiency. As we measure the university by the commission’s standards, we find several essential facts or major developments of recent years to be especially relevant:

- Cornell’s thorough and focused 2010 Strategic Plan;
- the longstanding decentralization of academic and various other responsibilities;
- Cornell’s character as the land grant university of New York State;
- the university’s responses to the national economic downturn, including immediate measures as well as bold changes to create long-term savings in administrative costs;
- the approaching retirement of a large proportion of the faculty and Cornell’s proactive response;
- the commitment to need-blind admissions and need-based financial aid;

- ongoing efforts to improve our students' living-learning experience and to continue or establish means of assessing the quality of student learning.

We introduce Cornell in our first chapter, outlining fundamental facts about the university and its individual colleges, describing transformational initiatives of the past decade, and explaining the external context that led to "Reimagining Cornell," a comprehensive self-examination culminating in the 2010 Strategic Plan. Chapter 2 briefly explains our approach to the Middle States self-study.

The first three Middle States standards (*Mission and Goals; Planning, Resource Allocation, and Institutional Renewal; and Institutional Resources*) are examined in chapter 3, "Institutional Stewardship." After examining Cornell's strategic planning process and outcome, we discuss the functions of planning, resource allocation, and renewal, and then describe the university's revenues, expenses, budgeting, and related areas. We also discuss changes brought about by the global financial crisis. We recommend developing a more coordinated approach to planning, to be achieved along the lines described in the 2010 Strategic Plan. We also recommend further planning for the refurbishment of campus facilities and for campus development as prescribed in the Campus Master Plan.

In chapter 4 we address *standards 4 (Leadership and Governance), 5 (Administration), and 6 (Integrity)*. Here we outline Cornell's administrative and governance structures as well as policies related to integrity and ethical conduct. We take note of several changes in recent years that have centralized certain functions of the university, and we recommend that Cornell continue on this path, so long as doing so does not jeopardize the academic missions of the colleges. We also recommend clarification of the roles of the assemblies, continued momentum on administrative cost-saving measures, and full implementation of an in-process change in management of conflicts of interest.

Chapter 5 considers *standards 8 (Student Admissions and Retention) and 9 (Student Support Services)*. We first examine admission policies, enrollment targets, and recruitment of underrepresented minorities. Next, we consider graduation and completion rates, advising, career services,

psychological services, residential life, and other aspects of student well-being, as well as grievance policies and privacy protections. We endorse need-blind admissions and competitive packages of need-based financial aid, recommend further attention to the retention and success of underrepresented minorities, and suggest that Cornell reconsider the recent policy of allowing applicants to choose an alternate college. We also offer recommendations concerning fostering student health and well-being, find room for improvement in academic advising and career services, and suggest that Cornell examine housing issues related to transfer admission.

Our next chapter examines Cornell's compliance with *standard 10: Faculty*, considering the composition of the faculty, measures of excellence, the role of non-professorial faculty members, diversity, mentoring, tenure, and other issues. We endorse Cornell's proactive faculty renewal efforts and support innovative hiring practices and efforts toward diversity. We recommend professional development opportunities for all faculty, including non-professorial ones, and advise further consideration of the role of emeritus faculty. Urging more consistent university-wide support for teaching, we recommend more widespread mentoring of junior faculty and incentives for units to better integrate faculty members' roles as researchers, teachers, advisors, mentors, and agents of public engagement. Finally, we recommend that the university continue to expand cross-campus and inter-campus collaborations, with particular emphasis on the social sciences and business.

"Educational Offerings," our seventh chapter, focuses on *standards 11–13: Educational Offerings, General Education, and Related Educational Activities*. Here we examine undergraduate education, graduate and professional programs, off-campus study, and supporting factors such as the library, information technology, and instructional facilities. We endorse moving toward a more unified educational experience for undergraduates, developing stronger ties across colleges, and minimizing obstacles that may prevent students in one college from taking courses in another. We also urge greater attention to the creative and performing arts as well as data collection on undergraduate research. At the graduate level, we recommend that Cornell examine the viability of some small graduate fields as well as the adequacy of programs in English as a second

language. Other recommendations concern library services and the need for improved means of supporting study abroad.

Next we address *standard 14: Assessment of Student Learning* in chapter 8. Cornell's many programs are at varying points in their progress toward establishing and using effective assessment practices. We examine the situation across undergraduate, graduate, and professional programs and offer a general recommendation that Cornell ensure ample central support for the assessment project. We also recommend that Cornell use a range of resources for developing assessment activities, provide additional support for assessment-related work in the Center for Teaching Excellence, and create fora in which units can share assessment models.

Standard 7: Institutional Assessment is discussed in chapter 9. This chapter outlines our data collection and analysis services, our current assessment activities, and plans for the future. We endorse the Strategic Plan's aims for institutional assessment and recommend addressing issues of communication and transparency of data. We also see a need for more data collection in two areas: (1) the links between students' Cornell experiences and their later careers and (2) the experiences and perceptions of graduate and professional students.

In conclusion, we survey the highlights of our self-study and affirm the need for Cornell University to act as "one university" to maintain and improve its research prominence and to enhance the undergraduate experience. We see administrative efficiency and academic collaboration as means to help Cornell achieve its ambitious goals.

“Any Person ... Any Study” within One University

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1. Introducing Cornell University

In 2015 Cornell will celebrate its sesquicentennial. In this chapter, we introduce the Cornell University of today: its character, its size, and its leadership. We highlight significant transformational initiatives of the last decade. Finally, we describe recent strategic planning efforts at the university and the significance of our theme, *“Any Person ... Any Study” within One University*.

1.1 Facts about Cornell

Cornell University represents a distinctive mix of eminent scholarship and democratic ideals. Called “the first American university” by educational historian Frederick Rudolph, Cornell was conceived as a coeducational, non-sectarian institution that would teach in and contribute to all fields of knowledge—from the classics to the sciences and from the theoretical to the applied. Ezra Cornell captured these ideals in 1865 with a statement that has since become Cornell’s motto: “I would found an institution where any person can find instruction in any study.”

As the fruition of Ezra Cornell’s vision of “any person ... any study,” Cornell University today offers over a hundred programs of study: from Philosophy to Crop and Soil Sciences; from Applied and Engineering Physics to Sculpture; from Collective Bargaining, Labor Law, and Labor History to Ophthalmology. In the 2010 *Data-Based Assessment of Research-Doctorate Programs* conducted by the National Research Council, Cornell had more doctorate-granting programs ranked than any other private institution in the nation. As the university’s strategic plan notes, Cornell “combines the finest attributes of an Ivy League institution with an

unusually deep commitment to public service, stemming from its history as a land grant institution.”¹

On the Ithaca campus alone more than 20,000 students representing every state and 120 countries choose from among 4,000 courses in 11 undergraduate, graduate, and professional schools taught by 1,600 tenured and tenure-track faculty. Many undergraduates participate in a wide range of interdisciplinary programs, play meaningful roles in original research, and study in Cornell programs in Washington, New York City, and the world over. In addition to the main campus in Ithaca, the university also includes Weill Cornell Medical College and Graduate School of Medical Sciences in New York City, a branch of the medical college in Qatar, and the New York State Agricultural Experiment Station in Geneva, New York. Reflecting its heritage of egalitarian excellence, Cornell University today is one of the most socioeconomically and educationally diverse members of the Ivy League. Cornell is also the largest institution in the Ivy League.

1.1.1 Mission

Cornell University is both a private Ivy League university and the land grant university for the State of New York. Cornell’s mission is to discover, preserve, and disseminate knowledge; produce creative work; and promote a culture of broad inquiry throughout and beyond the Cornell community. Cornell also aims, through public service, to enhance the lives and livelihoods of our students, the people of New York, and others around the world.

1.1.2 Vision

Cornell aspires to be the exemplary comprehensive research university for the 21st century on the basis of our distinctive status as a private university with a formal public mission. Faculty, staff, and students will thrive at Cornell because of its unparalleled combination of quality and breadth; its high standards; its open, collaborative, and innovative culture;

¹ *Cornell University at Its Sesquicentennial: A Strategic Plan 2010–2015*, <http://www.cornell.edu/strategicplan/>

the opportunities provided by beautiful, vibrant rural and urban campuses; and programs that extend throughout the state of New York and across the globe.

1.1.3. Cornell's Colleges and Schools

By design, Cornell University's colleges exercise considerable autonomy from one another and from the central administration. Each defines its own academic programs, operates its own admissions and advising programs, and establishes the requirements for its own degrees. This autonomy is written into the Cornell University bylaws:

It shall be the duty of each separate college or school faculty to determine the entrance requirements for its own students; to prescribe and define courses of study for them; to determine the requirements for such degrees as are offered to students under its jurisdiction; to recommend to the President such candidates for degrees as may have fulfilled the requirements therefor; to enact and enforce rules for the guidance and supervision of its students in their academic work; and in general to exercise jurisdiction over the academic interests of students and all other educational matters in the particular college or school.

Undergraduate students affiliate with a particular college and must meet the degree requirements of that unit, but students are encouraged—and often required—to take classes outside of their home college.

Cornell University is a private institution, but three of its undergraduate colleges (Agriculture and Life Sciences, Human Ecology, and Industrial and Labor Relations) as well as the College of Veterinary Medicine receive significant funding from the state of New York to support their teaching, research, and service missions. As these colleges are operated under statutes, appropriations, and contracts with the state, they are referred to as the “contract colleges” or the “statutory colleges.” As is the case with public state universities, residents of New York enrolled in the contract colleges pay reduced tuition. The remaining colleges and schools are referred to as the “endowed colleges.” Table 1.1 lists Cornell's colleges and schools, their enrollment, and the number of faculty in each.

Table 1.1. Cornell's degree-granting colleges, fall 2010

College/school	Fall 2010 enrollment		Faculty ^a
Undergraduate			
Agriculture and Life Sciences	3,477	undergrad	371
Architecture, Art, and Planning	487	undergrad	54
Arts and Sciences	4,201	undergrad	513
Engineering	2,775	undergrad	232
Hotel Administration	894	undergrad	37
Human Ecology	1,190	undergrad	91
Industrial and Labor Relations	911	undergrad	54
Graduate and professional			
Graduate School	4,971	graduate	— ^b
Veterinary Medicine	363	DVM	131
Law School	681	JD, LL.M	53
Johnson Graduate School of Management	989	MBA	55
Weill Cornell Medical College	396	grad/MD	1,187 ^c
Weill Cornell Graduate School of Medical Sciences	618	grad/MD	— ^d
Weill Cornell Medical College in Qatar	148	MD	
Total Ithaca	20,939		1,591
Total university	22,101		2,596

^a Faculty are defined as the three professorial ranks including part-time, clinical and acting. Adjunct, visiting, courtesy, and emeritus appointments are excluded. Faculty counts are as of spring 2010.

^b Graduate school faculty have home appointments in one of the colleges.

^c Faculty of Weill Cornell Medical College include a large number of primarily clinical faculty.

^d WCGSMS and Qatar faculty are appointed through WCMC.

On its Ithaca campus, Cornell enrolls nearly 14,000 undergraduates in the seven colleges that award bachelor's degrees. Here they are briefly described, listed from largest to smallest undergraduate enrollment:

- **College of Arts and Sciences (A&S).**² The oldest and largest of the university's colleges, A&S provides undergraduate education characterized by breadth and depth of study, and latitude to shape an individualized curriculum. A&S is home to 14 humanities departments, 7 departments in the physical and natural sciences, and 6 social sciences departments. It has 43 majors and 34 minors, and offers more than 40 foreign languages. Each year the college offers approximately 2,000 undergraduate courses—nearly half of all the undergraduate courses taught at Cornell.
- **College of Agriculture and Life Sciences (CAL S).**³ CALS is the second largest undergraduate college at Cornell and the third largest college of agriculture in the United States. It offers 24 majors and 26 minors, and its land grant mission intersects with all of the college's core academic priorities, from the applied social sciences, to the environmental sciences, to the life sciences. Twenty-two academic departments offer unique teaching, research, and extension programs focused on serving the public good and making a positive difference in the lives of stakeholders in New York State, the nation, and the world.
- **College of Engineering.**⁴ At the undergraduate level, Engineering offers 13 majors and 18 minors. Discovery stretches across disciplines to find answers to complex and challenging problems in fields such as nanoscience, biomedical engineering, chemical and biomolecular engineering, advanced materials, and information science. The college's faculty collaborate in an interdisciplinary blend of engineering and science research, providing undergraduates with opportunities to work closely with faculty on a variety of research and development projects.
- **College of Human Ecology.**⁵ Bringing together natural sciences, social sciences, and design to advance and improve the human condition, Human Ecology is organized around the

² <http://as.cornell.edu/information/index.cfm>

³ <http://www.cals.cornell.edu/cals/about/index.cfm>

⁴ <http://www.engineering.cornell.edu/explore/facts-figures/index.cfm>

⁵ http://www.human.cornell.edu/che/About-Our-College/More_About_Us/Facts.cfm

multidisciplinary units of the Division of Nutritional Sciences (shared with CALS) and the Departments of Human Development, Fiber Science and Apparel Design, Design and Environmental Analysis, and Policy Analysis and Management. Faculty and students conduct research to improve nutrition and health, advance design and technology, promote development and the life course, and secure economic and social well-being for individuals, families, and communities.

- **School of Industrial and Labor Relations (ILR).**⁶ ILR is the leading college of applied social sciences relating to workplace, employment, and labor policy issues and practices. Although all undergraduates have the same major (Industrial and Labor Relations), ILR's six academic departments ensure that students can choose courses according to individual interests within the social or management sciences (including statistics); students may also opt to pursue a formal minor in fields outside of ILR. As part of the land grant mission, ILR creates and disseminates workplace-relevant knowledge to solve human problems, manage and resolve conflict, establish best practices, and inform government policy.
- **School of Hotel Administration.**⁷ The School of Hotel Administration was the first collegiate program in hospitality management and today is regarded as the world leader in its field. Core areas include facilities management; food and beverage management; human resource management; law; leadership; managerial communication; operations; real estate and finance; services marketing; and tourism. The Statler Hotel provides an on-campus laboratory where students can earn promotions to increasingly greater levels of management responsibility.
- **College of Architecture, Art, and Planning (AAP).**⁸ AAP grants four bachelor's degrees through courses offered in three departments: Architecture, Art, and City and Regional Planning. The curriculum blends theoretical training and studio experiences,

⁶ <http://www.ilr.cornell.edu/explore/admissions/>

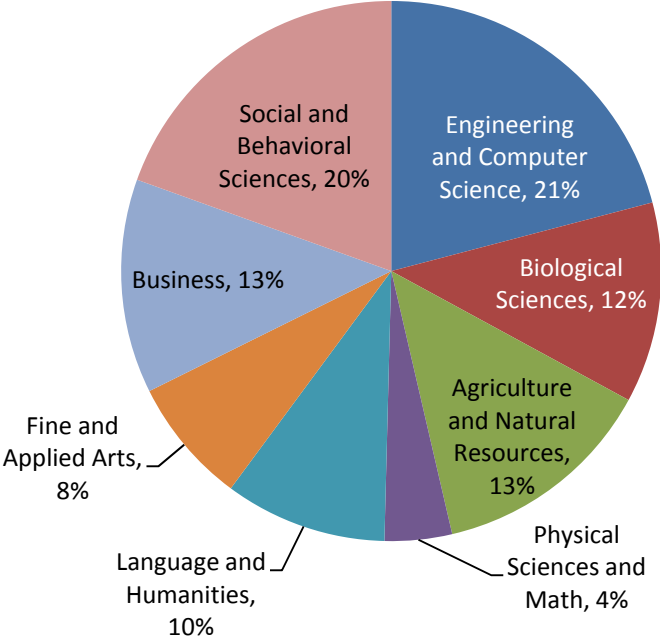
⁷ <http://www.hotelschool.cornell.edu/about/>

⁸ <http://www.aap.cornell.edu/aap/explore/collegefacts.cfm>

encouraging students to develop imagination, technical creativity, critical thinking, a sense of history, and the development of a social, ethical, and artistic perspective. In addition to study at the Ithaca campus, AAP offers specialized off-campus study opportunities in New York City and in Rome, Italy. AAP's Bachelor of Architecture program consistently ranks first in the nation.

The overall distribution of bachelor's degrees awarded by discipline is illustrated in Figure 1.1.

Figure 1.1. Bachelor's degrees awarded in the 2009–2010 academic year, by broad disciplinary grouping



Note: Undergraduate degrees in the discipline of business include those in Hotel Administration and in Applied Economics & Management.

Graduate and professional degrees are awarded by Cornell's Graduate School and four professional colleges; distribution by disciplines is shown in Figure 1.2.

- **Graduate School.**⁹ Cornell was one of the first institutions of higher education in the United States to offer advanced degrees. Today the Graduate School offers 18 different post-baccalaureate degrees, including the PhD. Transcending the administrative boundaries of departments and colleges, Cornell's Graduate School is characterized by the "field system." Graduate "fields" are voluntary groupings of faculty members who have academic interests in common and who wish to exercise shared responsibility for an area of inquiry and for the admission, education, and, as appropriate, financial support of graduate students. While many fields correspond roughly to academic departments, others are not directly associated with any department but nonetheless represent areas of faculty research. As an example of the diversity of representation within a field, the Graduate Field of Neurobiology and Behavior includes close to 50 members; about half come from the *Department* of Neurobiology and Behavior, but the *field* includes representation from a total of 13 departments and 5 colleges. Within the Graduate School, each field is administered by a director of graduate studies who serves as the primary point for admissions, students' financial support, and the monitoring of student progress. The Graduate School includes more than 90 degree-granting fields in which graduate students are admitted and which confer doctoral and master's research and professional degrees. On average, a faculty member belongs to two graduate fields.
- **Johnson Graduate School of Management.**¹⁰ The Johnson School's mission is to develop business leaders who create, transform, and sustain successful organizations around the world, to generate research and scholarship that shape the future practice of management, and to train the next generation of business scholars. The Johnson School enrolls over 800 MBA students, including residential and executive MBA students. The school's general

⁹ <http://www.gradschool.cornell.edu/>

¹⁰ <http://www.johnson.cornell.edu/About.aspx>

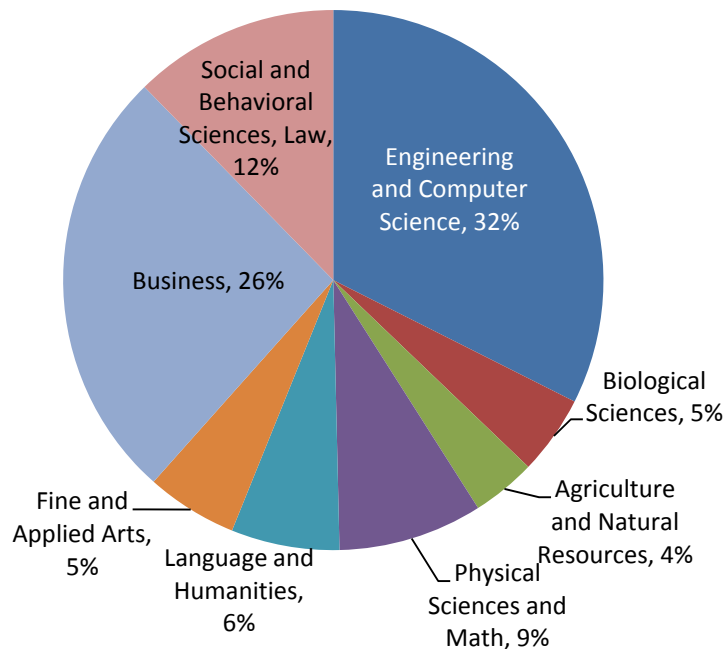
management curriculum combines theoretical study with practical performance and case-based learning.

- **Law School.**¹¹ Among the smallest of the elite law schools, the Law School offers a three-year JD program and a one-year LLM program within a close-knit and collegial intellectual community. Its mission is to produce well-trained, large-minded, morally based lawyers in the best sense. The Law School encourages collaboration and interdisciplinary study and has a global emphasis that is reflected in its educational partnerships around the world.
- **College of Veterinary Medicine.**¹² Consistently ranked as the top program in veterinary medicine, the Veterinary College advances animal and human health through education, research, and public service. Five academic departments span basic biomedical research, translational biology, and clinical and diagnostic medicine. The college operates a state-of-the-art teaching hospital and the Animal Health Diagnostic Center.

¹¹ <http://www.lawschool.cornell.edu/about/index.cfm>

¹² <http://www.vet.cornell.edu/about/fastfacts.cfm>

Figure 1.2. Post-baccalaureate degrees awarded from the Ithaca campus in the 2009–2010 academic year, by broad disciplinary grouping



- Weill Cornell Medical College (WCMC),¹³ New York City.** Founded in 1898, WCMC is among the top-ranked clinical and medical research centers in the country. In addition to offering degrees in medicine, WCMC also offers, through the Weill Cornell Graduate School of Medical Sciences, PhD programs in biomedical research and education. WCMC enrolls nearly 1,000 students in New York City and is divided into 24 basic science and patient care departments that focus on the sciences underlying clinical medicine and/or encompass the study, treatment, and prevention of human diseases. WCMC also operates an additional location in Doha, Qatar, making it the first U.S. medical school to offer its MD degree overseas.

In addition to the degree-awarding colleges and schools, Cornell includes the Faculty of Computing and Information Science and the School of Continuing Education and Summer Sessions:

¹³ <http://www.med.cornell.edu/about-us/index.html>

- **Faculty of Computing and Information Science (CIS).**¹⁴ Founded in 1999 on the recognition that the ideas and technology of computing and information science are relevant to every academic discipline, CIS engages with every college at Cornell to integrate computing and information science—its ideas, technology, and modes of thought. While students working to earn degrees in computer science and information science are enrolled through the degree-granting units listed above, 25 academic departments cross-list courses with CIS and this number is expected to grow.
- **School of Continuing Education and Summer Sessions (CESS).**¹⁵ CESS strives to provide educational opportunities for any person, in any study, at any time, and in any place. Year-round offerings enroll some 7,500 students, persons of all ages and all interests, in more than 900 classes and programs annually, in addition to thousands more users of CyberTower, a website featuring video-streamed mini-courses and interviews with leading Cornell faculty. CESS classes, both credit and noncredit, are offered on Cornell campuses in Ithaca, Washington, and Qatar and in many other places around the world, and via distance learning.

1.1.4 Cornell's Leadership¹⁶

On July 1, 2006, David J. Skorton¹⁷ took office as the 12th president of Cornell University. President Skorton came to Cornell from the University of Iowa, where he had served as president since 2003 and as a faculty member since 1981. A board-certified cardiologist and biomedical researcher, President Skorton holds faculty appointments as professor in the Departments of Medicine and Pediatrics at Weill Cornell Medical College and in the Department of Biomedical Engineering at the College of Engineering on Cornell's Ithaca campus.

¹⁴ <http://www.cis.cornell.edu/about.html>

¹⁵ <http://www.sce.cornell.edu/>

¹⁶ University organizational charts can be found at http://dpb.cornell.edu/F_Univ_Org.htm.

¹⁷ <http://www.cornell.edu/president/about.cfm>

The president's senior staff members include Provost Kent Fuchs,¹⁸ Provost for Medical Affairs Anthony Gotto,¹⁹ and the vice presidents. The deans of the colleges and schools on the Ithaca campus report directly to Provost Fuchs. The dean of the Weill Cornell Graduate School of Medical Sciences reports to Provost Gotto.

1.2 Transformational Initiatives of the Last Decade

In the interval since our last decennial accreditation, Cornell has launched a number of initiatives that have profoundly shaped the nature of the university. While many other changes over the last decade could be highlighted, we identify here the three initiatives that have had the most comprehensive impact on the university: the undergraduate residential initiatives, the undergraduate financial aid initiatives, and the new life sciences initiative, along with the capital campaign that enables them to go forward.

1.2.1 Undergraduate Residential Initiatives

In the past ten years Cornell has undergone a complete transformation in its commitment to optimizing living and learning environments. Before the residential initiatives, Cornell offered clusters of traditional residential halls in two distinct areas on the perimeters of the Ithaca campus: West Campus and North Campus.²⁰ There were disparities between West and North in the character and quality of the buildings, but also in the extent of residential-based programming available and in the perceptions of the kinds of students who chose to live in the different areas. For at least two decades, there were discussions across the university concerning the need to re-conceptualize West Campus housing and to find ways of uniting living and learning at Cornell.

In October 1997, President Hunter Rawlings announced plans to co-locate all entering freshmen on North Campus in order to improve the

¹⁸ <http://www.cornell.edu/provost/about.cfm>

¹⁹ <http://www.cornell.edu/medprovost/>

²⁰ In addition, a relatively small number of students live in traditional residence halls in Collegetown, a neighborhood adjoining the campus.

effectiveness of programming for the entire freshman class, better enable the class to take full advantage of its diversity, and more generally to enhance the intellectual climate outside the classroom. After the construction of new buildings added 558 new beds to North Campus, in fall 2001 all first-year students began to be housed there together. A first-year student resource center, the Carol Tatkon Center, opened in fall 2003, offering spaces for classes and meetings, a café, and a walk-in writing service. The North Campus Residential Initiative transformed both physical spaces and the opportunities for developing a more coherent first-year experience for undergraduates.

The transformation of West Campus followed shortly after the relocation of all first-year students onto North. The West Campus Residential Initiative was guided by the following goals²¹:

- Create a living/learning environment capable of attracting students and faculty to West Campus.
- Encourage students and faculty to assume responsibility for the living/learning environment.
- Engage students in intellectual life and the mission of the colleges and the university.
- Provide and foster opportunities for increased faculty-student interactions.
- Enrich students' sense of community at Cornell.

With a university commitment of \$200 million, the buildings on West that were originally constructed for the postwar enrollment boom were torn down and replaced by five “houses,” each named after an esteemed, now-deceased faculty member known for his or her pedagogical gifts. The first, Alice Cook House, opened in 2004, followed by Carl Becker House in 2005, Hans Bethe House in 2007, William Keeton House in 2008, and Flora Rose House in 2009. West Campus’s Noyes Community Recreation Center—including a fitness center, a gymnasium, a bouldering wall, and multiple lounge areas—opened in 2007.

²¹ http://www.campuslife.cornell.edu/campuslife/wchs/upload/Transforming_West_Campus.pdf

Today, each of the five houses serves as home to between 310 and 380 students of sophomore and above status; a live-in house professor-dean; a live-in assistant dean; and a staff of live-in graduate and undergraduate students (called graduate resident fellows and student assistants respectively). Each house also has its own dining room, library, computer lab, study rooms, front office, visiting faculty apartment, and administrative support staff.

Since each house is independently governed by faculty members (though efforts are certainly coordinated with other houses in the system), each house is free to develop its own personality, agenda, roster of fellows and guests, and governing system. There is no established programmatic “theme” for the houses; by design, students from all the undergraduate colleges at Cornell live in each house to create a broad-based, rather than discipline-focused, intellectual community.

While it remains the case that only about half of Cornell undergraduates live on campus (see Chapter 5, “Student Admissions and Supports”), the transformation of West Campus has created entirely new opportunities for engaging in an enhanced intellectual community within the university’s residential environment.

1.2.2 Financial Aid Initiatives

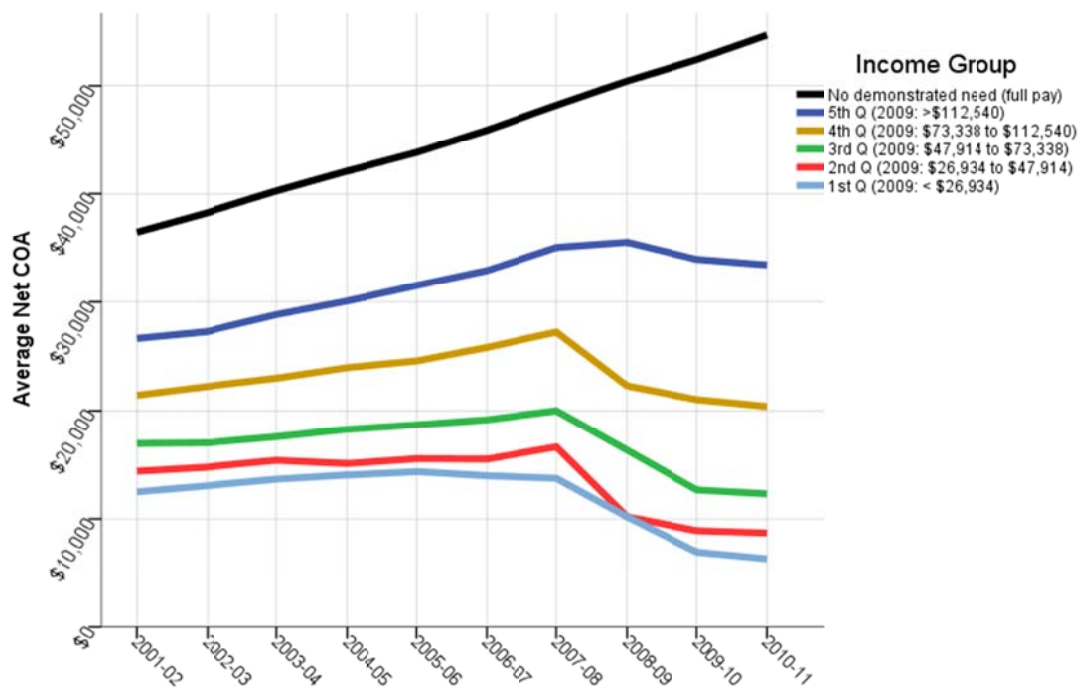
Consistent with its tradition of emphasizing access to all, Cornell is one of a select number of institutions practicing need-blind admission. That is, when an applicant is considered for admission, the staff is unaware as to whether the student has applied for financial aid. Cornell also has a policy of need-based aid: all financial aid is awarded according to need, and Cornell does not award financial aid based on merit or talent to students who do not demonstrate need.

The university has recently underscored its commitment to need-based financial aid. In January 2008 Cornell announced a new financial aid initiative, with further enhancements in November 2008 even in the midst of the economic downturn. This initiative included several elements. The parental contribution was eliminated for students from families with income less than \$60,000 and assets less than \$100,000. In addition, the

university further reduced the parental contribution to 10% of family income for students from families with income above \$60,000 if the student was from an underrepresented minority group or was a college enrollment priority. All need-based student loans are replaced with grant aid for undergraduate students from families with income under \$75,000. Need-based loans are limited to \$3,000/year for middle-income students whose families earn between \$75,000 and \$120,000/year. Need-based loans are limited to a maximum of \$7,500/year for students with financial need whose families earn more than \$120,000/year.

As a result of these policies, the average cost of attendance at Cornell declined between 2007 and 2010 for families in the bottom 80% of the income distribution for all American households (see Figure 1.3). In 2010, about half of Cornell students received financial aid.

Figure 1.3. Average cost of attendance, net grant from all sources, endowed colleges



1.2.3 New Life Sciences Initiative

Since Cornell's last accreditation, the life sciences have undergone a massive and strategic revision in both research and teaching missions. In

1998–99 a faculty-initiated Cornell Genomics Initiative (CGI) swept across multiple colleges, resulting in inter-college and interdepartmental hiring practices founded on the premise that the future of biology lies in the hands of scholar-researchers who work at the interfaces among engineering, computer science, and physics, as well as biology.

In 2000 President Hunter Rawlings and Provost Carolyn (Biddy) Martin announced a campus-wide New Life Sciences Initiative as a centerpiece of a new capital campaign, designating \$500 million—the largest fund-raising campaign for a single project ever attempted by Cornell—to “change the way life-science research is conducted and taught at the university.” From the outset, a goal of the New Life Sciences Initiative was that “the work must be cross-disciplinary and involve large teams of researchers.” The initiative has involved the collaboration of seven colleges, the Boyce Thompson Institute for Plant Research at Cornell, and the USDA’s Agricultural Research Service, also at Cornell. Hundreds of faculty members and 60 departments became involved in a comprehensive program of interdisciplinary research and education. An icon of the New Life Sciences Initiative is the \$162 million, 263,000-square-foot Weill Hall, dedicated in October 2008. Other achievements include 73 new faculty hires, 68 new graduate fellowships, and the completion of other relevant new facilities such as Duffield Hall, a world-class center for nanotechnology and nanobiotechnology, and the East Campus Research Facility, dedicated to animal research. A new Physical Sciences Building opened in January 2011.

1.2.4 “Far Above”: The Campaign for Cornell

Cornell’s current campaign was initiated in October 2006 with a goal of \$4 billion by the end of 2011. By the time of Cornell’s sesquicentennial in 2015, according to the campaign’s stated goals, Cornell aspires to be the best research university for undergraduate education; to set the standard for interdisciplinary collaboration in areas of critical social importance; and to be a model for higher education in our approach to the public mission, serving as land grant institution to the world.

Campaign fundraising priorities are determined by the vice president of alumni affairs and development and his senior leadership team in

consultation with the president, the provost, and other members of the university's senior administrative and academic leadership and in alignment with the university's strategic plan. Fundraising priorities are approved by the Board of Trustees, based on the recommendation of its Committee on Development.

Areas of emphasis for the Campaign for Cornell include

- guaranteeing access to the most deserving students;
- advancing interdisciplinary initiatives in fields where Cornell can lead the world, such as life sciences, physical sciences, and computing and information sciences;
- preserving and enhancing our leadership in the arts and humanities;
- advancing our professional schools and key social science disciplines to top rankings;
- transforming the undergraduate living and learning experience through the Residential Initiative and related efforts.

In November 2010, the Campaign for Cornell reached the \$3 billion mark. Consistent with the University's new strategic plan—described at some length in Chapter 2—continued areas of focus will include faculty renewal and scholarship as well as financial aid.

1.2.5 Other Initiatives

Other initiatives that have had a significant impact across the university include:

- **Internationalization.** With the Qatar campus of the medical college opening in 2001, Cornell became the first American university to offer its MD degree overseas. This was the first of several international initiatives that would later include a master of management in hospitality program housed primarily at the Nanyang Technological University in Singapore and a master of professional studies degree program focused on watershed management at Bahir Dar University in Ethiopia.

- **Sustainability.** At several points over the last decade, student groups and faculty task forces have examined the role that Cornell can play in the issue of sustainability. In February 2007 President Skorton signed the *American University and College Presidents Climate Commitment*, committing Cornell to develop a plan for achieving climate neutrality on the Ithaca campus. Later that same year, the provost’s office supported the founding of the Cornell Center for a Sustainable Future to bring together faculty, staff, and students from across the university around themes relating to energy, environment, and economic development. Three years in existence, the center has 220 faculty fellows from 10 colleges and schools and 55 departments. In October 2010 the center was renamed the Atkinson Center for a Sustainable Future in recognition of an \$80 million gift from David R. Atkinson ’60 and his wife, Patricia Atkinson. This gift was the single largest gift to the Ithaca campus from an individual.
- **Faculty Salaries Improvement Plan.** In the fall of 2000, the university committed to bringing the salaries of Cornell faculty members in line with average salaries at agreed-upon peer institutions. Since then, Cornell faculty salaries have made steady progress relative to most peers, particularly in the first half of this decade. Lagging 9–10% behind the peer average in 2000, Cornell faculty salaries increased 30% over a five-year period, bringing all ranks close to the average salaries at peer institutions.²²
- **Institute for the Social Sciences.** Working with more than 80 units and departments across 10 of Cornell’s colleges, the Institute for the Social Sciences promotes collaborative research and interdepartmental cooperation through three-year, interdisciplinary “theme projects” that attract attention from national and international academic communities. Current projects include “Persistent Poverty and Upward Mobility” (2008–2011), “Judgment, Decision Making, and Social Behavior” (2009–2012), and “Immigration: Settlement, Integration and Membership” (2010–2013). As an example of the collaborative nature of this

²² See, for example, https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=254.

work, the theme project on judgment and decision making represents the contributions of 19 faculty and 23 graduate students from five different colleges.

1.3 The External Context and “Reimagining Cornell”

This self-study occurs within the context of a quickly changing financial environment for academic institutions throughout the United States, while at the same time the need for a creative, innovative, and well-educated workforce has never been greater. As President David Skorton has said:

Now, more than ever, our nation needs a highly skilled and adaptable workforce to bolster and grow our economy, along with a steady stream of new ideas generated through research and creative activity to solve the great challenges facing us and the rest of the world—from developing safe and renewable sources of energy, to addressing global climate change, to improving human health and reducing poverty and inequality, among other urgent societal concerns. . . . More and more people in the U.S. and elsewhere will be seeking a better future for themselves and their families by continuing their education beyond high school.

On the other hand, expanding capacity for higher education is enormously costly—to the students, families, colleges and society at large. New educational initiatives, new research programs, and new forms of outreach and service usually require additional funding. The continuing global economic challenges have already placed considerable strains, directly or indirectly, on all American higher education, and many private colleges and universities have been especially hard hit. Loss of endowment income, lower-than-expected fund-raising results, greater need for financial aid by students and their families, constraints on tuition increases—all part of the fallout from the Great Recession—are the “new normal” on many of our campuses.²³

The “new normal” around financial aid is particularly challenging for institutions like Cornell. Several factors make need-blind admission with need-based financial aid an expensive principle to uphold, particularly so

²³ Address to the National Association of Independent Colleges and Universities, <http://www.cornell.edu/president/speeches/20100201-naicu-annual-mtg.cfm>

for Cornell relative to some of its competitors. The total size of Cornell's endowment is a key element in supporting the financial aid packages that undergraduate students receive. Before the financial crisis, in 2007, Cornell's endowment ranked 18th by total size but only 73rd on a per-student basis. It is the per-student number that is the most relevant to the cost of need-based financial aid. Cornell has adjusted its fund-raising goals, putting more emphasis on raising endowment for undergraduate financial aid, but this shift in resources undoubtedly challenges the university in other ways.

National studies of tuition trends suggest we are quickly approaching limits on the extent to which we can increase what we charge students and families above and beyond the rate of inflation.²⁴ The National Association of Independent Colleges and Universities reports that private colleges raised tuition for 2009-10 by the smallest average amount in 37 years—just 4.3%, compared to an average of 6% annually during the previous decade. At the same time, these colleges increased their institutional student aid budgets by an average of 9% for 2009-10.

The university must increasingly look beyond tuition for revenue streams. But these, too, are challenged. State budget deficits across the nation will result in reduced annual discretionary revenue for institutions of higher education. Although Cornell is a private institution, the contract colleges receive significant funding from the state of New York. Those colleges have seen double-digit percentage decreases in its allocation over the last several years. While New York State continues to provide the university with significant support through construction funds, fringe benefits, and other designated areas, these reductions in discretionary revenue make it increasingly difficult to support Cornell's broad efforts in research, education, and outreach.

Cornell is a leading recipient of funding from both the National Science Foundation and the National Institutes of Health.²⁵ While we expect the budget for NSF to experience some growth in the near term, NIH budget projections are less optimistic. Funding from industry and other private

²⁴ http://www.highereducation.org/reports/affordability_pa/affordability_pa.shtml

²⁵ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=295

entities will likely depend on the speed and success of the economic recovery. In short, the sustainability of this level of support in the future is of constant concern. Adding to this concern, we expect significant turnover in our faculty in the next decade, and new faculty will have less experience competing for grant dollars. However, as Vice Provost for Research Robert Burhman recently wrote, “Our strategy will continue to be to support the best ideas of the faculty, rather than trying to predict and plan for specific areas of growth.”²⁶

In this self-study we document the actions that Cornell is undertaking to adjust to this new reality of higher education. The development of a strategic plan as well as major initiatives to lower the administrative costs of delivering educational capacity are documented in this self-study along with some of the initiatives that will foster better collaboration across academic programs—delivering high quality at lower cost.

Some of these efforts have been focused on addressing budget shortfalls in the short term. For example, in order to decrease the in-year deficit for fiscal years 2009 and 2010, the central administration captured some budget reserves held at the college and unit levels. While this step was unprecedented, the deans and vice presidents were supportive, understanding that the needs of the university were foremost. The budget situation in 2009 also led President Skorton to establish capital construction guidelines under which no new construction could begin without all funding identified, secured, and within institutional parameters.

In the 2009 fiscal year, the university instituted an across-the-board 5% budget cut, but resisted further cuts without a thoughtful process of deliberation and review. Seeing the need for a thorough strategic analysis, President Skorton asked Provost Fuchs to lead Cornell in a comprehensive, coordinated set of planning and implementation activities upon which the future health of our university depends.²⁷

²⁶ Ibid

²⁷ <http://www.cornell.edu/reimagining/index.cfm>

This work, dubbed “Reimagining Cornell,” has ensued using a three-pronged approach:

- **Academic task forces.**²⁸ A total of 20 task forces worked through 2009 to make recommendations on strategies to enhance the university's competitiveness in priority areas within a difficult economic environment. Thirteen of the task forces took broad looks at Cornell's colleges and schools:
 - Architecture, Art, and Planning²⁹
 - Agriculture and Life Sciences³⁰
 - Arts and Sciences³¹
 - Engineering³²
 - Hotel Administration³³
 - Human Ecology³⁴
 - Industrial and Labor Relations³⁵
 - Computing and Information Science³⁶
 - Johnson School³⁷
 - Law School³⁸
 - Veterinary Medicine³⁹
 - Graduate Education⁴⁰
 - Continuing Education and Summer Sessions⁴¹

²⁸ <http://www.cornell.edu/reimagining/taskforces.cfm>

²⁹ <http://www.cornell.edu/reimagining/docs/aap-summary-1109.pdf>

³⁰ <http://www.cornell.edu/reimagining/docs/cals-summary-1109.pdf>

³¹ <http://www.cornell.edu/reimagining/docs/as-summary-1109.pdf>

³² <http://www.cornell.edu/reimagining/docs/eng-summary-1109.pdf>

³³ <http://www.cornell.edu/reimagining/docs/hotel-summary-1109.pdf>

³⁴ <http://www.cornell.edu/reimagining/docs/he-summary-1109.pdf>

³⁵ <http://www.cornell.edu/reimagining/docs/ilr-summary-1109.pdf>

³⁶ <http://www.cornell.edu/reimagining/docs/cis-summary-1109.pdf>

³⁷ <http://www.cornell.edu/reimagining/docs/jgsm-summary-1109.pdf>

³⁸ <http://www.cornell.edu/reimagining/docs/law-summary-1109.pdf>

³⁹ <http://www.cornell.edu/reimagining/docs/vetmed-summary-1109.pdf>

⁴⁰ <http://www.cornell.edu/reimagining/docs/grad-summary-1109.pdf>

⁴¹ <http://www.cornell.edu/reimagining/docs/cess-summary-1109.pdf>

Three task forces were charged to examine broad disciplinary groups that regularly cross the boundaries of colleges:

- Life Sciences⁴²
- Management Sciences⁴³
- Social Sciences⁴⁴

Finally, four task forces examined key features of the university that affect the delivery of its fundamental mission:

- Student Enrollment⁴⁵
- Libraries⁴⁶
- Student and Academic Services⁴⁷
- Budget Model⁴⁸

Some task force report recommendations have since moved forward. Regarding others, the provost has requested additional study and development. As he described in a December 2009 public response⁴⁹ to the task force reports, the provost has “sought to respect the need to accord individual academic units an appropriate degree of autonomy, while at the same time ensuring that all such decisions support and advance the overall strength of the university.”

- **Nonacademic initiatives.** In our large and decentralized environment, administration is sometimes inefficient; tasks can be duplicated, sometimes without full awareness that services are provided centrally or that similar activities are undertaken elsewhere in the university. In the fall of 2009, the university retained Bain & Company, a management consulting firm, to examine nonacademic infrastructure and spending, asking them to

⁴² <http://www.cornell.edu/reimagining/docs/lifesci-summary-1109.pdf>

⁴³ <http://www.cornell.edu/reimagining/docs/mgtsci-summary-1109.pdf>

⁴⁴ <http://www.cornell.edu/reimagining/docs/sosci-summary-1109.pdf>

⁴⁵ <http://www.cornell.edu/reimagining/docs/student-enrollment-summary-1109.pdf>

⁴⁶ <http://www.cornell.edu/reimagining/docs/library-summary-1109.pdf>

⁴⁷ <http://www.cornell.edu/reimagining/docs/sas-summary-1109.pdf>

⁴⁸ <http://www.cornell.edu/reimagining/docs/budgetmodel-taskforce-summary-1209.pdf>

⁴⁹ <http://www.cornell.edu/statements/2009/20091218-fuchs-task-force-response.cfm>

identify substantial savings in the annual budget. Implementation teams have been established in these areas, with joint sponsorship by an academic dean and a senior administrative leader. Cost-saving measures will be implemented throughout fiscal years 2011–2014, and current estimates indicate that Cornell will save at least \$75 million in administrative expenses annually by 2015. Implementation efforts are guided by the Administrative Streamlining Program in the Division of Planning and Budget. Measures of success have been shared with the community on the ASP website.⁵⁰

- **Strategic Plan.** In 2009–10 Cornell conducted a collaborative, transparent process, led by faculty but including student and staff input, to produce a new strategic plan to replace the plan of 2008. The new plan was drafted by the Strategic Planning Advisory Council, a committee of eminent faculty members chaired by Edward Lawler, the Martin P. Catherwood Professor of Industrial and Labor Relations. Initial drafts of the plan were made available for public comment, and the final version was endorsed by the Board of Trustees in May 2010.⁵¹ The new plan, Cornell University at its Sesquicentennial, identifies goals, strategies, tactics and metrics that will define the Cornell of the future in terms of five key objectives: promoting faculty excellence; promoting educational excellence; promoting excellence in research, scholarship, and creativity; promoting excellence in public engagement; and promoting staff excellence. (For more about the strategic plan, see Chapter 3, Institutional Stewardship.)

⁵⁰See <http://www.news.cornell.edu/stories/Oct10/ASP.html> and <http://asp.dpb.cornell.edu/>

⁵¹ The final strategic plan is available at <http://www.cornell.edu/strategicplan/>.

1.4 “Any Person ... Any Study” within One University

Cornell has long embraced a highly decentralized style of decision making. In a 1940 address, faculty member Carl Becker identified the essential character of Cornell as one of “freedom and responsibility,” noting that “the administration wasn’t much in evidence and exerted little pressure.” The diversity in programs of study—reflecting the notion that the university would offer “any study”—would seem to resist a heavily centralized administrative style.

The autonomy of the colleges well serves their fundamental academic missions, as decisions relating to curriculum, investments in research, and programs of outreach thus can be firmly rooted in relevant disciplinary expertise. Yet there are areas of university functioning in which the benefits of centralization—including cost efficiencies, the reduction of redundancy, consistency in messaging, and ease of navigation—can clearly outweigh the costs. The need to identify those areas and functions is revisited continually at Cornell, but has become more acute since late 2008 when the decline in the national economic outlook resulted in a substantial university budget shortfall.

As described in Chapter 2, “Approach to Self-Study,” the question of whether and how Cornell functions as “one university” is a compelling one to consider as we examine how best to deliver on Cornell’s mission within the context of resource constraints.

2. Approach to Self-Study

Early in the process of planning for our institutional study, we elected to make a comprehensive self-examination of the university rather than to take a “special topics” approach. This decision was consonant with the fact that the president and the provost—both fairly recently appointed at the time we initiated the self-study—were interested in taking a fresh, full look at the university. In addition, our self-study unfolded during a period in which financial circumstances impelled us to reexamine the costs and benefits of long-standing practices and assumptions across the institution. Thus, a holistic, comprehensive examination of all essential facets of the university was well suited to our needs at this historic period.

Following this decision, we organized committees and working groups to address all 14 “Characteristics of Excellence” as defined by the Middle States Commission on Higher Education, and charged these groups to reflect on the tension between Cornell’s goal of “Any Person ... Any Study” and the call to operate as “One University” as these relate to the standards for accreditation.

2.1 Organization of the Self-Study Process

The self-study process began in November 2008 when incoming Cornell University Provost W. Kent Fuchs appointed two co-chairs of the Accreditation Steering Committee:

- Michele Moody-Adams, then vice provost for undergraduate education, professor of philosophy, and director of the Ethics and Public Life Program

- Alan Mathios, Rebecca Q. and James C. Morgan Dean of the College of Human Ecology and professor of policy analysis and management

The co-chairs subsequently convened a Planning Committee to design the self-study approach. In addition to the co-chairs above, the following individuals served on the Self-Study Planning Committee:

- Marin Clarkberg, director, institutional research and planning
- William Fry, dean of the university faculty and professor of plant pathology and plant-microbe biology, College of Agriculture and Life Sciences
- Kent Hubbell, Robert W. and Elizabeth C. Staley Dean of Students and professor of architecture, College of Architecture, Art, and Planning
- Barbara Knuth, vice provost (as of April 1, 2010) and dean of the Graduate School (as of July 1, 2010) and professor of natural resources, College of Agriculture and Life Sciences
- Susan Murphy, vice president for student and academic services
- Paul Streeter, interim vice president for planning and budget
- Kristin Walker, manager of academic support, institutional research and planning

The Planning Committee initiated the self-study design process by agreeing on a comprehensive approach to the self-study (with a theme of “Any Person ... Any Study’ within One University”); conceptualizing the formation of six working groups (illustrated in Figure 2.1) to address the 14 standards required for accreditation; and conceiving of a full Steering Committee comprised of the Planning Committee, working group chairs, student representation, and academic leadership from Weill Cornell Medical College. The Planning Committee provided recommendations to Provost Fuchs regarding the appointment of other Steering Committee members, including the working group chairs.

The full Steering Committee convened for the first time in early March 2009. In addition to the members of the Planning Committee, the Steering Committee included the following faculty and students:

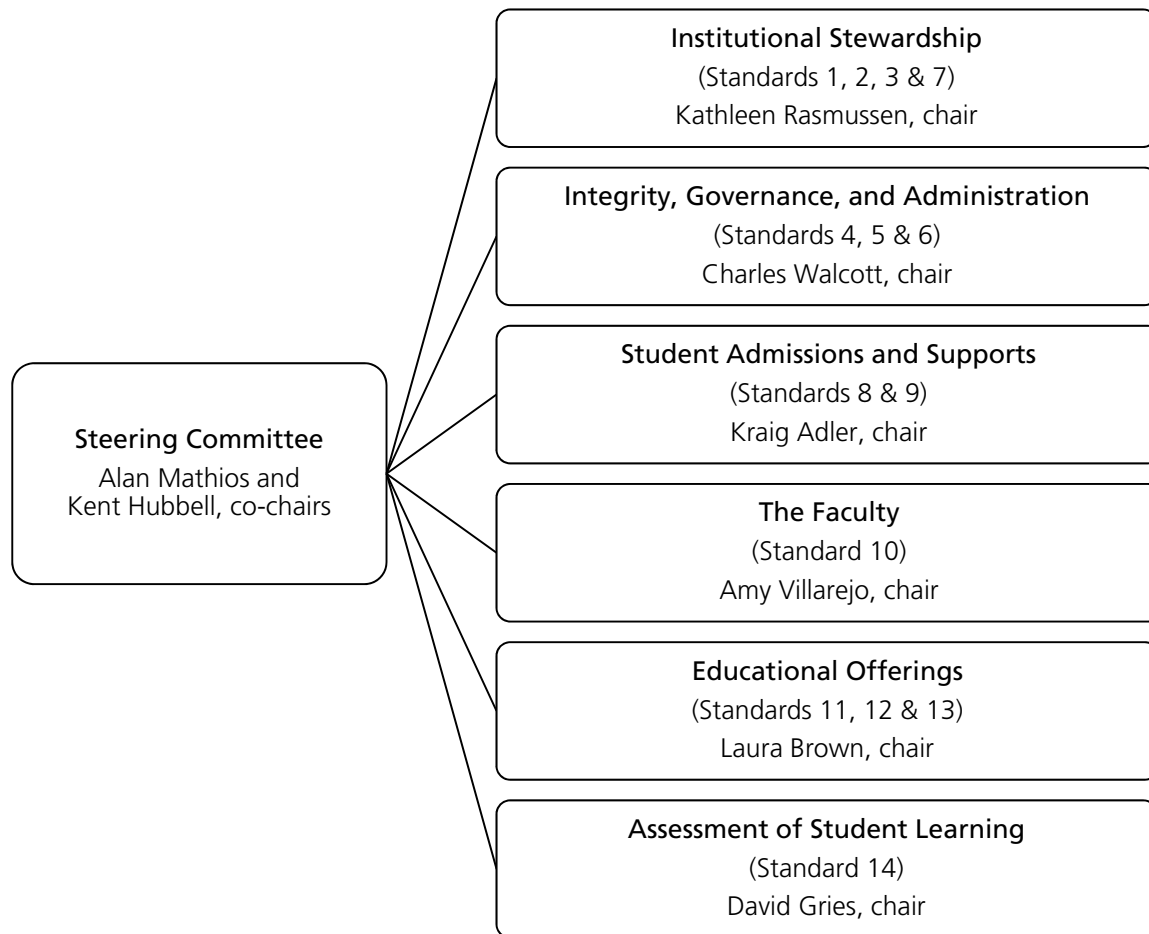
- Kraig Adler, professor and chair of neurobiology and behavior, College of Arts and Sciences and College of Agriculture and Life Sciences
- Laura Brown, vice provost for undergraduate education (as of July 1, 2009) and John Wendell Anderson Professor of English, College of Arts and Sciences
- David Gries, associate dean for undergraduate programs and the William L. Lewis Professor of Computer Science, College of Engineering
- David Hajjar, Frank H.T. Rhodes Distinguished Professor of Cardiovascular Biology and Genetics, and professor of biochemistry and of pathology and laboratory medicine, Weill Cornell Medical College
- Nikhil Kumar, undergraduate student, School of Industrial and Labor Relations
- Kathleen Rasmussen, professor of nutritional sciences, College of Human Ecology
- Gina Ryan, graduate student, microbiology, Graduate School
- Amy Villarejo, chair and associate professor of theatre, film, and dance, College of Arts and Sciences
- Charles Walcott, professor emeritus of neurobiology and behavior, College of Arts and Sciences and College of Agriculture and Life Sciences

On February 27, 2009, Cornell announced that Vice Provost Michele Moody-Adams would be named dean at Columbia College and vice president for undergraduate education at Columbia University as of July 1, 2009. In recognition of the impending departure, Provost Kent Fuchs appointed Dean of Students Kent Hubbell, already a member of the Planning Committee, to replace Vice Provost Moody-Adams as a co-chair of the Accreditation Steering Committee.

Nikhil Kumar, a sophomore in fall 2008, received his bachelor’s degree from Cornell a year early. To serve in his stead, Vincent Andrews, an undergraduate from Industrial and Labor Relations and member of the Student Assembly, joined the Steering Committee in late spring 2010.

The Accreditation Steering Committee has met on a monthly basis, and occasionally more frequently, beginning in March 2009.

Figure 2.1. Self-study steering committee and working groups



2.1.1 The Working Groups

Each working group was charged to focus on a somewhat limited aspect of the university (as illustrated in Figure 2.1), but a number of mechanisms ensured that the working groups operated in harmony with one another.

First, all members of the working groups received Cornell's self-study design document as well as *Characteristics of Excellence* as guides for understanding the process in its entirety. Second, the chairs of the working groups were also members of the Steering Committee that met monthly; this connection ensured that the work of each group could be informed by the work of the others. Third, one or more other members of the Steering Committee visited the working groups at least once to answer any questions working group members had about the process.

As described in Cornell's self-study design, the Steering Committee charged each working group with the following tasks:

- Assess Cornell's strengths and weakness with respect to each relevant standard.
- Assess the extent to which Cornell is structured and operating effectively and efficiently by weighing the merits of centralization or decentralization as it pertains to each relevant standard.
- Consider if and how Cornell is prepared to meet the challenges of the next five to seven years with respect to each relevant standard.
- Develop specific, realistic recommendations for institutional improvement where warranted.

The tasks were undertaken primarily in the course of the 2009–2010 academic year. Working groups submitted drafts of their reports by May 2010, though in some cases, working groups continued to compile evidence and revise drafts into the fall of that year.

2.1.2 The Steering Committee

In the summer and into the fall of 2010, the Steering Committee built upon the work of the six working groups to compile the self-study. Much of the work of the Steering Committee at this stage was editorial: chapters were revised to reduce redundancy across chapters and to move toward a more consistent overall structure. Elizabeth Holmes, a staff writer from the office of the president, assisted in this process and helped to bring a more consistent "voice" to the document. However, the primary, substantive contributions to the self-study come directly from the working groups.

The Steering Committee carefully weighed each of the strengths, weaknesses, and recommendations that arose from the chapters of the self-study. These, in turn, were brought to the attention of the president and provost for their comments. The recommendations for improvement have been carefully considered and present realistic opportunities for change.

2.2 “Any Person ... Any Study” within One University

As noted above, the beginning of our self-study process coincided closely with the beginning of a worldwide financial downturn, and Cornell was hardly immune from its effects. In a March 6, 2009, communication to the university, President Skorton wrote:

We are at a defining moment in Cornell’s history. It is time to reconfigure the university in ways that not only guard our excellence and breadth, preserve our accessibility and meet our responsibilities to the local community and the State of New York, but that also consolidate our academic and administrative functions in imaginative and cost-effective ways.

Under the banner of “Reimagining Cornell,” strategic planning activities throughout 2009 and 2010 have taken up the challenge President Skorton so clearly articulated: to identify ways to consolidate functions to increase our efficiency while guarding Cornell’s fundamental strengths with vigilance.

At the same time that Cornell embarked on strategic planning, the Accreditation Steering Committee charged six working groups to examine the 14 Characteristics of Excellence and to “assess the extent to which Cornell is structured and operating effectively and efficiently by weighing the merits of centralization and decentralization as it pertains to each relevant standard.” Our self-study activities have informed, facilitated, and complemented strategic planning efforts.

The correspondence between strategic planning efforts and the self-study for accreditation is partly attributable to overlap between participants in the self-study and participants in strategic planning—at every level of

involvement in both. Perhaps more significantly, however, there was considerable overlap in the kinds of questions that were asked—and in the information that was required to answer those questions—across activities. The self-study and strategic planning were undertaken in an environment that invited us to examine the extent to which the institution functions as a single, sensible, coherent system. In many cases, the information gathered and the conclusions drawn as part of the self-study effort directly informed the formulation of the strategic plan. Conversely, the recommendations that come out of strategic planning frequently fed back into our thinking for this self study. The 2010 strategic plan, Cornell University at Its Sesquicentennial, opens by stating, “This strategic plan treats Cornell University as a *single unit*” (emphasis in the original), reflecting to a remarkable degree the “one university” theme of this self-study proposed a year prior.

Thus it has become apparent that our focus on whether and how Cornell functions as “one university” is the question of our time. The university is presently adopting plans that will adjust the balance between centralization and independence, efficiency and latitude, and control and creativity in ways we hope will preserve Cornell’s fundamental strengths. We expect that this self-study will continue to inform university strategic planning—and the implementation of the strategic plan—over the next decade.

3. Institutional Stewardship

Standards:

1. Mission and Goals
2. Planning, Resource Allocation, and Institutional Renewal
3. Institutional Resources

This chapter assesses how Cornell meets Standards 1–3, which we have called Institutional Stewardship. The first section, titled “Mission, Vision, and Goals,” focuses on the comprehensive strategic planning process that Cornell has undertaken in 2009–10. Faculty-led but engaging the participation of the broader Cornell community, this process resulted in a Strategic Plan that clarifies the university’s primary goals and provides metrics for assessing progress toward underlying objectives. In light of the recent economic downturn, the plan offers guidance for enhancing the university’s overall quality while focusing resources on priority areas.

The second section, “Planning, Resource Allocation, and Institutional Renewal,” discusses these matters in the context of Cornell’s status as both a private university and the land grant university of the State of New York. We outline some of the ways that Cornell assesses its functioning in these areas through specific initiatives and projects, ongoing evaluations, and responses to special situations.

In “Institutional Resources,” our third section, we describe Cornell’s revenues, expenses, assets, financial planning and budgeting, facilities master plan, and auditing, as well as the university’s resources in the form of facilities, human beings, and information technology. We also discuss how the recent financial crisis led to numerous changes—including administrative reorganization, new budget models, and new procurement

procedures—which have reduced the university’s fiscal imbalance and positioned it to accelerate investments in the future to achieve its goals.

Our final section offers recommendations for the future.

3.1 Mission, Vision, and Goals

In the past, strategic planning has been done episodically at Cornell. In 1994 a comprehensive plan was developed shortly before a presidential transition. In 2003, then President Jeffrey Lehman, with his “Call to Engagement,” began the process of developing a vision for Cornell at its 150th anniversary (2015). The 2008 Strategic Plan, conceived as a first step in a more complete process, was a top-down effort led by then Provost Carolyn (Biddy) Martin. With the financial crisis and the effort to “reimagine” Cornell, President David Skorton and Provost Kent Fuchs halted this effort and initiated a new, faculty-driven process.

The new strategic plan would be designed to capture Cornell as a whole and, for the first time, would emphasize metrics for assessing progress toward its university-wide objectives. To develop the plan, Provost Fuchs established a Strategic Planning Advisory Council, which then devised a set of questions and issues that several working groups explored in an interactive process with the Advisory Council and the senior administration over a period of several months. A draft outline was made available to the university community, and the provost and the chair of the Advisory Council held a series of meetings in every college and numerous other venues to elicit comments on the outline. This process led to a revision of the document, which was again distributed widely.

The Board of Trustees, which discussed the planning process continually, also held a well-attended daylong retreat in April 2010 specifically to focus on the plan. After small-group discussions centered on specific parts of the plan, the trustees provided input and expressed enthusiasm for the overall document and process. The board gave its final approval in May 2010.

“Cornell University at Its Sesquicentennial: A Strategic Plan, 2010–2015”¹ identifies five “umbrella” goals that are linked closely to the university’s mission and vision (described in Chapter 1, “Introducing Cornell University”). These are broad and overarching as well as timeless and enduring.

1. Enroll, educate, and graduate the most deserving, promising, and diverse student body possible. Provide all students (undergraduate, graduate, professional) with an education that is innovative, distinctive, and of the highest quality, and that inspires in them a zest for learning.
2. Maintain and enhance world leadership in research, scholarship, and creativity.
3. Maintain and enhance efforts to recruit, nurture, and retain a diverse faculty who are outstanding scholars and teachers and an excellent, diverse staff who provide outstanding support to faculty and students.
4. Strengthen the public engagement of the university's education, research, and clinical programs with local, national, and international communities, consonant with its stature as an academically distinguished private university with a public mission.
5. Establish and maintain organizational structures and processes that promote and support academic excellence.

The plan also describes five general objectives that are closely related to these goals:

1. faculty excellence
2. educational excellence
3. excellence in research, scholarship, and creativity
4. excellence in public engagement
5. staff excellence

The plan includes detailed, specific objectives under each general heading.

¹ For Cornell University at its Sesquicentennial: A Strategic Plan, 2010–2015, May 2010, see: <http://www.cornell.edu/reimagining/docs/051110-strategic-plan-final.pdf>.

3.1.1 An “Overarching Aspiration”

Included in the 2010 Strategic Plan is an overarching aspiration for the university: “to be widely recognized as a top-ten research university in the nation and world, and a model university for the interweaving of liberal education and fundamental knowledge with practical education and impact on societal and world problems.” This aspiration reflects both Cornell's stature as a first-tier, Ivy League institution of higher education and its special capacity to bridge the world of thought and ideas to the world of practice and action.

The general strategy proposed for achieving this aspiration is captured by two words: *focus* and *connectivity*. Cornell is to *focus* on strong or potentially strong academic programs that are strategically important to the university and maintain areas of excellence within each of the basic academic groupings—humanities and the arts; life sciences and agricultural sciences; physical sciences and engineering; social sciences; and professional schools. In other words, the university should create and maintain academic leadership across all of the broad areas but do so selectively and strategically within each.

Cornell also aims to build greater *connectivity* among the diverse colleges, schools, and programs around these basic academic areas by developing new integrations, boundary-crossing structures, and productive synergies. Greater connectivity implies that it will be easy for students and faculty to cross college and program boundaries in pursuit of their academic goals. The idea is to make academic boundaries at Cornell as permeable and seamless as possible.

To achieve this “overarching aspiration,” the 2010 Strategic Plan articulates seven strategic initiatives for the next five years:

1. Faculty renewal in the context of academic priorities and substantial retirements. Identify strategically important departments where the age distribution will result in a significant loss of quality over the next ten years and develop multi-year hiring plans giving priority to recruiting new Ph.D.s and “rising stars.” Use pre-fills of retirements, internal reallocation, and fund-raising to generate necessary resources.

2. Identify a few departments or fields of critical importance to the university and move them into a position of world leadership while working to prevent others from losing such stature. Identify departments on the cusp of leadership or on the verge of losing it and make proactive efforts to generate or preserve that leadership.
3. Create a culture in support of teaching in every department across campus. Improve assessments of teaching and enhance the importance of teaching excellence in the allocation of resources to departments, programs, and faculty. Identify good models for promoting a culture in support of teaching and use these as benchmarks to assess and improve teaching in other units.
4. Develop stronger connections across colleges to enhance educational opportunities for students and the quality and stature of disciplines or fields. Develop policies that encourage students in one college or campus to take courses in another, and devise new mechanisms of coordination and connectivity across academic disciplines or across colleges within a given academic discipline.
5. Implement strategically focused, cost-effective enhancements to the infrastructure in support of research, scholarship, and creativity. This includes in particular the university libraries, shared research facilities in the sciences and social sciences, and administrative support for faculty applying for or managing research grants.
6. Make significant progress toward a more diverse faculty, student body, and staff in terms of gender and race and ethnicity. Establish explicit and ambitious targets, considering appropriate pipelines and the importance of “critical mass”; enhance recruitment and retention processes; and ensure that mechanisms holding units accountable are effective.
7. Strongly connect outreach and public engagement with Cornell's areas of strength in research, scholarship, and education. Broadly redefine the outreach mission as public engagement, extend it across campus, and develop approaches appropriate to different academic disciplines or fields; strengthen the opportunities for students to “engage the world” as part of their academic work.

3.1.2 Strategic Planning in Academic and Administrative Units

Some academic units and administrative divisions have their own preexisting strategic plans that have evolved separately,² as do certain academic departments and administrative subunits. Historically, the process of developing goals in the university and its various units has not been well coordinated, so it is not surprising that there are different focal points among the plans. Since the release of the 2010 Strategic Plan, there has not been time for the colleges and other administrative units to develop their new strategic plans that reference this document. However, the provost expects the colleges to align the focus of their annual reports with the new strategic plan.

As part of the 2008 Strategic Plan, a related strategic plan was included for each college and major administrative unit. An analysis of these plans for the academic units shows that they reflect the major themes of the university's mission and goals. As might be expected, the correspondence between unit and university goals is highest for the themes that deal with the quality of the faculty and students, the quality of the educational experience, careful resource planning and stewardship, and the overall goal of discovery and dissemination of knowledge. The correspondence is lowest for themes related to producing creative work, enrolling the most deserving students regardless of background, inspiring students to be ethical and purposeful citizens, and promoting a culture of broad inquiry across the university. For a complete list of the learning goals established by each college, see Chapter 7, "Educational Offerings."

In the major administrative units, there is strong correspondence between the unit's goals and the university's mission to "enhance the lives and livelihoods of its students, the people of New York and others around the world." Unit goals also correspond strongly with the university's goal to "use careful planning, efficiencies, appropriate integration of operations, the development of new income sources, and increases in private support as the foundation of our stewardship."

² See, for example, *Orientation Manual, Weill Cornell Medical College and Weill Cornell Graduate School of Medical Sciences*, https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=558.

3.2 Planning, Resource Allocation, and Institutional Renewal

Cornell has an elaborate system of resource management that reflects the fact that it is a private university that is also chartered under the laws of New York State as the state's land grant institution. Cornell operates four colleges under contract from New York State. The geographic separation of Cornell's several campuses adds to this complexity. As a result, Cornell has two provosts, the medical provost for Weill Cornell Medical College and Graduate School of Medical Sciences and the provost for the remainder of the university.

Responsibility for university-level strategic directions and assurance of accountability ultimately rests with the Board of Trustees, although this is delegated to the president. At the unit level, responsibility resides with the provost and the medical provost as well as the several vice presidents. Although the deans and vice presidents are charged with overall management of their own areas, the provost and vice president for planning and budget oversee resource allocation on the Ithaca campus, and the Weill Cornell Medical College provost and executive vice dean for administration and finance are responsible for resource allocation at the medical college. In addition, the chief financial officer reviews operating and capital budgets on both campuses before they are finalized. Academic responsibility is delegated to the deans, who meet regularly with the provost and provide annual reports; internal and external reviews of departments (see below) also serve a monitoring purpose.

The office of Institutional Research and Planning (IRP)—situated within the provost's office and reporting directly to the vice president for planning and budget—supports the annual budgetary process and resource allocation decisions more generally by providing comprehensive information about the university and specific units to the university leadership, including the academic deans. IRP regularly engages in ad hoc analyses and new information gathering efforts (such as surveys, focus groups, or exit interviews) in order to inform strategic decision-making. Appropriately, academic leaders view statistical indicators as essential *context* for informed and intelligent resource allocation. Though complex

and varied, Cornell's budget models (described below) do not blindly couple simplistic measures directly with funding consequences.

For more information on administration and governance as well as processes for policy development, see Chapter 4, "Integrity, Governance, and Administration."

Periodic assessment of the effectiveness of planning, resource allocation and institutional renewal is quite comprehensive at Cornell. There are multiple planning processes (e.g., an individual college often has both an academic and a facilities plan; there are both capital and operating budgets; facilities planning reflects institutional and academic directions and needs). The planning process is both regular (e.g., annual and five-year capital plans, major fund-raising campaigns) and ad hoc (e.g., university-wide renewal of animal facilities, the recent Budget Model Task Force). It can be major (e.g., the Campus Master Plan) or much smaller. Finally, the periodicity of the effort varies with the nature of the activity.

Cornell periodically assesses its planning, resource allocation and institutional renewal using three different approaches: specific initiatives and projects, on-going evaluations, and responses to special situations.

Specific initiatives and projects include the improvement of faculty salaries to meet peer benchmarks (discussed in Chapter 6, "Faculty"), the development of the West Campus housing initiative (see Chapter 1, "Introducing Cornell University," and Chapter 7, "Educational Offerings"), the Campus Master Plan,³ and the ongoing capital campaign (as highlighted in Chapter 1).⁴ The West Campus initiative grew out of the recognition, articulated in Cornell's last decennial review, that the campus's living/learning environment needed improvement. The success of this system is evaluated regularly by IRP and by faculty and staff associated with the house system. Development of a facilities master plan involved a multi-year planning effort with a multi-decade implementation horizon. A capital campaign also involves years of planning before it is launched, planning that links overall institutional priorities to needs at the unit level. Planning continues during the several years of the campaign

³ <http://masterplan.cornell.edu/>

⁴ <http://www.campaign.cornell.edu/>

and may involve, as Cornell's has, changing priorities in response to changing circumstances. Development of both the capital campaign and the master plan included input from a wide variety of stakeholders.

Resource allocation for institutional renewal is also done through ongoing planning. A good example of this is how decisions are made about planned maintenance funding. Facilities Services staff identify deficiencies and corrective measures through discussions with users and unit facilities staff members, annual audits, corrective maintenance data, life-safety system inspections, and unit-driven planning efforts. Facilities Services then assesses their stewardship against national averages as well as their peer group and assigns priority for funding based on a set of criteria. The outcomes of this process are included in the process for capital planning and funding.

Another example of this approach is the repeated reassessment over the last 10 years of the university's cost-allocation model by which units are "taxed" to support the costs of campus-wide services such as utilities and roads. The objective of these reassessments was to refine the method so it would do a better job of meeting institutional needs.

Finally, resource allocation for institutional renewal is also carried out in special situations such as those created by the financial crisis of 2008–2009, which added urgency to an already-needed adjustment of the workings of the university's operating and capital budgets. The Budget Model Task Force proposed a hybrid model that includes both activity-based budgeting and discretionary budgeting to meet institutional priorities.⁵ For the capital budget, new structures, timing, and control processes have been established.⁶ In addition, Cornell is now linking its five-year financial plan to pro forma institution-wide balance sheets.

⁵ For Budget Model Task Force Final Report, Executive Summary, December 24, 2009, see:

<http://www.cornell.edu/reimagining/docs/budgetmodel-taskforce-summary-1209.pdf>

⁶For Capital Planning, see: http://www.dpb.cornell.edu/FP_3_A_Capital_Planning.htm

For Capital Project Spending Guidelines, see: http://www.dpb.cornell.edu/documents/capital_proj_spend_guide.pdf

For Managing Capital Activity, see: <http://www.dpb.cornell.edu/documents/Managing%20Capital%20Activity.pdf>

The financial crisis also led to the creation of a concerted administrative streamlining effort—described in Chapter 1, “Introducing Cornell University”—which has produced plans for substantial savings in operational expenditures. Focusing on such areas as procurement, facilities, information technology, finance, human resources, and communications, Cornell expects to save at least \$75 million annually by 2015. Implementation of the cost-saving measures is guided by the Administrative Streamlining Program in the Division of Planning and Budget. Progress is reported publicly via the website, contributing to transparent processes and explicit accountability.⁷

At the unit level, college mission statements and goals are used to fine-tune the allocation of resources among departments. They are also used as a benchmark for reporting of accomplishments and assessment of progress and needs in annual reports to the provost. In addition, some academic departments and programs—especially those that are accredited by external organizations—have their own mission statements.⁸ The use of these statements for assessment as part of the accreditation process is discussed in Chapter 8, “Assessment of Student Learning.”

A key way in which Cornell achieves its institutional goals is by hiring and retaining talented faculty and staff members with competitive compensation packages. Since the last decennial review for accreditation, Cornell set an objective of raising the salaries of both faculty and staff members to meet certain benchmarks. Aided by annual measurements of progress and adjustment of resources to stay on track, Cornell was successful in meeting its stated goals.

Cornell also strives to reward faculty for outstanding performance in order to retain them. IRP supplies information (i.e., current salaries for individuals in relevant disciplines with similar rank and time in rank) to deans to help them develop and allocate raises. In some fields, the national trend toward higher starting salaries has resulted in significant salary compression in the senior ranks—and Cornell has not been immune to this process. After an assessment of this problem at least two colleges, Arts and

⁷ <http://asp.dpb.cornell.edu/>

⁸ It was not possible to document the degree to which department-level mission statements are used for resource allocation for Cornell’s nearly 100 academic departments.

Sciences (A&S) and Agriculture and Life Sciences (CALs), responded by substantially increasing raises offered at the time of promotion so as to maintain a competitive position nationally.

The frequency of assessment of Cornell's academic and administrative units is dictated by external organizations as well as internal processes and needs. Many departments in the contract colleges are under regular review by the U.S. Department of Agriculture. Since 1996, when the Faculty Senate created the Faculty Committee on Program Review, academic departments have been subject to a formal review of their current programs, future plans, and academic standing nationally and internationally. A recent assessment of the review process, while generally positive, resulted in a number of improvements.

In addition to this formal review process, all units are continually evaluating their ability to meet their goals and making changes to improve their processes. Some units hold annual planning meetings to consider more complex academic and programmatic issues than can be handled in regular staff meetings. Academic and administrative processes within units are subject to constant ad hoc review. This kind of review has recently resulted in major improvements in course enrollment for first-semester freshmen and completion of graduation requirements for seniors in A&S, as well as in the ability of transfer students to meet the course requirements in the School of Industrial and Labor Relations.

These efforts also occur across units. For example, in 2003 a "workforce planning" process was used to review administrative processes within the academic and central service units. To increase compliance, accuracy, and quality of service, the university created "business service centers" in each college and within the administrative departments. These centers have established consistent practice and training for staff engaged in financial and human resources transactions. This consolidation is continuing to advance through Reimagining Cornell and the efforts overseen by the Administrative Streamlining Project.

3.3 Institutional Resources

In support of its core academic missions, Cornell fosters adherence to principles of good stewardship at all levels of the university. These principles include a commitment to protect and enhance the reputation of the university, an understanding of priorities and responsibilities at an organizational and an individual level, an appropriate respect for shared governance and collaborative decision making, and a commitment to open communication and transparency in planning, priority setting, and decision making. Given the aspirations described in the 2010 Strategic Plan, excellence in the stewardship of institutional resources is essential.

Below we consider first revenues, expenses, and assets and then financial planning, budgeting, the Campus Master Plan, and auditing. Next we discuss facilities, human resources, and information technology.

3.3.1 Revenues

Cornell has several important sources of revenue: tuition, appropriations from New York State and the U.S. government, contributions, payment from its endowment, income from the physicians' practice associated with Weill Cornell Medical College, and overhead from grants and contracts as well as from other enterprises (Figure 3.1). In fact, Moody's Investors Services describes Cornell as "possibly the most diversified private university in the U.S. from an operating perspective, with six separate revenue sources each comprising at least 9% of revenues."⁹ Between FY2000 and FY2010, operating budget revenue increased by nearly \$1.3 billion. The largest contributors were educational enterprises, the physicians' practice, and grants and contracts. Contributions dropped from 16% to 6% of revenues during this period, while the proportion of revenue from educational enterprises and the physicians' practices both increased—from 8% to 14% and from 15% to 19%, respectively (Figure 3.2). This comparison coincides with a particularly strong year of fund-raising in 2000, while recent years have been weak as a result of the

⁹ "Moody's assigns Aa1 ratings to Cornell University's \$305 million of Series 2009A revenue bonds and \$500 million series 2009 taxable bonds; outlook is stable." Moody's Investors Service, Global Credit Research, 3/25/09.

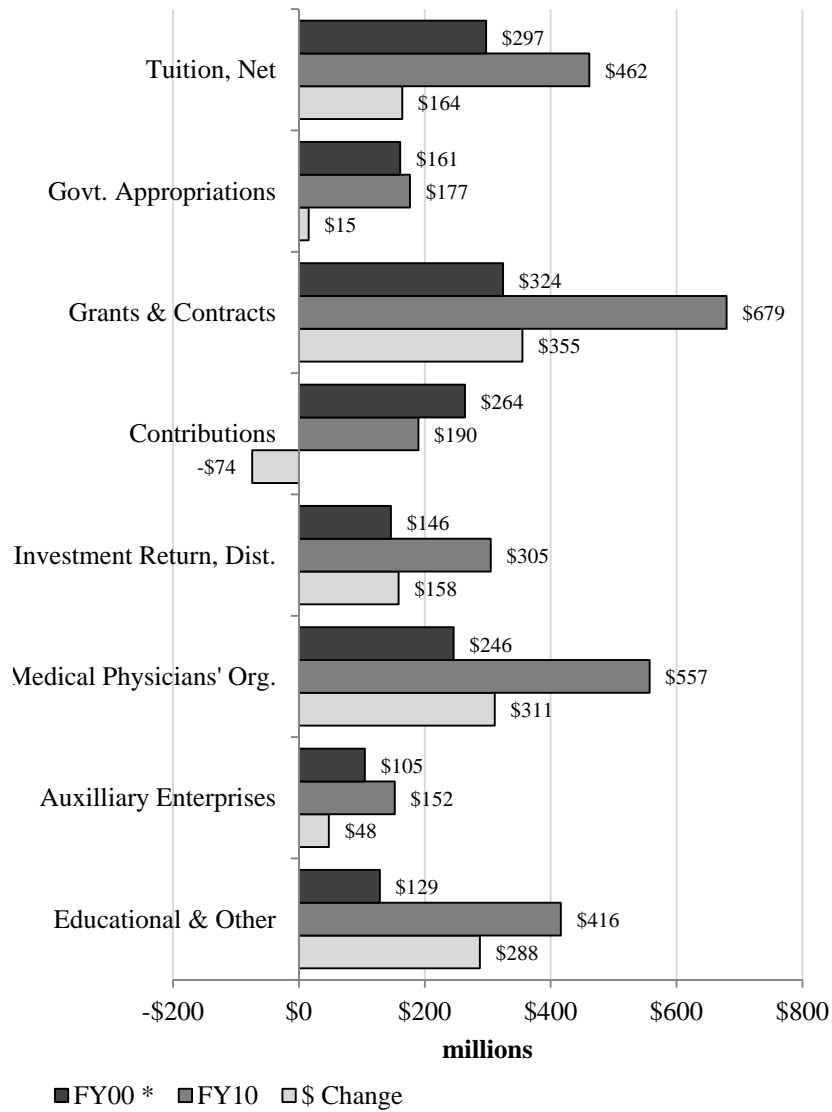
recession. Before 2009, two of the preceding three years had record-breaking fund-raising totals as part of our current campaign, which is continuing toward its \$4 billion goal.

Cornell first set the priorities for its current capital campaign by using a complex process that included input from numerous stakeholders, with resolution of competing opportunities at the highest level of university administration. Since then, major external and internal changes (e.g., the economic crisis, competition in higher education relative to undergraduate financial aid, and experience with donors' giving preferences) have led to further refinement of the campaign goals. The current goals, which were developed with a less extensive review by campus constituencies, are given in Chapter 1, "Introducing Cornell University." Continued areas of focus include faculty renewal as well as scholarship and financial aid.

The Ithaca campus and Weill Cornell Medical College (WCMC) contributed 64% and 36% of the university's \$2.92 billion in revenues, respectively, in FY2009. Since FY2000, the proportion of the revenues contributed by the Ithaca campus has decreased while that of WCMC has increased (from 29% to 36%).

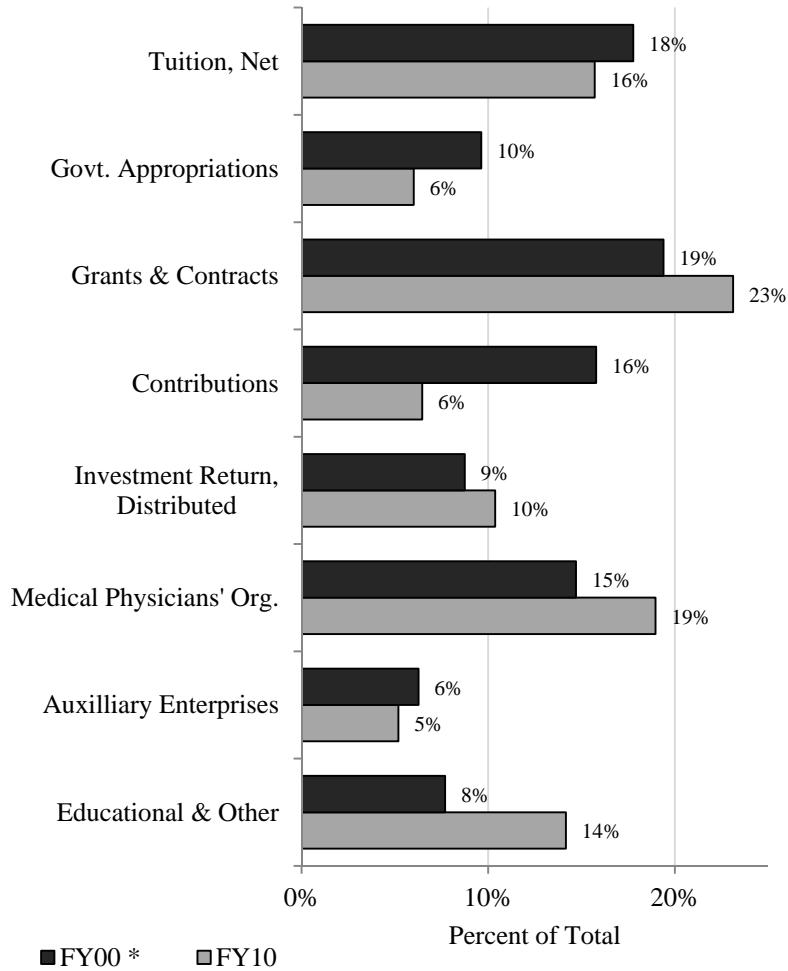
A more detailed examination of revenue sources reveals a substantial relative reduction in appropriations from New York State (from 9% to 6%) between FY2000 and FY2010 (Figure 3.3). At the same time, there was a relative increase in revenues from the physicians' practice (from 14% to 18%) and other sources (from 5% to 7%). Trends in sponsored research are further described in Chapter 6, Faculty.

Figure 3.1. Cornell University operating revenues (in millions),
 FY2000, FY2010, and the difference between them



*FY00 Restated to new financial statement format

Figure 3.2. Cornell University's proportional distribution of operating revenue: FY2000 and FY2010



*FY00 Restated to new financial statement format

3.3.2 Expenses

Cornell's major categories of operating expenses include instruction, research, the physicians' practice, institutional support, and academic support (Figure 3.4). Between FY2000 and FY2010, operating budget expenses increased by \$1.26 billion. The largest increases in expenses during this period were in the physicians' practice, instruction, and institutional support. As a result, institutional support and the physicians' practice became a greater proportion of expenses (from 10% to 12% and from 15% to 22%, respectively) while research decreased from 23% to 20%

of expenses (Figure 3.5). Expenses closely track revenues, so that the changes among the major divisions in the proportion of expenses between FY2000 and FY2010 are similar to those described above for revenues.

Figure 3.3. Cornell University's proportional distribution of operating budget revenues: FY2000 and FY2010

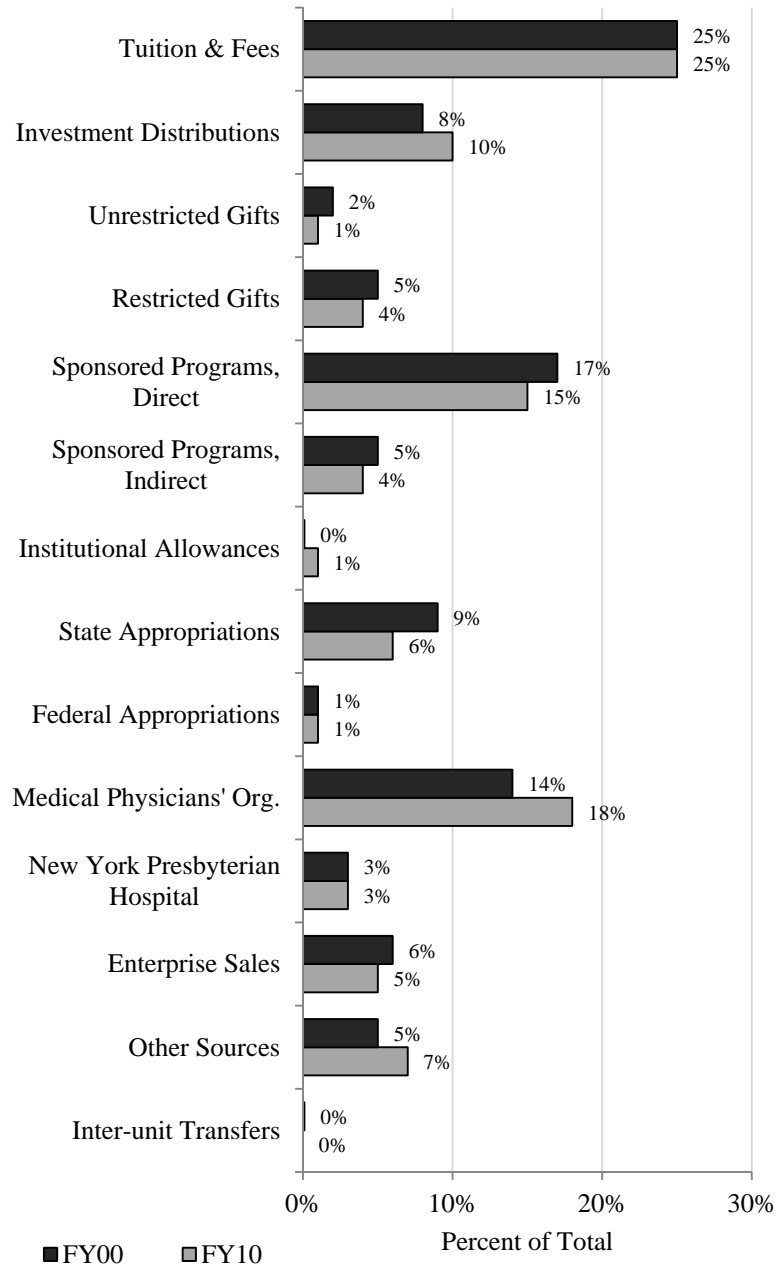
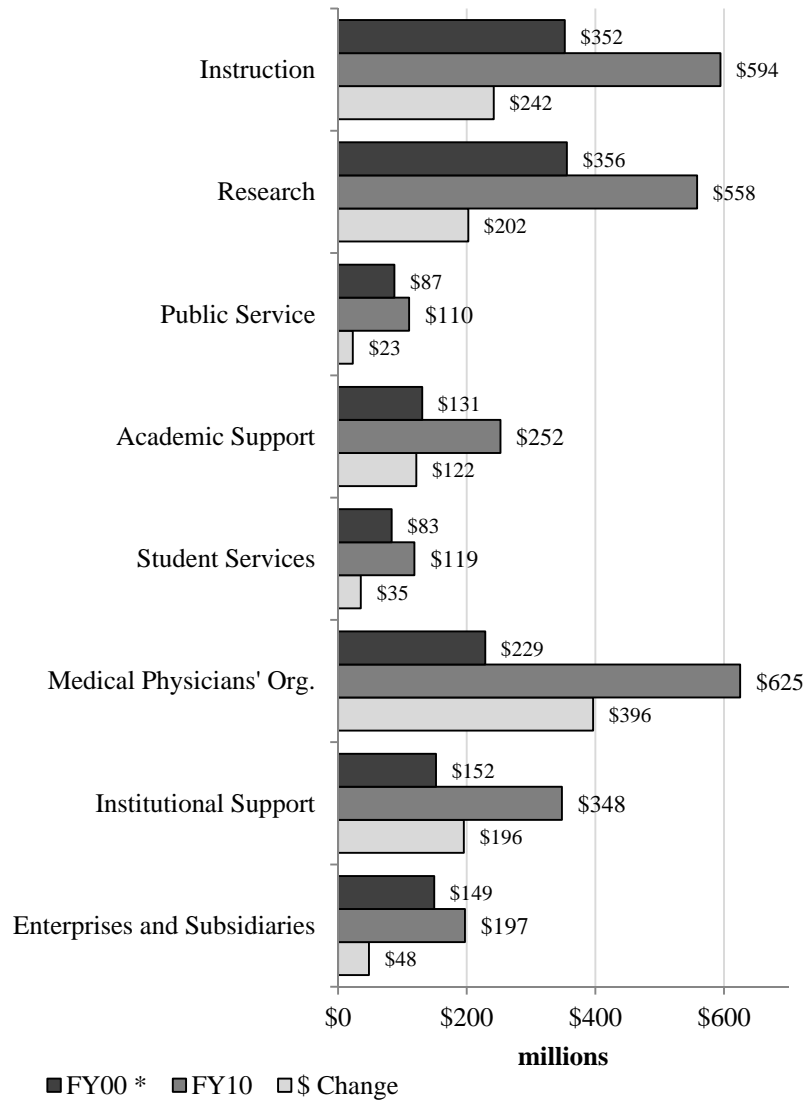
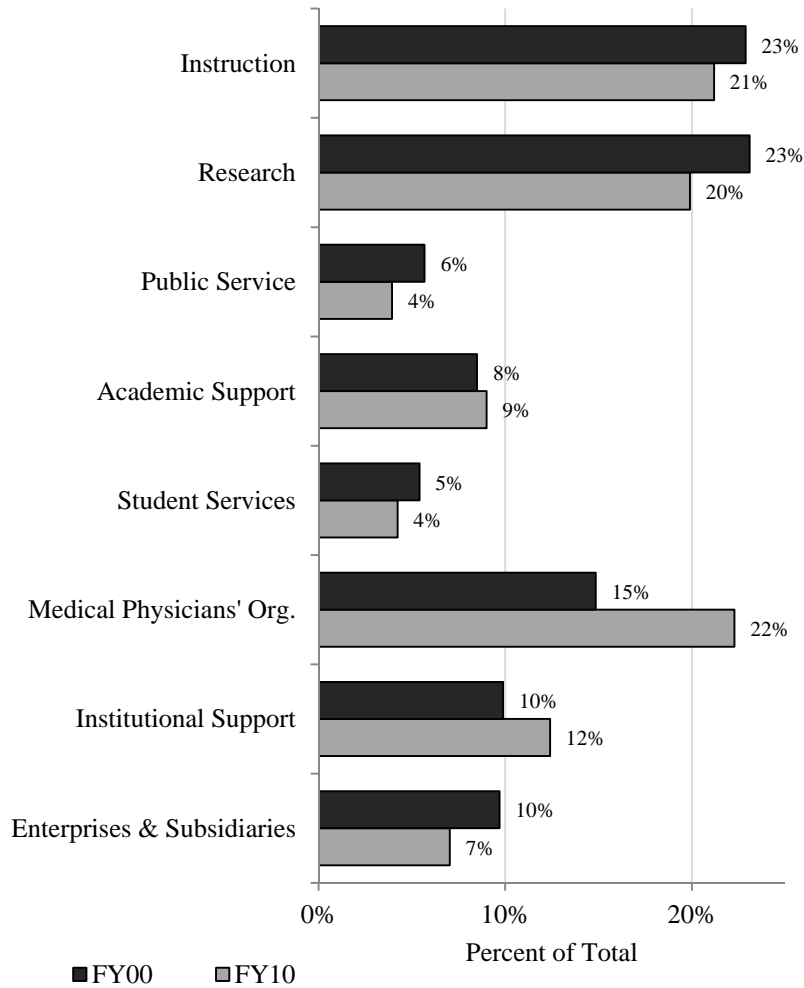


Figure 3.4. Cornell University's operating expenses (in millions): FY2000, FY2010, and the difference between them



*FY00 Restated to new financial statement format

Figure 3.5. Cornell University's proportional distribution of operating expenses: FY2000 and FY2010



*FY00 Restated to new financial statement format

3.3.3 Assets

The university's net assets increased from \$5.27 billion to \$8.04 billion from 2000 to 2008, but declined 24.5% with the recent fiscal crisis to \$6.07 billion in 2009. This decline resulted from a combination of decreased endowment value and increased liability as the university took on \$800 million in bonds to meet anticipated cash-flow needs. With the stock

market's recovery, the university's net assets improved by 10.3% in FY2010.¹⁰

3.3.4 Comparison to Other Institutions

Cornell benchmarks its financial health to that of other, similar institutions using the expendable resources to debt ratio ("viability ratio"). This indicates whether an institution has sufficient expendable net assets to meet its debt obligations. It may also indicate at what point the financial burden of taking on new debt outweighs the strategic values added to achieve the institutional mission. Although a ratio of 1.0 or higher signifies sufficient expendable resources to meet debt obligations, an institution can operate with a ratio less than 1.0. This ratio is strongly related to the institution's bond rating and, thereby, to the cost of borrowing money. For example, in FY2009, Cornell's ratio was about 1.3 (bond rating of Aa1) while that of Harvard, the highest in the Ivy group, was closer to 4.0 (bond rating of Aaa).

America's universities differ vastly in wealth, and some of the wealthiest are in Cornell's benchmark group. The total resources of each institution in the group ranged from \$1.9 to \$42.8 billion in 2008. Cornell's total resources, \$6.22 billion, were similar to those of Emory, Northwestern, the University of Chicago, and the University of Pennsylvania but were below the median of the benchmark group as a whole. There were also vast differences within the benchmark group in terms of the ratio of unrestricted resources to operating expenses; Princeton far outdistanced the rest with a ratio of 13.22. Here also Cornell was below the median with a ratio of 1.24. Cornell's operating structure, as a land grant university with four state-supported colleges, is also different from its peers. As a result, Cornell's ratios tend to be higher than those of other public land grant universities and lower than those of its Ivy League peers. The slightly lower financial ratio is offset by the diversity of Cornell's revenue streams which include some state appropriations.

¹⁰ For more information, see: *Statement of Financial Position at June 30, 2010* and *Statement of Activities for Year Ended June 30, 2010*, https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=542 and https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=543, respectively.

At present, Cornell's balance sheet is stressed; with active management, however, the institution has not retreated from its core mission of providing an affordable education. Cornell has enhanced financial aid packages while making cuts elsewhere to balance the budget.

3.3.5 Financial Planning and Budgeting

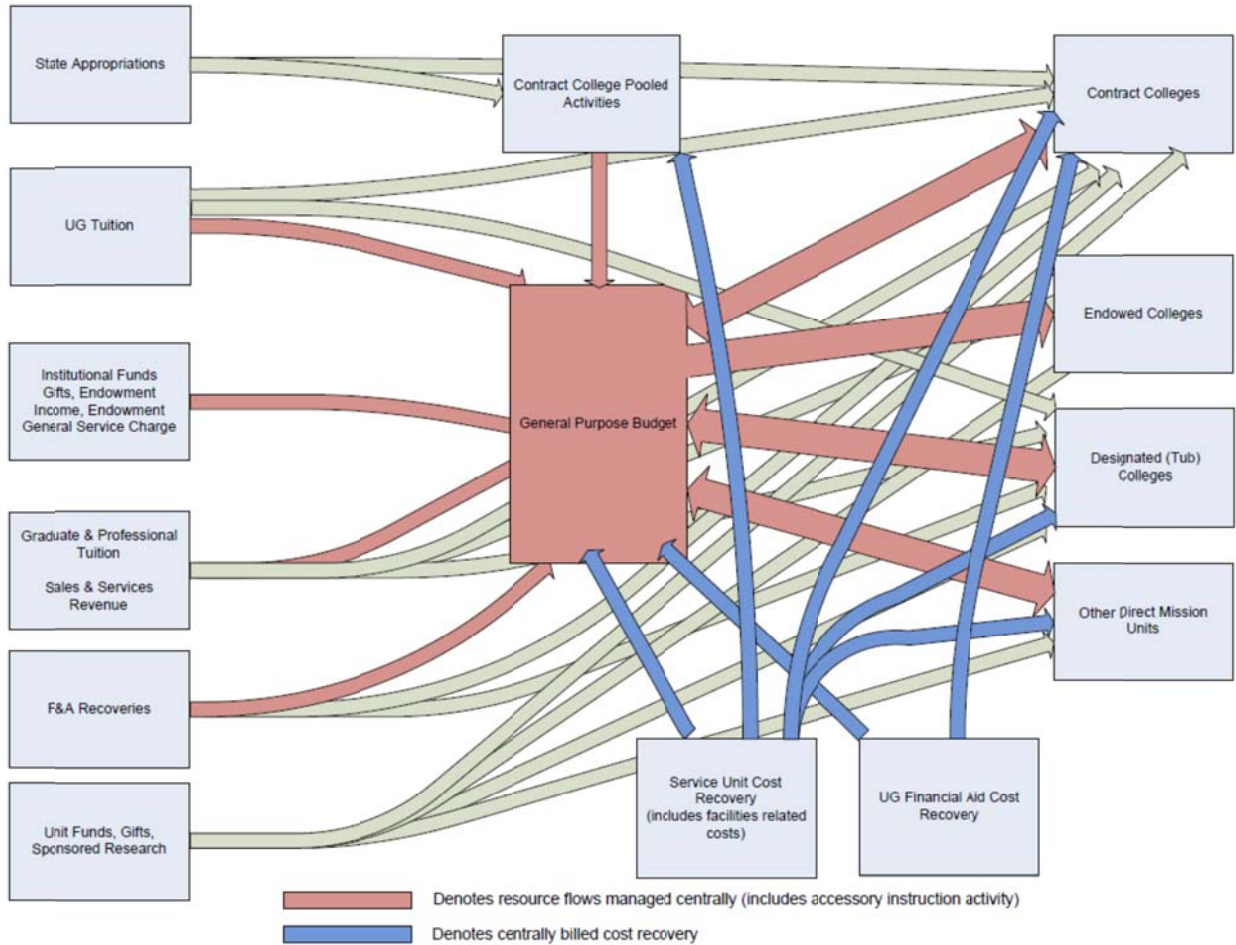
In its tradition of decentralized authority, Cornell has long operated with a complex set of policies and procedures for managing its revenues and expenses. Several budget models are currently in use across the Ithaca campus, with some units using multiple models. The primary models are

- **General purpose.** Funding source for the three general purpose colleges (Engineering, Arts and Sciences, and Architecture, Art, and Planning) and for the Graduate School. The GP budget also provides initial funding for institutional administrative and support costs and undergraduate financial aid that are subsequently distributed to and recovered from the major revenue producing activities.
- **Contract colleges.** Revenues (such as tuition dollars) generated by the contract colleges are distributed directly to each college. State appropriations are allocated to each college based on the decisions of the provost. New York also directly funds employee benefit costs for the contract colleges as well as major capital investments, which are provided through the State University Construction Fund.
- **Designated colleges.** This group includes the School of Hotel Administration, the Johnson Graduate School of Management, and the Law School. Revenues generated by each of these colleges are distributed directly to each college. Unlike the other colleges, the Johnson School and Law School establish their own tuition and enrollment levels.
- **Auxiliary enterprises.** Includes housing and dining operations (Campus Life) and Campus Store. Revenues earned are held directly by each.

- **Recharge operations.** These units receive a major portion of their resources through internal billings for services provided. Cornell Information Technologies and Facilities Services are the largest of these.

Figure 3.6 illustrates the flow of resources in this complex system.

Figure 3.6. Flow of resources under current budget model, Cornell University



Two examples of this complexity are the transfer of costs from college to college for “accessory instruction” (courses taken in a college other than the student’s home college) and the university administrative overhead charge paid by most colleges and administrative units.

The recent fiscal crisis caused the university to reexamine its practices in detail and resulted in numerous changes. These included a high-level administrative reorganization, with elimination of the position of

executive vice president for finance and administration and having the chief financial officer now report directly to the president. In addition, new financial controls were implemented, such as requiring the chief financial officer to approve the budgets of both the Ithaca and WCMC campuses before they are presented to the Board of Trustees.

Recently, new guidelines for capital planning and budgeting were approved, with the inclusion of capital projects in the annual budget and five-year planning cycles.¹¹ As a result, capital budgeting is now part of the overall university budgeting process along with the development of the operating budget. In addition, a Budget Model Task Force was charged to recommend changes to the operating budgeting process as a whole, in recognition that the multiple and complex financial models and structures made it difficult to understand, manage, and support effective planning. The complexity contributed to the failure to maintain a balanced and sustainable operating budget.

The task force proposed¹² a number of substantive changes, chief among them the implementation of a single budget model for the entire Ithaca campus. The parameters for such a budget model are that it be data-informed, transparent, involve accountability throughout the organization, align fiscal responsibility with budgetary activity, empower deans and other campus leaders, and create an adequate institutional resource pool for priority investments.

At the core of the Budget Model Task Force recommendation is that most revenues and expenses are attributed directly to the unit responsible for the activity, with the critical exception of undergraduate tuition, as undergraduate instruction involves cross-college activity and centrally determined enrollment and tuition levels.

Changes of such a comprehensive scope could be far-reaching, and campus conversations on the future of the budget model continue.

¹¹ http://dpb.cornell.edu/documents/capital_proj_spend_guide.pdf

¹² https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=182

3.3.6 Campus Master Plan

Cornell's campus is strikingly beautiful and has state-of-the-art research facilities. With the goal of maintaining the best of this environment and developing it to meet future needs, the university created a detailed and forward-looking Campus Master Plan for the Ithaca campus and surrounding areas, which projects development over a 30- to 60-year period.¹³ The Board of Trustees initiated the planning process in 2005 when, with new development on the campus increasingly constrained, Cornell determined it needed a vision and strategy for the best use of the university's lands. After a period of intense work, conducted with the assistance of consultants and broad campus discussion, the plan was adopted by the Board of Trustees in 2008. The Master Plan provides the university with an integrated framework to guide its long-range physical development. This document articulates a vision for development, captured in six words to describe the essence of the future campus: "open, green, compact, integrated, connected and engaged."

Driven by academic planning priorities, the Master Plan provides guidelines for decisions about where to locate the university's research, teaching, residential, and recreational priorities and programs. It also offers a campus-wide frame of reference for the university's current capital plan and links local and precinct plan goals to the broader plan. The Master Plan also draws upon previous physical planning efforts, including the 1989 campus plan and precinct plans as well as the Comprehensive Policies for the Physical Planning and Design for the Ithaca Campus from 1989 and 1972.

3.3.7 Auditing

As a large research institution, Cornell University is audited extensively by many audit organizations. In addition to its own University Audit Office staff of 13 audit professionals, Cornell is subject to a financial statement¹⁴ and an OMB Circular A-133¹⁵ audit performed by

¹³ <http://masterplan.cornell.edu/>

¹⁴ For the 2009 audit, see: <http://www.dfa.cornell.edu/dfa/cms/accounting/reporting/annualstatements/upload/cufinancialrept0809.pdf>

PricewaterhouseCoopers LLP. The firm also performs the required NCAA “agreed upon procedures” audit. The minority-owned CPA firm TCBA Watson Rice conducts audits of the Cornell subsidiaries and all Cornell retirement plans. The four contract colleges at Cornell are subject to audits from SUNY and the New York Office of the State Comptroller. Cornell’s federal audit agency is the Department of Health and Human Services, although all granting agencies send auditors to review Cornell’s policies, procedures, systems, grants, and contracts. Cornell has been selected as one of 40 colleges and universities being reviewed as part of the Internal Revenue Service’s Colleges and Universities Compliance Project. Cornell is also undergoing a routine IRS benefit review.

Cornell has a very active and engaged Audit Committee of the Board of Trustees, which meets five times per year. All members are external to the university and are charged with the oversight of the external and internal audits, internal controls, conflicts of interest, and various risk areas including research, physician billing, and information technology security.

3.3.8 Facilities Resources

Project planning and execution, energy management and delivery, and maintenance as well as building and grounds care for the Ithaca campus are all provided by the 850 staff members of Facilities Services. This staff, which includes design professionals, building trades people, custodians, maintenance mechanics, and managers, is characterized by long service and exceptionally low turnover (7% compared to 25% in comparable operations elsewhere).

On the Ithaca campus alone, 750 facilities occupy 15.9 million gross square feet of space, 9.5 million of which is assigned for programmatic use (21% of this is used for research). The average age of these facilities is 50 years, and 56% of the space has not been renovated within the last 25 years. To remain functional, the 0.5 million square feet of research space that is more than 20 years old will require renovation in the near future. The Ithaca infrastructure also includes 38 miles of sidewalks and streets, 11 bridges,

¹⁵ For the 2009 audit, see: http://www.dfa.cornell.edu/dfa/cms/accounting/topics/sponsoredfinance/upload/cu_act_A13309.pdf

and 90 acres of parking lots. In total, the Ithaca facilities resources are valued at \$4.5 billion.

The economic recession, combined with Cornell's own financial challenges, has substantially reduced approved capital activity (down from \$1.95 billion in FY 2009 to \$1.43 billion in FY 2010) combined with one-time maintenance reduction of 35% as a result of a "pause" in new capital activity. Unfortunately, Cornell's ongoing funding for maintenance is only about 33% of the industry-accepted annual target of 1.5% of replacement value, and it is expected to remain low in the near future. The university has developed a prioritization process as part of its annual capital planning process to address the most urgent and critical needs first.

In this environment capital planning cannot be focused primarily on specific projects; it must pay attention to the fabric and function of the campus as a whole. Factors that influence or are affected by campus facilities include the need for infrastructure (e.g., utilities, transportation, parking, and service); the provision of indoor and outdoor public spaces; the campus landscape and preservation and treatment of open spaces; efficient utilization of space; the aesthetics of design; financial tradeoffs between facilities needs and other campus priorities and initiatives; fundraising capacity and priorities; the availability of educational, research, and outreach support from New York State, the federal government, and private resources; debt capacity and repayment burden; and operating and maintenance costs. Cornell has formal processes for deciding what to build and when.¹⁶ It also maintains a detailed list of capital projects that is reviewed several times annually by the Buildings and Properties Committee of the Board of Trustees.¹⁷

Management of Cornell's facilities is unusually complex because the Ithaca campus alone involves four different municipalities—each with different requirements and processes for building permits and inspections—and must be responsive to the needs of the State of New York in the

¹⁶ For a description of the facilities priority planning process, see: <http://dpb.cornell.edu/documents/1000448.pdf>, http://dpb.cornell.edu/documents/capital_proj_spend_guide.pdf and <http://dpb.cornell.edu/documents/Managing%20Capital%20Activity.pdf>

¹⁷ For a list of current projects, see <http://dpb.cornell.edu/documents/1000448.pdf>.

management of the facilities of the four contract colleges in addition to the needs of the endowed units.

Cornell has long been involved in energy conservation and is recognized nationally for its leadership in transportation management, which has led to a coordinated, county-wide transportation system and no growth in the demand for parking during a time of substantial university expansion. In this growth period, the university's energy purchases have also remained flat as a result of two innovative energy conservation projects: Lake Source Cooling and the Cornell Combined Heat and Power Project, which together have reduced Cornell's greenhouse gas emissions by 30%. Lake Source Cooling uses the cold water of Cayuga Lake as a heat exchanger to provide year-round, campus-wide cooling. The Combined Heat and Power Project has replaced a coal-fired plant with gas turbines that use natural gas for electricity and waste heat for steam generation. This project allows Cornell to significantly reduce its reliance on obtaining electricity from the grid and will reduce Cornell's total carbon emissions by 20%, a major contribution to the university's Climate Action Plan.

3.3.9 Human Resources

The strength of any academic institution is in the quality of the faculty, staff, and students that it attracts, and Cornell has long understood this premise. The recruitment, retention, and development of the faculty and staff are institutional priorities.

Cornell continues to be recognized with national awards for workplace quality. For example, in the first quarter of FY2009, Cornell was placed on the *Chronicle of Higher Education's* "Great Colleges to Work For" list, *Working Mother* magazine's "100 Best Employers for Working Mothers" list, and AARP's list of "50 Best Employers for Workers Over 50," where Cornell placed first. Cornell was also recognized by *Conceive* magazine for prospective parents (second time in a row), the Dave Thomas Foundation for Adoption's "Top 100 Adoption-Friendly Workplaces" (third consecutive year), and *ComputerWorld's* "Best Places to Work in IT" (third consecutive year). Cornell also placed as one of the top universities in diversity for *Diversity Inc's* inaugural recognition of universities

addressing diversity.¹⁸ These awards provide recognition for the work that Cornell has put into creating a supportive workplace. The actions that the university has taken to earn these awards include opening a new childcare facility for the children of faculty, staff, and students; flexible work policies; state-of-the-art wellness facilities; generous leave benefits; and a panoply of benefit services to meet the needs of employees at all life and career stages.

In response to the economic downturn, the Office of Human Resources recently had to shift much of its focus from recruitment to workforce realignment while working to retain its top faculty and staff members. Offering a Staff Retirement Incentive in 2009 reflected one of HR's core values ("treat all employees with dignity and respect"), and allowed 432 staff members to retire voluntarily. This significantly reduced the number of individuals who had to face involuntary reductions and layoffs. Cornell also instituted an internal hiring process so that those whose positions were eliminated would have easier access to reemployment possibilities within the campus, and hired professional outplacement services to assist staff members in finding employment outside Cornell.

Staff performance is reviewed annually, but the nature of the process has varied considerably by unit. In a 2008 HR-run leadership development program called Leading Cornell,¹⁹ a group of staff from across the campus undertook a full and careful review of performance evaluation practices. The group's recommendations formed the basis of changes to performance review guidelines. Proposed revisions were piloted in four areas of the campus in 2009 and reviewed and adjusted on the basis of that experience. The new guidelines for staff performance review will be rolled out across campus by 2011. The result will be a more uniform process promising clear feedback to all staff about their achievement of work goals and their own professional development.²⁰

¹⁸ For the Division of Human Resources Annual Report, see:

http://www.hr.cornell.edu/about/annual_report.pdf.

¹⁹ http://www.hr.cornell.edu/life/career/leading_cornell.html

²⁰ http://www.hr.cornell.edu/life/career/performance_management.html

Professional Development

To help ensure that staff members have the skills and abilities to perform their jobs well, the university offers numerous courses to advance skill development.²¹ These range from brief on-line courses—hundreds of which are available through “Skillsoft”—to intensive, multi-day workshops in leadership development, such as the Harold D. Craft Leadership Program. The Department of Environmental Health and Safety offers general and specific training courses for all employees, for those engaged in laboratory research, for general services and trades workers, and for administrative and office professionals. In addition, the Division of Financial Affairs offers training in university financial management, and eCornell offers on-line courses in business skills, supervision, and a number of hotel and restaurant topics—some of which lead to certification.

Recognizing that the ability to navigate Cornell is a valuable component of human capital among employees, the Office of Human Resources has sought to increase the exposure of staff to different parts of the institution through enhancing opportunities for internal career mobility. In support of this effort, HR’s on-line job applications system, Taleo, tags and tracks internal applicants as a category of special interest. Human Resources has also become more involved in succession planning; given current demographic trends, it appears that many of the university’s best employees will retire within the next decade.

Beyond the efforts of the central Office of Human Resources, some units have created their own career development programs. For example, the Division of Campus Life (encompassing residential programs, dining, and conference services) has introduced an internship program to give workers a chance to learn and experience administrative jobs. The hope is to develop employees’ skills as they move within the department and into the broader Cornell community.

The university has also made significant investments in fostering the more general educational aspirations of staff members. For example, through a partnership among the United Auto Workers, the Office of Human

²¹ Courses are listed at: http://www.hr.cornell.edu/life/career/professional_development.html

Resources, and the Department of Communication, employees who are pursuing GEDs or otherwise working to improve their reading and writing skills receive mentoring from students in communication.²² The university also has a program that allows qualified employees to earn Cornell University degrees—undergraduate or graduate—at no cost to the employee. Currently about 25 staff members are working toward an undergraduate degree and 149 are working toward graduate degrees through the Employee Degree Program.

For information on the faculty—quality, evaluation, career development, and diversity—see Chapter 6, “Faculty.”

3.3.10 Information Technology

As in other universities, Cornell’s IT services have developed in response to unit and administrative needs in a relatively uncoordinated fashion. This evolution, combined with Cornell’s decentralized structure, has led to a complicated governance structure; a lack of clarity in roles, responsibilities, and decision rights; and a lack of strategic management of IT resources in support of well-articulated and defined goals—problems that are recognized by the university’s IT leadership. Cornell spends about \$40 million per year on its information technology operation. About \$28 million of this is for application development, enhancement, and maintenance, but the quality of these applications is uneven. The remaining \$12 million is for end-user support to faculty and staff. Cornell spends about twice as much as its peers on desktop support. An analysis by outside consultants indicated that substantial cost savings could be achieved by leveraging economies of scale and standardizing infrastructure.

To this end, Cornell’s information technology unit has recently developed a vision statement: “The Cornell IT community will function in a unified manner in the delivery and maintenance of academic, administrative and general campus IT services. The most appropriate standards, processes and procedures will be followed to meet the priorities of the university by

²² <http://vivo.cornell.edu/all/individual/vivo/CommunityLearningandServicePartnershipCLASP>.

using the most secure, efficient and effective means possible.”²³ This statement was developed in response to constrained financial resources and in the context of a change in leadership. It is recognized that achieving this vision will require a change in both the culture and environment in which IT support is provided at Cornell. To this end, a five-year (2011–2015) plan has been developed with specific, sequential steps to address the identified problems.²⁴

In November 2010, Cornell appointed a chief information officer and vice president after a rigorous nationwide search for leadership. This position is a new one for Cornell and is a key part of the university's vision for coordinated campus-wide IT strategy and service delivery.²⁵

3.4 Recommendations

3.4.1 Planning, Resource Allocation, and Institutional Renewal

Cornell University has a compelling “overarching aspiration” and an ambitious, integrated strategic plan by which to reach this aspiration in the near future. With regard to institutional stewardship, the plan promotes several important goals. In support of this, we recommend

- that Cornell develop a more coordinated approach to planning, following the guidelines in the new strategic plan, which is designed to achieve several important goals: (1) to affirm general guidelines for organizational stewardship, (2) to make continual improvements in the stewardship of financial resources, (3) to promote effective stewardship of the built and natural environment, and (4) to provide cost-effective infrastructures for information technology.

²³ For the Cornell Initiative on Information Technology, see: http://www.cornell.edu/reimagining/docs/20100512_info_tech_vision.pdf.

²⁴ Ibid.

²⁵ <http://www.news.cornell.edu/stories/Nov10/InfotechChief.html>

3.4.2 Institutional Resources

Cornell's vast infrastructure includes numerous state-of-the-art facilities but also includes many older facilities for which maintenance and renovation funding is below the industry standard. We recommend

- that Cornell develop a plan to refurbish campus facilities, identifying clear priorities and assigning funding responsibility, sources, and time frame for these needs;
- that the university develop its campus infrastructure for the future according to the precepts of the Campus Master Plan.

4. Integrity, Governance, and Administration

Standards:

4. Leadership and Governance
5. Administration
6. Integrity

The first section of this chapter, “Leadership and Administration,” outlines administrative and governance structure and policies, and describes how different constituent groups participate in policy development and decision making. The core leadership and governance structures of the university easily span college boundaries and frequently adopt explicit policies for ensuring broad constituent representation. While decision-making authority is formally vested within the university hierarchy, administrative reporting structures are in productive dialogue with elected or appointed representatives, such as the Student Assembly and the dean of the university faculty.

Drawing on the 1940 address of Carl Becker, the Cornell community speaks often of freedom with responsibility as a foundational principle. The second section of this chapter, “Integrity,” describes several of the university’s formal policies that represent thoughtful efforts to make these responsibilities explicit. Regarding breaches of policy, enforcement efforts seem to provide adequate protection for all involved.

Finally, in “Recommendations,” we offer suggestions for improvement in specific areas but conclude that the essential administrative structures described in this chapter largely reflect an appropriate “one university” approach.

4.1 Leadership and Administration

4.1.1 Board of Trustees

Cornell University has a large, active, and widely representative Board of Trustees. The structure of the board reflects a conscious effort to embody the diverse nature of Cornell's educational mission and constituencies.¹

Thus, the board's bylaws state that the 64-member board shall include the New York State governor (one of four *ex officio* but voting members); three trustees appointed by the governor; members selected to represent the fields of agriculture, business, and labor in New York State; eight elected from and by the alumni; two elected from and by the faculty; two elected from and by the students; one elected from and by the nonacademic staff; as well as the eldest lineal descendant of university founder Ezra Cornell.

Most trustees are elected for four-year terms. Once elected or appointed to the board, all new members receive the annually produced *Trustee Orientation Notebook* and engage in annual orientation activities with the chairperson of the board, the secretary of the corporation, and members of the administration. A follow-up to this orientation occurs seven months later.

Because Weill Cornell Medical College's distance from Ithaca poses challenges to communication and shared decision making, in 1980 the Board of Trustees created a separate Board of Overseers with certain delegated powers regarding the Medical College and Graduate School of Medical Sciences.² The Board of Trustees retains ultimate governance authority over Weill Cornell, but the Board of Overseers is more actively engaged with day-to-day operations.

Like the Board of Trustees, the Board of Overseers achieves shared governance through broad representation. There are five *ex officio* members (including the president and chair of the Board of Trustees) as well as ten university trustees, one full-time Weill Cornell faculty member, one member of the voluntary faculty of Weill, one medical student, and

¹ See the University Charter, Bylaws and a description of the Board of Trustees:

<http://www.cornell.edu/trustees>.

² <http://www.med.cornell.edu/about-us/board-of-overseers.html>.

two members of the board of New York–Presbyterian Hospital (Weill Cornell’s primary teaching hospital affiliate). The overseers also elect 50 public members drawn primarily from the greater metropolitan New York City area; this group includes alumni, medical educators, community partners, and donors, among others.

Members of the Board of Trustees see their role as supportive of the president and senior officers, and this support is crucial to the proper function of the university. The board expects the president to serve as the visionary, leader, manager, and spokesperson of the university. The board therefore avoids second-guessing the president and expects faculty, staff, and students to view the president as the person with whom business is done.

The board continually considers how best to evaluate its own effectiveness, working with Cornell’s secretary of the corporation to compare and benchmark against our peers through the Association of Board Secretaries. In addition, the board solicits input and feedback on an ongoing basis. For example, the board receives annual reports from the various college councils and the assemblies, and its Community Communications Committee facilitates communication with the campus and the larger community. The board also sets aside time for open dialogue at each board and Executive Committee meeting.

As part of its self-examination, the board and university administration periodically review whether representation on the board is sufficient, and whether the numbers of board members from the staff, student, and faculty constituencies are appropriate. Thus, the Committee on Board Membership, in consultation with university officials and board leadership, recently identified areas that could be better represented on the board,³ including fiscal/development abilities, ethnic diversity, and specific areas of academic and/or administrative expertise. Discussions in 2006 also resulted in a provisional change from two students to one undergraduate student and one graduate/professional student in order to ensure adequate representation.⁴

³ <http://www.cornell.edu/trustees/committees.cfm>

⁴ This change came up for review in 2010; a vote on whether to make it permanent is likely in 2011.

The open input style of board leadership was reflected in the last two searches for a new university president (2002 and 2005). In both cases, search committees included a broad array of constituents: trustees, students, faculty, and staff. Open fora on campus and elsewhere solicited broad feedback.⁵

In order to increase transparency and communication, Cornell's current leaders have asked the deans of the various colleges—in addition to members of the central university administration—to attend all board meetings. The Executive Committee of the board also meets annually with the deans of the colleges and schools for frank exchange about governance, strategic planning, and the overall mission of the university. The dean of the faculty has attended board meetings regularly for decades and has often played an important role in helping the administration and trustees work through issues involving faculty.

The board has frequently scrutinized and altered its governance structure, which involves a number of standing committees. For example, reviews commissioned by the board have led to decisions to allocate more authority to the Board of Overseers (1996), add the Finance Committee (1999), reconstitute the Investment Committee (2002), and split the Academic Affairs and Student Life Committee into two separate standing committees (2005).

The most recent of these reviews, launched in March 2010, included this introductory statement in its charge document: "In keeping with the trustees' prudent practice of undertaking such governance structure reviews—and mindful of the Middle States Accreditation Commission's imperative that governing boards should periodically evaluate their effectiveness—the chairman and the president have formed a task force to review the roles and relationships of and among several subordinate committees." The resulting "Report of the Task Force on Board Governance," adopted by the full Board of Trustees in October 2010, contained six recommendations, including a clarification of the review

⁵ For example, <http://www.news.cornell.edu/stories/Aug05/Search.meetings.html>

processes for annual and five-year capital budgets and discrete capital projects.⁶

4.1.2 University Assemblies

Cornell University is committed to the ideals of shared governance and constituent representation, and expresses this commitment through a set of formal representative bodies together known as the assemblies.⁷ Five assemblies, four of which represent specific constituent groups, meet on the Ithaca campus. The fifth—the University Assembly—is an overarching group that includes representation from undergraduate students, graduate/professional students, faculty, and staff on the Ithaca campus:

- **Student Assembly.** Comprised of 23 elected undergraduates, the SA includes representatives from each undergraduate college and includes seats that represent first-year students, transfer students, minority students, international students, and lesbian, gay, bisexual, transgender, or questioning students. There are also “at large” representatives. The SA meets weekly, establishes the undergraduate student activity fee, manages the distribution of those funds, and advises the office of the Dean of Students as well as other administrative units.
- **Graduate and Professional Student Assembly.** Like the SA, the GPSA broadly represents a share of the student body, establishes the graduate and professional student activity fee, and addresses non-academic issues affecting graduate and professional students. Currently, the GPSA governing structure includes a 19-member voting council and an advisory body, composed of representatives from each graduate field and the three professional schools. During the academic year, both the advisory and voting council meetings are held monthly.
- **Employee Assembly.** The 13-member EA includes representation from the endowed and statutory units, as well as the New York

⁶ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=255 for the final report.

⁷ See <http://assembly.cornell.edu/Main/OverviewOfAssemblies> for a description of the various assemblies.

State Agricultural Experiment Station at Geneva, New York. The EA meets twice a month and makes recommendations to the appropriate university administrators concerning policies affecting staff and their working environment.

- **Faculty Senate.** The dean of the faculty convenes the Faculty Senate, the governing body of the university faculty. Constituency members are elected by the School of Hotel Administration, School of Industrial and Labor Relations, Johnson Graduate School of Management, and Law School, and the academic departments within the other colleges in Ithaca and Geneva; nine members are elected at-large by the university faculty. In addition to the dean of the faculty, voting members of the senate include the president, the associate dean and secretary of the faculty, and the two faculty trustees. Meetings are held monthly.
- **University Assembly.** The UA is comprised of seven faculty, five staff, two undergraduates and three graduate or professional students appointed by the four just-described constituent assemblies. Four additional undergraduate representatives are directly elected. The UA deals with issues of common interest to all members of the Cornell community. More specifically, the UA has responsibility for the Campus Code of Conduct and participates in the selection of the judicial administrator, the university ombudsman, and the judicial advisor. The UA has also advised University Health Services, Transportation and Mail Services, Cornell United Religious Work, and the Cornell Store. Meetings are held monthly.

The assemblies provide an important link between the Board of Trustees and their constituencies. The student, faculty, and staff representatives on the board are all *ex officio* members of their assembly counterparts: the employee-elected trustee communicates with the EA, the faculty trustees with the Faculty Senate, and student trustees with the SA or the GPSA. In addition, these trustees participate in campus committees, task forces, and other projects in service of the university.

In addition to the assemblies, each college has its own governance structure to solicit input from and represent the concerns of faculty, students, and staff. The form of this varies. At Weill Cornell, the Executive and General Faculty Councils are the functional analogues to the assemblies in Ithaca.⁸ The College of Agriculture and Life Sciences—one of the larger colleges in Ithaca—has its own faculty senate. Smaller colleges—such as Hotel Administration and Industrial and Labor Relations—convene the entire faculty regularly. Each college also has an advisory council to assist the dean in implementation of its mission, and some have student advisory councils as well.

4.1.3 The Assemblies and Shared Governance

Outside of a limited sphere (including management and allocation of student activity fees), the assemblies act primarily in an advisory role to the university administration. Over most matters, decision-making authority remains with the president, the provost, the academic deans, the vice presidents of the administrative units, and their designees.

However, advice from the various assemblies carries significant weight and has resulted in substantial changes in university policies and practices. Four examples described below—chosen to reflect the diverse nature of issues addressed through shared governance—illustrate how the assemblies are used to great effect.

The first example involves review of the Campus Code of Conduct, which establishes standards for all members of the university community. Through the assemblies and other fora, all university constituents were involved in the development of the revised code. Ultimately, the revisions were approved by all constituent assemblies and subsequently ratified by both the administration and the Board of Trustees. The review process began in early 2006, and final approval of the revised code occurred in late spring 2008.⁹

⁸ <http://weill.cornell.edu/about-us/weill-cornell-faculty-councils.html>

⁹ For the final product, see <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/campuscode.cfm>

A second example of shared governance in an effective advisory capacity involves the development and adoption of the Campus Master Plan. An initiative of the Board of Trustees, the master plan was designed to represent a vision and strategy for the best use of the university's lands over the next several decades. The two-year process resulted in an integrated framework to guide the university's long-term physical development, driven by academic planning priorities, research, teaching, and residential and recreational priorities and programs. The master plan was approved by the Board of Trustees in 2008 following constituent input through broad representation on the master planning task force, consultation and advising via the assemblies, and open, public fora.¹⁰

A third example of the effectiveness of shared governance arises out of a controversy on campus involving inclement weather. After a major snowstorm in February 2007 in which the university officially closed, there was a grassroots movement to amend the Inclement Weather Policy which had been in place for 10 years. An ad hoc campus-wide committee developed revisions and contingency plans, and the updated policy was approved in December 2008.¹¹

Finally, a fourth example relates to oversight of faculty conduct. Although there has long been a policy governing the dismissal of tenured faculty, there was no policy governing their suspension. In spring 2007, after several years of discussion between the Faculty Senate and the administration, as well as substantial effort by a faculty committee, the Board of Trustees amended the dismissal policy and adopted a suspension policy. While this was a long and difficult process, the end product—a policy that all constituents felt they could support—clearly benefited from the collaborative process.¹²

While valuing these examples of productive exchanges, we recognize that the assemblies—together with the university's espoused commitment to broad representation in decision making—create very high expectations of inclusion that can be problematic. There are occasional, but recurring,

¹⁰ <http://masterplan.cornell.edu>

¹¹ <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/riskandsafety/inclementweather.cfm>

¹² http://theuniversityfaculty.cornell.edu/policies/pol_main.html

disagreements over the nature and import of the advisory role that the assemblies play in the administration of the university.

Not all decisions are best vetted through the assemblies. Further, consultation with the assemblies does not, and should not, imply that majority opinions will be enacted. In many areas that affect the direction of the university, administrative officers bear responsibility—and accountability—for decisions.

To avoid unnecessary tensions and promulgate reasonable expectations among assembly members and the broader campus community, the university should better clarify the roles of the assemblies in university governance.

4.1.4 Administration

While the Board of Trustees is vested with “supreme control” over Cornell University, our board has delegated authority for the daily operations of the university to the president and his or her designees. It is this presidential oversight that allows for the administration and functioning of the university on behalf of the Board of Trustees.

The senior administration of the university consists of the president, the provost, and the provost for medical affairs, all of whom are elected by the board, as well as the vice presidents and vice provosts.¹³ The provost, in turn, delegates college-specific decision making to the college deans, who allocate resources to support the unit strategic plan.

In general, decision making is placed close to the parties who are accountable for the impact of the decision. For example, while the Faculty Senate and the Executive and General Faculty Councils at Weill Cornell make decisions about possible academic titles, faculty hiring is managed at the academic department level with input from the dean. The colleges are responsible for overall academic direction. University leadership is responsible for overall university financial health, the common student experience, and overarching policies and practices that govern some aspects of local decision making.

¹³ A current list of the administrative leadership, with links to organizational charts, is at <http://www.cornell.edu/administration>.

In practice, identifying the proper sphere for a specific decision within the overall hierarchy can be a source of contention. The historic tendency toward decentralization and localized decision making is laudable because it well serves the core academic missions of colleges and programs. However, within the context of the entire university, localized decision making—especially when coupled with imperfect budget models—can result in a splintering of efforts, or even create incentives for colleges to compete against one another in ways that fail to serve the larger interests of the university. While there may be areas in which greater centralization would be desirable, in a broad sense, the university’s core organizational structure does meet the need for clear “lines of sight” up and down the organization.

4.1.5 Policy Development

Cornell University is recognized as a model institution for centralized policy development because of the work of the University Policy Office. Each year, this unit offers a Policy Development Program that gives participants insight into Cornell’s highly successful model for institutional policy development and maintenance. Over its nine years of existence, this program has been attended by representatives of colleges and universities from around the world as well as by representatives of state university systems and corporations.

To date, not every official university policy has gone through the process overseen by the Executive Policy Review Groups; some policies have been shepherded by offices outside of the University Policy Office, such as those of the vice provost for research or the dean of students.¹⁴ However, all university policies are readily available in a central policy library and are searchable on the University Policy Office website.¹⁵ In addition, policies that are specifically relevant to the employment and scholarly activities of faculty are contained in the Faculty Handbook.¹⁶ The Graduate School Code of Legislation provides policies relevant to the conduct of

¹⁴ <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/other.cfm>

¹⁵ <http://www.dfa.cornell.edu/treasurer/policyoffice>

¹⁶ http://theuniversityfaculty.cornell.edu/handbook/handbook_main.html

graduate education.¹⁷ In general, efforts to disseminate information about university policies—such as through regular e-mails as well as periodic articles in university publications—are thoughtful and seem adequate to reach all members of the Cornell community.

4.1.6 Selection and Evaluation of Leadership

The process of selection of Cornell's leadership, including the recent searches for president and provost, begins with careful and thorough development of the position overview. Broad consultation takes place with faculty, trustees, and many other constituencies. A search committee is then created. For presidential searches, the committee has broad representation including leadership, trustees, faculty, staff, and students. Depending on the nature of the position, a search firm may be brought in. Recruitment includes identifying qualified candidates and conducting a thorough screening. Parts of the selection process may be open—for example, when final candidates for a deanship are required to make public presentations—but confidentiality is maintained when top candidates require it, for example, in a presidential search.

Every leader is evaluated annually. The president asks each of his direct reports to comment on his or her progress toward pre-established goals, noting those that were accomplished and those that were not, against specific pre-established measurement standards. Each leader is also expected to set next year's goals with measurable outcomes. The evaluation and goals are delivered in writing, in advance of a meeting at which the president comments upon the self-evaluation. The president's comments are recorded in a written memorandum. The leader is then required to accept the memo in writing, with or without comment, and this forms the written documentation for the year. This information is reviewed along with market data on salary before developing any recommendations for pay increases, which are reviewed with the board.

In addition to the annual reporting process, each dean and the provost participate in a 360-degree review in the second year of a five-year term. Though a survey administered through LearningBridge, input is collected

¹⁷ http://www.gradschool.cornell.edu/pubs_and_forms/pubs/codeoflegislation.pdf

from peers (e.g. fellow deans), direct reports (e.g. assistant and associate deans), institutional leaders (the provost, president and/or board chairman), and external audiences (such college advisory councils).¹⁸ In the fourth year of a dean's term, open-ended input is solicited from a broad constituency, including all faculty in that college as well as leaders from other colleges across the university.

The president is reviewed each year by the board. He is required to develop short- and long-term goals, and the board's evaluation includes a review of his progress on these as well as a summary of confidential feedback solicited from his direct reports, which is collected by the vice president of human resources and delivered to the board. This information is reviewed along with market data in order to determine whether any pay increase will be awarded.

For information on performance reviews and professional development for staff other than those at the highest levels, see Chapter 3, "Institutional Stewardship." Similar information on the faculty is available in Chapter 6, "Faculty."

4.1.7 Communication

Effective communication is an essential component of administration and governance—especially at an institution as large and complex as Cornell. While the leadership at Cornell understands this, ensuring that communication spans the breadth of the university can prove challenging.

Communication at Cornell has been transformed in the past six years. In 2004 a new office—University Communications—was created with the goal of improving and modernizing communications within the university and increasing the profile of Cornell in the media. This office serves as an umbrella covering Publications and Marketing, Campus Relations, Press Relations, Public Affairs, and other units.

A model of "one university" in a decentralized culture, Cornell's communications structure is characterized by a "hub and spokes" model. University Communications is the "hub"; the "spokes" are the many

¹⁸ <http://www.learningbridge.com>

college and unit communications offices, each led by a director and focused on communications for an individual unit. The college communications directors and the vice president for university communications and his leadership staff convene monthly to discuss communications issues, both at the college level and the university level. Communication and collaboration between the Ithaca campus and Weill Cornell Medical College have increased greatly over the past five years.

Overall, this strategy appears to be effective. Available metrics suggest a much higher profile for Cornell and its colleges with all their respective audiences; over the past five years, there have been regular, annual increases in major market media coverage, visitors to the Cornell web environment, and readership of communications vehicles supported by the university.

However, supporting and coordinating numerous communications units poses challenges. Within the context of the strategic “Reimagining Cornell” efforts, the “hub” has begun to assume greater responsibilities with respect to the university’s central administrative offices, including Human Resources; Student and Academic Services; Government and Community Relations; Alumni Affairs and Development; Finance and Administration; Planning and Budget; the Office of the President; and the Office of the Provost. As these core units have broad audiences and a clear need for consistent messaging across offices, a centralized approach to communication would seem to offer more advantages than the localized-control approach.

In 2009, in a further centralizing step, Cornell created the new position of vice president for university relations, with responsibility for articulating and overseeing university strategies related to communications, government relations, and land grant affairs.

4.2 Integrity

4.2.1 Ethical Conduct Policies

The preamble to *University Policy 4.6: Standards of Ethical Conduct* reads:

The university's commitment to the highest standard of ethical conduct is an integral part of its mission to "foster initiative, integrity and excellence, in an environment of collegiality, civility and responsible stewardship." That commitment upholds the reputation of the university, both locally and globally, and encourages compliance with applicable laws and regulations.

This 17-page policy—in place since 1996—is the foundational university pronouncement on ethical conduct. It provides guidance in many areas, including conflicts of interest and commitment; harassment and abuse of power; handling of grants and contracts; confidentiality; and the stewardship of university resources.¹⁹ In addition, a number of other policies underscore the university's commitment to integrity and ethical behavior. Perhaps the three most important are:

- **The Campus Code of Conduct.** Developed through the university assemblies, the Campus Code establishes standards of behavior for the entire campus community (not just students) in non-academic arenas. The code addresses a variety of types of misconduct, including serious acts (for example, sexual assault and other acts of violence) as well as misbehavior that is more typical among older adolescents or young adults (for example, false identification and minor theft).²⁰
- **The Code of Academic Integrity.**²¹ Developed through the Office of the Dean of the Faculty, the Code of Academic Integrity guides students on issues including submitting only their own work; proper citation practices when quoting from the work of others; using exams as a way to demonstrate their own knowledge; and

¹⁹ <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/ethical.cfm>.

²⁰ <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/campuscode.cfm>.

²¹ http://theuniversityfaculty.cornell.edu/policies/pol_main.html.

generally representing the university and their colleges in ways consistent with Cornell's core values. The issue of plagiarism is further explicated in an instructional website sponsored by the College of Arts and Sciences; this resource includes a concise explanation of plagiarism and related issues as well as a set of case studies through which students can test their understanding of proper use of sources.²²

- **Conflicts Policy.** The university has recently evaluated the adequacy of its approach to conflicts of interest, reflecting in part the increased scrutiny associated with grants from federal agencies such as NSF and NIH. Until recently, conflict management policies were developed and monitored at the college level, but to ensure that unified policies are enforced across all parts of Cornell, oversight is now being transferred to the Office of the Vice Provost for Research. A single, coherent policy developed through that office addresses conflicts of interest and conflicts of commitment for academic and nonacademic staff. It addresses a variety of ethical dilemmas, including gains in finances, employment, or prestige that might conflict with obligations to Cornell; romantic relationships in the workplace; and situations in which a person's participation in outside activities might conflict with his or her work at Cornell University.²³

In addition, Weill Cornell Medical College outlines ethical standards specifically relevant to a medical community for its faculty, staff, and students. The Standards of Conduct, also known as the Honor Code, as well as a related Introduction to Academic Regulations, are available on the medical college website.²⁴

²² <http://plagiarism.arts.cornell.edu/tutorial/index.cfm>. A link to this valuable resource appears on Cornell's academic integrity website at <http://www.theuniversityfaculty.cornell.edu/AcadInteg/plagiarism.html>.

²³ <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/conflicts.cfm> and <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/ethical.cfm>

²⁴ Standards of Conduct: http://weill.cornell.edu/education/about/honor_code.html. Introduction to Academic Regulations: http://weill.cornell.edu/education/about/intro_acad_reg.html.

In addition to making all policies available on the web, the university takes extra steps to publicize policies relating to ethical behavior on an ongoing basis. For example, new supervisors' training, orientations for new students and new employees, and trainings required by the Office of Research Integrity and Assurance as a condition of grant funding all include information about one or more ethics-based policies. In addition, the president sends an annual letter to all Cornell community members highlighting the ethics policy, and the vice provost for research sends a letter to all faculty members annually concerning the conflicts of interests policies.

As President Skorton outlined in a March 2010 letter to the Cornell community, "all of us are responsible for upholding the integrity of the institution." In case any concern relating to integrity should arise and anonymity is desirable in reporting or addressing it, the university makes available a telephone hotline and a website, both administered by EthicsPoint, a company independent of Cornell.

4.2.2 Enforcement Efforts

The University Audit Office assumes primary responsibility for enforcement of the Standards of Ethical Conduct. If, for example, a community member provides information through the EthicsPoint hotline about an alleged breach of this policy, the Audit Office handles the complaint, either by assessing the evidence to substantiate the allegations or by forwarding the complaint to another appropriate office. If the allegations are substantiated, responsible university officials will be notified. Depending on the particular situation, deans, the judicial administrator, or the police may initiate the applicable disciplinary process and sanctions.²⁵

The Audit Office also has responsibility for investigating alleged violations of the Financial Irregularities Policy and conducts routine audits throughout the university to ensure that financial matters are being

²⁵ See also <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/academic/other.cfm>.

handled properly.²⁶ When financial irregularities are alleged, the Audit Office brings its conclusions to a standing committee, the Financial Irregularities Committee, which decides whether to refer the matter for criminal prosecution and also adjudicates disagreements over appropriate sanctions. In recommending sanctions, the Audit Office relies upon a database to ensure treatment that is consistent with prior cases, and the Financial Irregularities Committee reviews the same information.²⁷

The Code of Academic Integrity establishes a comprehensive process to maintain academic integrity and address deviations from community standards.²⁸ A student accused of violating academic integrity will be called to a “primary hearing” with the relevant faculty member and a neutral observer. If the faculty member finds the student guilty, a grade sanction may be imposed. If the student wishes to appeal or if the faculty member believes a more substantial sanction is called for, the matter will be referred to an Academic Integrity Hearing Board. Each college and school in the university has its own board, but the procedures are uniform and governed by the Code of Academic Integrity. All hearings before the boards are conducted *de novo*, and the boards may acquit or convict the student. The boards have authority to recommend a different grade sanction to the faculty member or to recommend that the dean impose more substantial sanctions (including suspension or dismissal).

Enforcement of the Code of Academic Integrity is decentralized, with each college having responsibility for alleged violations in that college. The chairs of the college Academic Integrity Hearing Boards devoted substantial efforts in 2009 to drafting and implementing a comprehensive set of protocols for issues not addressed directly in the Code of Academic Integrity. This effort will promote consistency in the process and in outcomes across the university.

Alleged violations of the Campus Code of Conduct are handled through the campus judicial system.²⁹ The Office of the Judicial Administrator

²⁶ <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/finance/irregularities.cfm>

²⁷ Ibid.

²⁸ http://theuniversityfaculty.cornell.edu/policies/pol_main.html

²⁹ http://cuinfo.cornell.edu/Admin/judicial_system.html.

receives the complaint, investigates it, and, if there is evidence of a violation, attempts to resolve the matter with the accused student, staff, or faculty member. If a resolution is not reached between the accused person and the judicial administrator, the matter is referred to the University Hearing Board, whose decisions may be appealed to the University Review Board. In cases of violence, the president may hear appeals from the Review Board. Each of these judicial boards includes student, faculty, and staff members.

Cornell's process borrows heavily from the criminal justice system. For example, the alleged perpetrator may choose not to speak about the allegations, may have an advisor (including an attorney), and has access to several levels of appeal. This legalistic approach may hinder the judicial administrator and delay the process but attempts to ensure fairness for the accused. Simultaneously, the code provides opportunities for a victim to participate and be heard throughout the process. For example, a victim may be accompanied by a support person, has an opportunity to weigh in on proposed sanctions (but does not have the final word), may receive immunity for her or his own transgressions, and has several levels of appeal rights. This system of checks and balances helps to protect the interests of all community members.³⁰

To address faculty nonfeasance and malfeasance, the Board of Trustees in 2007 approved a new suspension and dismissal policy.³¹ The policy gives deans clear guidance when faculty misconduct needs to be addressed and provides due process for the faculty member involved. In addition to the policy-related grievance procedures, the Board of Trustees adopted a more general, formal grievance policy for faculty.³² Each college and school, in turn, has established a formal grievance process founded on that policy. These processes help ensure compliance with university policies and

³⁰ <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/campuscode.cfm>.

³¹ http://theuniversityfaculty.cornell.edu/policies/pol_main.html.

³² <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/humanresources/grievance.cfm>.

permit faculty to challenge decisions affecting their employment and status.³³

In cases of alleged violations of HR policies,³⁴ a number of different offices may be involved. For example, the Office of Workforce Diversity and Inclusion³⁵ might investigate allegations of harassment or discrimination in employment settings. An HR professional may assist a supervisor with the disciplinary process. Formal policies also provide employees with the opportunity to appeal a disciplinary decision.

At Weill Cornell Medical College, the Office of Research and Sponsored Programs is responsible for investigating and auditing compliance with policies regarding research, including human subject and animal research, research compliance, research misconduct, and conflicts of interest. The Weill Cornell Office of Billing Compliance is responsible for overseeing and auditing compliance with complex (and often conflicting) federal, state, and private insurance requirements for clinical care billing by Weill Cornell's physicians.

The Office of the University Ombudsman may assist any community member who believes he or she has been treated improperly by the university.³⁶ The Ombudsman is an independent office that has the authority to investigate allegations of policy violations by the university. For example, the ombudsman's office might assist an employee through the grievance process on an employment matter, or might investigate whether the judicial administrator followed procedures in investigating a case. The ombudsman serves in an advisory role to other, formal structures within the university administration.

More than 1400 people utilized the services of ombudsman's office over the past five years; in addition to faculty, staff, and students, these included 155 alumni or parents, and 78 individuals who are either unaffiliated or who chose not to disclose any affiliation with the

³³ For an example, see <http://www2.johnson.cornell.edu/Administrativeservices/academic/JSinfo/grievance.html#4>

³⁴ <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/humanresources/index.cfm>.

³⁵ <http://hr.cornell.edu/about/wdi.html>.

³⁶ See also <http://www.gradschool.cornell.edu/?p=125>.

university. Nearly half of the issues brought to the ombudsman have involved employment situations (not including dismissals); 177 represented ethical concerns and/or human rights issues.

Through the process of creating explicit policies, widely disseminating information about those policies to the community, and providing robust processes for enforcement, the university demonstrates a commitment to the highest standards of ethical conduct. All told, the procedures in place seem to avoid arbitrary and capricious decision making and provide safeguards for the fair treatment of all members of the community. However, the decentralization of enforcement has, at times, created uneven treatment of similar situations. As the university has significantly increased its external funding portfolio and is attempting to seek more technology transfer activities, there are likely to be significant increases in managed conflicts of interest. As noted above, the university is now moving towards a more centralized approach to managing conflict of interest.

4.3 Recommendations

4.3.1 Leadership and Administration

As regards Cornell's overall administrative structure, the strategic planning activities of the last two years have sought to assess the balance between centralization and decentralization. We recommend

- that the university continue to centralize its functions where such action does not jeopardize the fundamental academic missions of the colleges.

As highlighted in this chapter, there are many instances of productive dialogue between the assemblies and the administration. At the same time, however, the assemblies' power is limited, as decision-making authority remains with the administration. We recommend

- that Cornell better clarify the roles and responsibilities of the assemblies in university governance, as uncertainty can erode the

trust between constituent representative bodies and the administration.

As described in Chapter 1, “Introducing Cornell University,” the university has conducted a careful examination of the entire institution—and especially its administration—in light of budget shortfalls. External consultants have helped guide the university in identifying savings in the administrative arena. The key issue for the next five years will be implementation. We recommend

- that the university devote the necessary change management resources for successful implementation of the significant administrative savings that have been identified—even if the financial pressures to do so are alleviated.

4.3.2 Integrity

Cornell has the structures in place to ensure that we implement our mission with the highest ethical principles. However, as noted above, decentralized enforcement may at times lead to inconsistency. We recommend

- that Cornell fully implement the transfer (currently in progress) of management of conflicts of interest from the colleges to the Office of the Vice Provost for Research, with appropriate input from the colleges.³⁷

³⁷ For more information see <http://www.research.cornell.edu/VPR/Policies/default.html>.

5. Student Admissions and Supports

Standards:

8. Student Admissions and Retention
9. Student Support Services

Consistent with our founding mission to serve “any person,” Cornell University is deeply committed to admitting and supporting students from a wide variety of backgrounds. This support includes a generous financial aid package for undergraduates, enrichment of the campus residential environment, and the institutionalization of practices that support student well-being. As a relatively large, decentralized institution with a substantial proportion of students living off campus, Cornell is continually challenged to find ways to build community and a sense of belonging among both undergraduates and graduate/professional students.

In the first section of this chapter, “Admissions and Enrollment Management,” we examine admission policies for undergraduates as well as graduate and professional students. We also discuss enrollment target figures and the factors that affect them. Our next section, “Supporting a Diverse Student Body,” focuses on Cornell’s need-blind admissions and need-based financial aid policies and explains efforts to recruit underrepresented minorities at the undergraduate and graduate levels and in the professional schools.

In “Graduation and Completion” we discuss the trends over time in rates of graduation after four, five, and six years, including factors of race and gender. For Cornell’s Graduate School, we compare completion rates and

time to degree at Cornell with rates nationwide. Our fourth section, “Advising, Well-Being, and Community,” looks at various forms of student support, including academic advising, career services, academic support for minority students, services for students with disabilities, and counseling and psychological services, as well as systems for identifying students experiencing academic or personal difficulties. In this section we also discuss the role of residences in the student experience, including special residential initiatives, Greek life, and the residential experiences of transfer students.

“Student Grievances and Privacy Protections,” our fifth section, refers readers to the comprehensive discussion of ethical conduct policies in the preceding chapter but explains in some detail the grievance procedures available to graduate students. Here we also discuss access to such confidential information as grades, health records, and disciplinary proceedings.

Finally, in “Recommendations” we suggest ways to reinforce Cornell’s commitments to core principles of excellence and access so as to create a diverse student body, as well as to enhance support and advising for the talented students that we are fortunate to have the opportunity to educate.

5.1 Admissions and Enrollment Management

As described in Chapter 1, “Introducing Cornell University,” in 1997 the university embarked on a plan to house all first-year students together on North Campus. This decision created new structural constraints on the size of the freshman class. Accordingly, a new Undergraduate Enrollment Planning Team (UEPT) was charged to form recommendations for overall undergraduate enrollment and, in particular, the size of the incoming freshman class. In its initial report, the UEPT recommended that undergraduate enrollment be set at 13,000 students and first-year enrollment at 3,000. Since that time, enrollment targets have remained fairly stable. When the university stopped admitting spring freshmen, the first-year student target was moved to 3,050. In the context of recent budget crises, and on the advice of a Student Enrollment Task Force, the

target was raised to 3,150.¹ The task force recommended exploring other budget options before implementing further increases, which might require additional support services.

While the number of entering fall freshmen *students* has remained fairly stable over time, the number of fall freshman *applications* to Cornell has risen 69% over the last decade, from 21,519 in 2000 to 36,338 in 2010. While applications are increasing at many schools, especially since the creation of the Common Application (which Cornell joined in 2004), the rise in applications is taken as a sign of continued great demand for a Cornell education. Even with an increased enrollment target, Cornell has become much more selective: in 2001, 27% of freshman applicants were offered admission; in 2010, the admit rate was only 18%. Total undergraduate enrollment has risen somewhat over the past decade, varying from a low of 13,510 in 2007 to a high of 13,935 in 2010 (the 2009 total was nearly the same at 13,931).²

Based on an overall first-year enrollment goal of 3,182 (this total includes 32 “alternate college” admits), the fall first-year enrollment targets for each undergraduate college/school are as shown in Table 5.1.

Table 5.1. Undergraduate college enrollment targets

College	Enrollment Target
Agriculture & Life Sciences (CALS)	663
Architecture, Art, & Planning (AAP)	109
Arts & Sciences (A&S)	1,063
Engineering	742
Hotel Administration (Hotel)	172
Human Ecology (HE)	275
Industrial & Labor Relations (ILR)	158

¹ Until all 2010, “alternate college (described below) admits were not included in the targets for first year students, although enrollment limits were identified for these groups. That practice has recently changed, and the current enrollment target is now stated as 3,182 including primary and alternate college enrollment targets.

² See the University Factbook, e.g. <http://dpb.cornell.edu/documents/1000178.pdf>

To help ameliorate the workload impact of the large increase in the number of applications, Cornell implemented an on-line reading process and encouraged applicants to apply on-line.

5.1.1 Management of Undergraduate Enrollment Targets

Prospective students apply to one of the seven undergraduate colleges rather than to a central office. Accordingly, each college manages its own admissions office and admits its own students. The constraint on housing on North Campus creates a need to minimize the likelihood of university-wide over-enrollment; some colleges may over-enroll somewhat if others come in under initial targets. For this and other reasons, coordination of the separate admissions offices is essential. This coordination has been under the purview of the associate vice provost for admissions and financial aid, and the director of undergraduate admissions.

In the last eight years, the university as a whole met the enrollment target (within the 1% tolerance) in four years, edged above it three times, and fell short once.³ With a total freshman enrollment goal of 3,000 or 3,050, there was more room for error in accommodating students on North Campus than there is today. With an enrollment target of 3,150 plus up to 32 alternate admits, there is a substantial risk that higher than expected yield could result in burdening housing and other university services beyond their capacity.

In 2009 the enrollment of 3,181 did not cause acute infrastructure issues, but this figure may represent something close to an absolute maximum without further investments in the buildings, academic programs, and other services that support Cornell's first-year students.

5.1.2 "Alternate College" Admissions: Impacts, Risks, and Benefits

As described above, prospective students apply to a specific college rather than to the university as a whole. In 2008 the university adopted a new practice in which applicants were permitted to identify an "alternate college." The student must meet the application requirements of both the

³ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=270.

primary and alternate college, including additional alternate college essays, to be considered as an alternate candidate. If the primary college does not admit the student, the application *may* be reviewed by the alternate college. Students receive one final decision; if admitted, they are informed whether they were admitted to the primary or alternate college.

The impact of this policy is mixed. Very few students—only 40 in fall 2010, about 1% of the class—are enrolled through the alternate admissions process. In addition to creating extra work for the applicant, this policy also creates extra work for colleges, as a portion of the already growing number of applications is read by two colleges instead of one. Most alternate applications, however, are not viewed by the alternate college.⁴ In 2008, the first year of this new practice, 8% of alternate applicants were reviewed. In 2009 only 2% were reviewed, but those students had a better chance of being admitted. In 2008 the overall admit rate for reviewed applications was 26%; in 2009, it soared to 63%. In 2010 the review rate fell further, to 1%, with an even higher acceptance rate of 71%.

The very high admit rates for the applicants who were reviewed (in three colleges the 2010 admit rate was 100%) suggest that alternate admits may be identified via athletics or URM roundtables, which further calls into question the added value of alternate college admissions and suggests that this policy should be reassessed.

5.1.3 Policies on Transfer Students: Current and Future

Cornell has traditionally welcomed transfers and seeks to attract students who have been successful in two-year and other community colleges, as well as at other four-year institutions. In addition, a number of freshman applicants who are not accepted are given a transfer option, offering admission to Cornell as a transfer student conditional on the successful completion of specified courses to be taken elsewhere. Information for prospective transfer students is available on the Cornell admissions website.⁵

⁴ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=187 for the 2008-2010 Alternate College Admissions Profile.

⁵ <http://admissions.cornell.edu/apply/transfer>

In keeping with its land grant mission, Cornell is eager to create pathways to success for students who attend community colleges, and the university works closely with these colleges—often through articulation agreements⁶—to create clear expectations about what it takes to be a successful transfer applicant. Transfer articulation agreements typically list the courses that students should be taking while they are attending other institutions. In many cases these course expectations are specific to transferring into particular majors or programs.

Cornell has had great success in generating a high graduation rate for transfer students without significantly extending time to degree. Typical of all preceding years, about 90% of external transfers entering in the 2003–2004 academic year graduated within four years of entering. This rate is quite comparable to the graduation rate of non-transfer students.

Each year, 560–700 external transfer students matriculate at Cornell; most enter in the fall. There is great variability across the seven undergraduate colleges. Among those receiving bachelor’s degrees during AY 2008–2009, external transfers represented 26% in CALS; 16% in AAP; 6% in A&S; 6% in Engineering; 30% in Hotel; 18% in HE; and 41% in ILR.

In discussion with the deans, the university administration set college/school-specific transfer student enrollment targets for the first time for the 2009–2010 admissions cycle, for fall 2010 transfer matriculants.⁷ Targets were informed by academic and budget goals. Achievement of these targets will be monitored and revised for future years as appropriate.

5.1.4 Early Decision in Admissions

Early Decision (ED) is an important tool in enrollment management in that it allows the university to confirm a portion of the class early in the admissions cycle. There is a cost to relying heavily on ED, however: ED students tend to represent a less diverse pool of students than the regular admit pool.

⁶ <http://cuinfo.cornell.edu/Student/docs/transfer-credit-certification.pdf>

⁷ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=186

Cornell has not set ED enrollment targets at a fixed level but monitors this figure annually. Since 2005 the percentage of the class that has been admitted ED has risen fairly steadily, increasing from 33.8% of the Class of 2009 to 38.0% of the Class of 2013.⁸ For the Class of 2014 the figure is somewhat lower, at 35.5%.

5.1.5 Communicating Information about Tuition and Financing

The Undergraduate Admissions Office and the Office of Financial Aid and Student Employment invest significant resources to provide prospective and current students with information about Cornell's policies and practices regarding tuition, financial aid, and payment plans. The offices disseminate the information in several ways:

- Policies are prominently featured on the financial aid website.⁹
- Electronic mailings to prospective and current students provide links to the financial aid website.
- The admissions and financial aid offices conduct informational sessions, on campus and in cities around the world, for prospective students and their parents. All accepted students, whether applying for financial aid or not, receive a brochure that describes Cornell's financing options and payment plans. The financial aid office conducts information sessions on campus for current Cornell students.
- Each student who receives financial aid from Cornell receives an annual mailing with information on the process for applying for financial aid for the upcoming academic year.
- The financial aid office maintains walk-in hours for students to speak to a financial aid counselor. These hours are advertised in mailings to students.

⁸ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=362

⁹ Office of Financial Aid and Student Employment website: <http://www.finaid.cornell.edu/>. Information for students on finding jobs at Cornell and in the area can be found at <http://www.studentemployment.cornell.edu/index.htm>.

5.1.6 Admission and Retention of Graduate and Professional Students

Because graduate education is a highly individualized program of study tailored to a student's unique research interests and the development of new scholarship, generalizations about admissions processes across the university are more difficult than they are for undergraduate admissions, even with seven separate processes at that level. Within the graduate school, individual faculty committees in each of the 92 major graduate fields make admissions decisions. Unlike some peer institutions, Cornell's Graduate School does not review each field's admissions recommendations before authorizing an offer of admission.¹⁰

Figure 5.1 shows the admission and matriculation rates for Cornell's graduate programs from 1998 to 2009. Selectivity in the doctoral programs has increased modestly over this period, while the research master's and professional master's programs have shown more fluctuation. Matriculation rates were fairly steady, with a significant increase only in the professional master's programs.

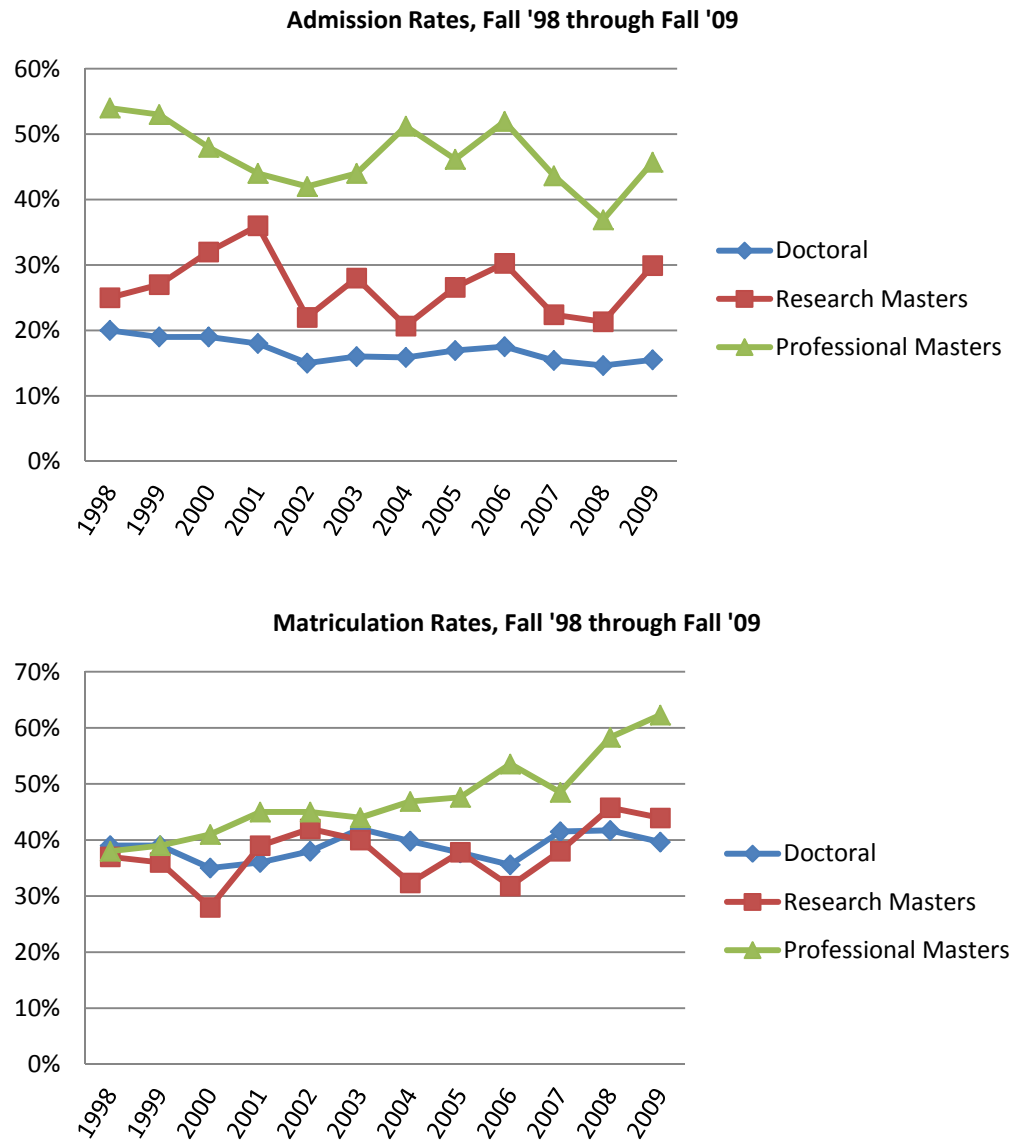
In the Law School, the admission process is overseen by a faculty admissions committee appointed annually by the dean. Applications are reviewed by admissions officers initially and then referred to the committee as necessary. The Law School admitted 17.6% of applicants in 2010, down from 23% in 2006.

In the College of Veterinary Medicine, the faculty admissions committee reviews and scores applicants according to the overall quality of their academic program, animal/veterinary/biomedical research experience, non-cognitive skills, all other achievements, and the quality of the applicant's essay. In addition to traditional veterinary roles, the college also seeks individuals with academic interests in production animal medicine, research, and non-traditional career paths that will meet the

¹⁰ The Graduate School does check the quality of fellowship offers each fall by having the General Committee review the files of all students who have been admitted on fellowship, but this occurs after the fact so as to avoid delaying the admissions process. Fields with evidence of inappropriate standards for fellowship awards are admonished and may experience a reduction in future fellowship allocations.

current and future needs of the veterinary profession. For the class of 2014, the college offered admission to 108 of 875 applicants (about 12%).

Figure 5.1. Admission and matriculation rates for graduate programs, 1998–2009



At the Johnson Graduate School of Management, every application is reviewed by the Admissions Committee, a team comprised of admissions professionals, students, and administrators. After an initial review, the

committee invites selected candidates to interview. The median GMAT score for admitted students in the MBA class of 2012 was 700, and the median GPA was 3.3.

The Admissions Committee at Weill Cornell Medical College (WCMC), as a faculty-student committee, makes its decisions independently and is not advisory to the dean or other administrative leadership in selecting students. For the class entering in 2010, WCMC received 5,565 applications, from which it accepted 317 and enrolled just 101 students. Admitted students had an average GPA of 3.7+ and MCAT scores averaging 34.5.

The professional schools have various mechanisms to evaluate admissions practices and monitor the relationship of admissions standards to outcomes.

- **Law School (JD, LLM).** Given the Law School's very rigorous admissions standards, it is rare for a student to be dropped for academic deficiency. When that occurs, the Admissions Committee is notified and conducts a review of the file. In addition, the Law School participates in annual validation studies conducted by the Law School Admissions Council, which provides useful information on correlating LSAT scores and undergraduate grade point average data with actual first-year Cornell Law School grades.
- **Johnson Graduate School of Management (MBA).** An Academic Standards Committee comprised of faculty and staff reviews students' progress. Grade point averages (GPAs) are reviewed each semester, and those students falling under the required GPA for graduation meet with the committee to develop a plan for improvement. The Academic Standards Committee meets with the director of admissions to review the admissions files of all students on probation in an effort to improve the admissions screening process as it relates to the likelihood of academic success.
- **College of Veterinary Medicine (DVM).** Admission to veterinary college is extremely competitive; only the most qualified students gain admission. As a result, it is unusual for students to require

more than four years to complete the DVM program, and the college's attrition rates are very low (< 3%). Attrition is typically for personal reasons, not poor academic performance. Faculty members review DVM students' progress each semester. Students placed on academic probation meet with a team of faculty and staff to develop a plan for improvement and ongoing support. If a student fails to complete the program or does not complete the veterinary degree in four years, his or her file is reviewed to determine whether any adjustments are warranted in the admissions process.

- **Weill Cornell Medical College (MD, PhD).** Each student's performance in the curriculum is reviewed at regularly scheduled meetings of the Committee on Promotion and Graduation. Students who are experiencing academic difficulty are usually identified early and are offered support and guidance from course directors and course faculty. Strategies are planned to assist them with remediation and completion of requirements.¹¹

5.2 Supporting a Diverse Student Body

5.2.1 Need-Blind Admissions and Need-Based Aid

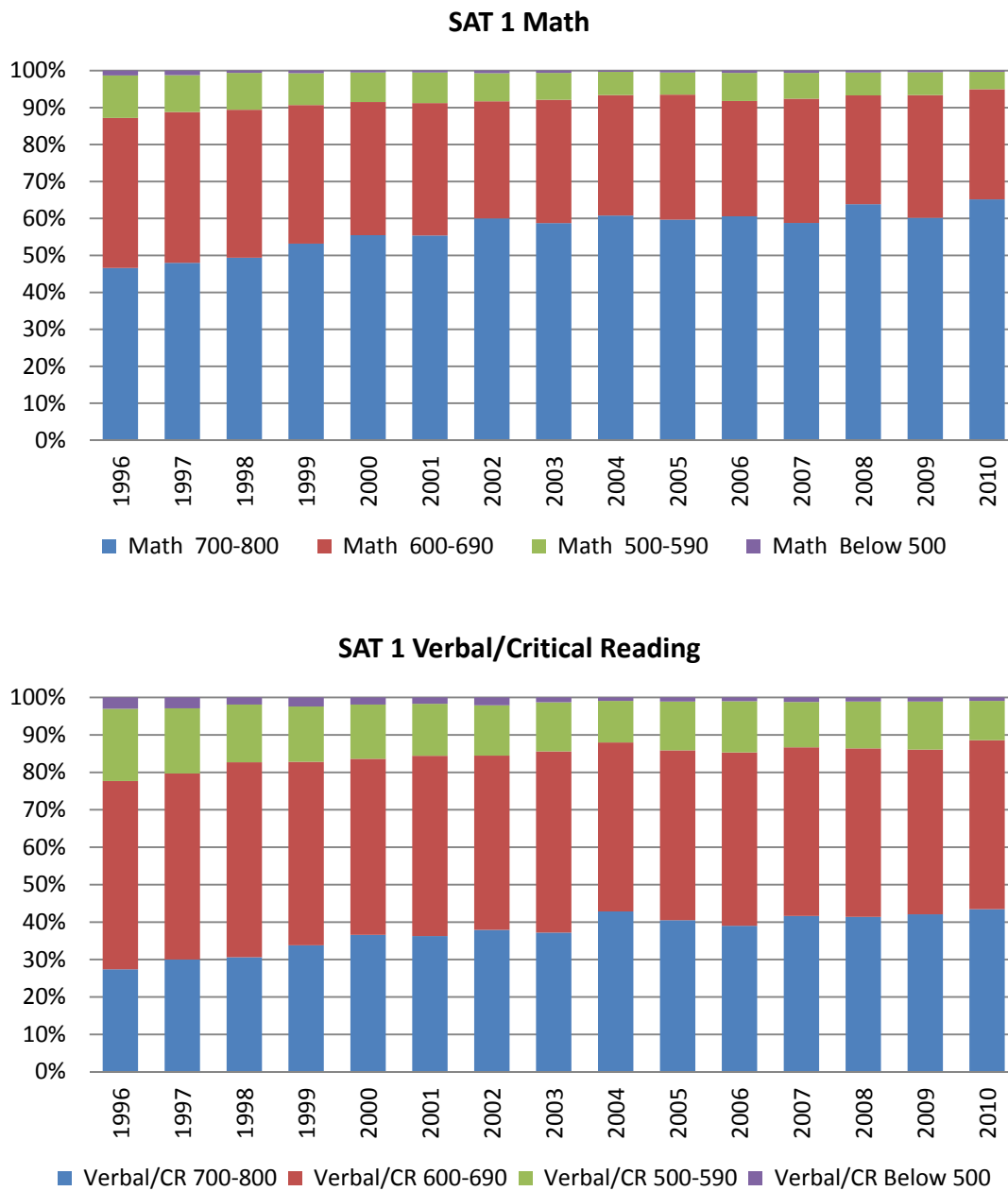
Building on a long tradition of access and opportunity for students without regard to personal background and circumstances, Cornell today practices need-blind admission. Financial aid applications are handled separately from admissions applications so that reviewers are unaware of whether a prospective student has the ability to pay full tuition. Cornell also practices need-based financial aid: all financial aid is based on need, and Cornell does not award aid based on merit or talent to students who do not demonstrate financial need.

Although standardized test results are not the best or only indicator of academic quality, they provide a useful measure for characterizing aggregates. For the Cornell Class of 2014, 96% of the entering first-year

¹¹ For more information see the Weill Cornell Medical College self-study, at https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=372

students submitting SAT scores had critical reading/verbal scores above the national average of 501; 98% of entering students had math scores above the national average of 516.¹² SAT trends are shown in Figure 5.2.

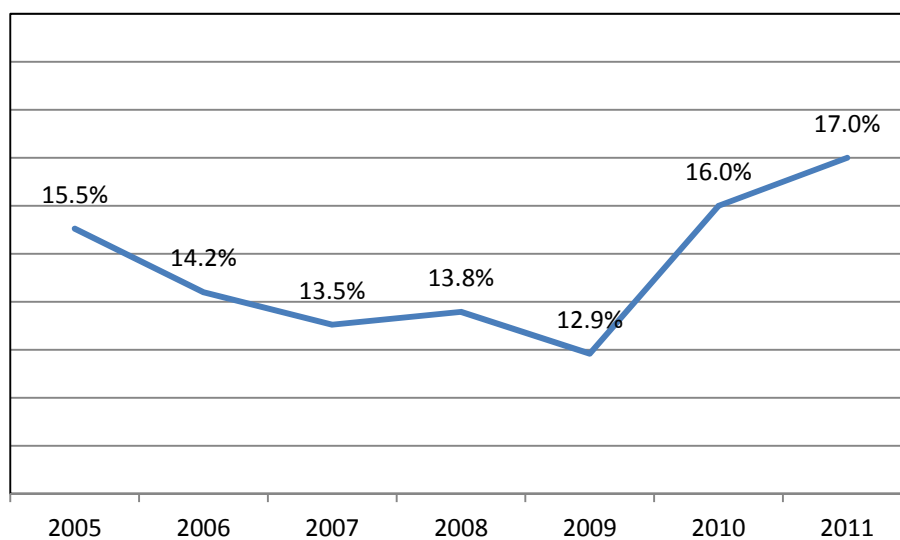
Figure 5.2. SAT 1 Math and SAT 1 Verbal/Critical Reading scores of entering freshmen, Cornell University, 1996–2010



¹² For 2010 mean SAT Critical Reading/Verbal and Math test scores of college-bound seniors, see https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=366

Recent data highlight Cornell’s socioeconomic diversity: about 17% of Cornell students are recipients of federal Pell grants, awarded to students whose family incomes fall below \$60,000. As of 2008–2009, Cornell ranked eighth among its peers in Pell grant recipients as a percentage of total enrollment.¹³ For trend data on Pell grant recipients at Cornell, see Figure 5.3.

Figure 5.3. Percent of enrolled undergraduates receiving Pell grants, Cornell University, 2005–2011



5.2.2 Undergraduate Financial Aid Policies

While Cornell’s long-term goal is to keep the growth in tuition close to inflation, tuition at the endowed colleges has increased slightly faster than inflation during the past decade. This is consistent with the national trend; indeed, Cornell’s recent increases in endowed tuition have been less than several other peers’ increases.¹⁴

Despite the high cost of tuition, careful analyses have demonstrated at Cornell and elsewhere that tuition does not cover the full cost of

¹³ Pell ranking is from an *ad hoc* analysis done by Institutional Research and Planning in January 2010. [US News & World Report](#) ranks Cornell ninth in percentage of Pell grant recipients within a larger group of 25 “top-ranked national universities.”

¹⁴ 2008-09 *Financial Plan*, p. 15. <http://dpb.cornell.edu/documents/1000405.pdf>.

education.¹⁵ Students in private colleges and universities pay only 40–60% of the cost of their education. A 2008 study completed at Cornell found that the ratio of tuition rates to education costs was in the range of 55–60%.

As illustrated in Table 5.2, Cornell provides generous financial aid packages to needy students. Most grant aid is institutionally provided (rather than financed through the government or other external sources). Over the past 10 years, the amount of state and federal grant aid as a proportion of total aid has declined, from 7.3% in 1997–1998 to 5.6% in 2009–2010.¹⁶ Similarly, the use of government loan resources as a part of need-based financial aid packaging has declined since the late 1990s. By contrast, Cornell-funded grant aid has quadrupled over the same period, rising to \$171.9 million in 2009–2010.¹⁷

Table 5.2. Cornell-funded grant aid as a percent of tuition and fees, 2010–2011 undergraduates

	Number of students	% of grant-aid population	% of overall undergrad enrollment	Average grant
Total with Cornell grant aid	6,515	100.0%	46.75%	\$29,376
<=25% of tuition/fees	535	8.2%	3.84%	\$4,692
>25% and <=50% of tuition/fees	782	12.0%	5.61%	\$13,971
>50% and <=75% of tuition/fees	1,075	16.5%	7.71%	\$22,971
>75% of tuition/fees	4,123	63.3%	29.59%	\$37,205

Recently implemented initiatives will further transform the trends displayed in this table by increasing the amount of Cornell-funded grant aid and lowering students' reliance on federal loan programs.¹⁸ As described in Chapter 1, it is now the case that no parental contribution is expected from families with income less than \$60,000 and assets under \$100,000. For families with income under \$75,000, loans are eliminated and replaced with grants. For those with incomes of \$75,000 to \$120,000, loans

¹⁵ Gordon C. Winston and Ivan C. Yen, *Costs, Prices, Subsidies, and Aid in U.S. Higher Education* (Williamstown, MA: Williams College, 1995); <http://www.williams.edu/wpehe/DPs/DP-32.pdf>.

¹⁶ Calculated from: 2008-09 *Financial Plan*, p. 76; <http://dpb.cornell.edu/documents/1000405.pdf>.

¹⁷ 2010-11 *Financial Plan*, p. 41; <http://irp.cornell.edu/documents/1000447.pdf>.

¹⁸ 2008-09 *Financial Plan*, p. 23; <http://dpb.cornell.edu/documents/1000405.pdf>.

are capped at \$3,000 annually, and at incomes higher than \$120,000, the maximum annual loan is \$7,500 for those receiving need-based aid.

Results from Cooperative Institutional Research Program (CIRP) surveys administered to incoming freshmen each year indicate that the majority of Cornell students experience “some” or “major” concerns about their ability to finance their college education. Data from the Enrolled Student Surveys in 2003 and in 2007 similarly suggest that most undergraduate students feel that the impact of financing their education has been “considerable” or “severe” on their families.

Although these data are a concern, it is important to put them in context. This is possible because Cornell administers the largest share of student surveys in consortium with other highly selective, research universities. Peer comparisons suggest that financial strains are not uniquely Cornelian. For example, the percentage of Cornell seniors who report they are “generally” or “very” satisfied with the quality of the financial aid office, the services they receive from this office, and the actual financial aid awards received compares favorably with students from peer institutions—especially those with which we most closely compete in the admissions process.¹⁹

5.2.3 Funding of Graduate Students

The funding of graduate students is complex and reflects the breadth of programs at Cornell. Each discipline (humanities, biological sciences, physical sciences and engineering, social sciences) has developed a funding model that best suits the needs of its students and reflects the reality of resources available to the program. For example, in the humanities—which have little opportunity for external grant dollars but support large undergraduate enrollments—students receive three or more years of teaching assistantship and two years of fellowship (to provide relief from teaching responsibilities). In the physical sciences and engineering, faculty rely primarily on external grants (government or industry) to provide Graduate Research Assistantships (GRAs). Within the

¹⁹ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=379; “SS FA award,” “SS FA office,” and “SS FA services” tabs.

social sciences and biological sciences, specific areas of research may have very different funding models, relying on combinations of fellowships, training grants, teaching assistantships, and research assistantships. While faculty acknowledge that more fellowships would be desirable in every field, the general consensus is that the differing funding models reflect a desirable flexibility to support students in the most appropriate manner based on the resources available and the particular needs of students and faculty members.

Cornell has made equitable and competitive funding packages a priority. Nearly all (97%) of on-campus PhD students receive funding for their studies, for example. The Board of Trustees mandates competitive funding, setting annual stipend levels designed to keep Cornell at the median of the peer group (University of California, Berkeley; Brown; Chicago; Columbia; Harvard; Massachusetts Institute of Technology; University of Pennsylvania; Princeton; Stanford; and Yale).²⁰ Student funding packages also include 12 months of individual student health insurance.

In addition to department- or college-funded fellowship awards (supported by endowments or government funds, such as Foreign Language and Area Studies awards), the Graduate School itself annually awards about 290 fellowships. Of these, the majority are two-year awards: 120 Sage Fellowships in the humanities and endowed-college social sciences; 30 SUNY Diversity Fellowships; and 40 Sage Diversity Fellowships. The remainder (about 100 annually) are one-year Cornell Fellowships in the biological and physical sciences or contract-college social sciences.

The largest problem with the existing funding model is the need for more fellowships in all fields and disciplines. In particular, endowment funds

²⁰ Anti-trust law prohibits Cornell from sharing information about future year stipends with peer institutions, so the actual method for setting stipends involves reviewing peer data for the prior year, checking the increases that have occurred within the peer group over the past five years or so, then making a projection about what increase will be necessary to keep Cornell's stipends near the peer group median, provided the current-year peer group increase averages out the same as in the past.

are desperately needed at both the college and university levels to reduce the reliance on general-purpose funds.

Because some fields have fewer opportunities for external funding than others and teaching assistantships are not available in all departments, the number of packages available in support of graduate students in similar fields varies. For example, in the three fields where students can study economics (Applied Economics and Management; Economics; and Policy Analysis and Management) the funding sources, policies, and support packages can vary significantly. The field of Economics admits a relatively large cohort of students (typically 15–20) into a straight PhD option with approximately half of the students receiving a five-year guarantee, including two years of fellowship funded by the General Purpose budget. In Applied Economics and Management, a large number of students are admitted to a self-pay MS program which serves as a feeder for the PhD program. MS students then compete for a limited number of fully funded PhD slots. In Policy Analysis and Management, a smaller number of students are admitted directly into a PhD program with grant funding guaranteed. Applicants may be unaware that financial support can differ in related fields, even though the professor with whom they plan to work is a member of the relevant fields. Funding problems also arise if faculty extend too many admissions offers, enrolling more students than they have the capacity to support. In recent years, however, there has been a significant push to eliminate “self-pay” admits to avoid the complications associated with enrolling a larger number of doctoral students than can be supported.

A related problem occurs with “unilateral admits” — students whose admission is based on advocacy by a single faculty member who guarantees financial support from individual funds without a back-up guarantee from the field. This practice exists in the physical sciences and some other fields in which faculty rely on graduate student researchers to fulfill sponsored project obligations. When a single faculty member makes the admission decision—even though that decision is officially approved by the admissions committee—the student may feel bound to that person and may find it difficult to move to another professor if the relationship to

the first sours. Qualified students may be forced to leave the program if other funding cannot be found.

5.2.4 Funding of Professional Students

The Law School awards institutional grants based on a combination of merit and need. In 2010 almost half of the entering class received such grants, averaging over \$14,000. Each applicant submits a financial aid application that is processed by NeedAccess, a web-based financial aid management tool.

The Johnson School offers Park Leadership Fellowships to up to 25 entering students each year. The fellowship is a full-tuition grant plus a stipend. In addition, the Johnson School has over \$1 million in merit-based scholarship funds to award each year to new and returning students. The school provides partial scholarships to a substantial percentage of its students. Almost 30% of Johnson School students receive some scholarship assistance.

At the College of Veterinary Medicine, approximately \$1.3 million of endowment earnings is used for financial aid. The recent decline in earnings has been offset with tuition and previously accumulated earnings to maintain a stable financial aid budget. Most underrepresented minority students accepted into the DVM program are offered a SUNY Diversity Fellowship. While loans and family contributions still represent the major sources of money for veterinary students, increasing available grant and scholarship moneys has been a major fundraising priority for the past several years.

At Weill Cornell Medical College, total student costs, and average unit loan levels rank in the lower third among peer institutions. The unit loan (the amount students must borrow before receiving a scholarship/grant) has shown moderate increases since 2001, going from a low of \$18,000 to the current high of \$26,985. As costs increase, the debt burden for students has risen. The most recent graduates (AY 2009) who received financial aid had an average debt of \$129,571.²¹

²¹ For more information see the WCMC self-study https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=372

5.2.5 Recruitment Efforts for Underrepresented Minorities

In addition to financial aid policies that allow economically disadvantaged students to attend Cornell, ongoing initiatives at the university level and in the individual colleges are aimed at recruiting underrepresented minority (URM) students.²² For many years, the Undergraduate Admissions Office has relied heavily upon the purchase of student names from College Board (students who had taken the PSAT). This general strategy has been enhanced in recent years, and Cornell now acquires lists of minority students who had taken other college entrance exams and lists from several national programs, including Venture Scholars, National Achievement, Washington Metro Scholars, National Hispanic Recognition Program, National LEAD, and Ron Brown Scholars.

Additionally, the Undergraduate Admissions Office began developing a database of Community Based Organizations (CBOs) and independent agencies that serve primarily low-income and underrepresented students. Over the past several years, this database has grown to several hundred and has served as a way to communicate directly with individuals who are actively promoting the admission of minority students to highly selective institutions. Not only are these organizations sponsoring invitation-only college fairs and arranging for students to visit campus, but they also guide students through the application process. Over the past few years, the undergraduate admissions office has hosted workshops around the country for CBO and agency representatives and has also brought representatives to Cornell to participate in “Selection Institutes”. Both opportunities serve to educate representatives on the educational preparation necessary for students to succeed in the admissions process and at Cornell. In addition, Cornell participates in the New York State Opportunity Program funded partially by the state, which provides programming funds and some financial aid targeted toward lower income, underrepresented minority, and 1st-generation students who are New York State residents.

²² At Cornell, URM refers to students who are (a) U.S. citizens or permanent residents and (b) self-identified as one or more of the following: African-American, Hispanic-American, American Indian, or Native Hawaiian/Pacific Islander.

Cornell has seen a significant increase in undergraduate applications from all major racial/ethnic groups in recent years, as have peer institutions. At Cornell, between 2003 and 2009, applications from African-Americans have increased 116%, American Indians 92%, Hispanic-Americans 117%, and bi/multicultural underrepresented students 197%.²³

The provost's presentation to the Board of Trustees, "Admissions, Climate, and Retention: Race and Ethnicity," provides trend data highlighting undergraduate admissions and graduation rates for selected populations.²⁴

At the graduate level, traditionally underrepresented students have been reached through

- recruiting fairs at other institutions and on-site recruiting events at targeted universities, including schools in Puerto Rico
- publications disseminated at events detailing resources for minority students
- a phone-a-thon, in which currently enrolled graduate students (typically representing minority groups) contact admitted minority students to answer questions and encourage enrollment
- collaboration of recruiters on campus to streamline information and efforts
- providing support to the American Indian Program for their recruiting efforts
- providing support for fields to bring minority students for campus visitation

Cornell is also represented at a variety of conferences and symposia that target minority candidates, including the Instruction and Recruitment of Teachers conference, the Grad Horizons conference for minority students, and the Annual Biomedical Research Conference for Minority Students.

Senior administrators also play a role in recruiting minority candidates at the graduate level. For example, the associate dean for academic affairs in

²³ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=400

²⁴ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=405

the Graduate School meets individually with students during their field-sponsored visit to campus and serves as the institutional coordinator for the Leadership Alliance Summer Research Program (see below, “Underrepresented Students: Strategies for Success”), working closely with the students for the summer.

There is some evidence these efforts have paid off. Between 1994 and 2000, the Graduate School received 400–500 applications a year from underrepresented minority students; since that time, URM applications have steadily increased and reached nearly 700 in fall 2008 (the most recent year available).²⁵ Applications from white and undeclared race students were largely flat. Reflecting that positive trend, underrepresented minority matriculations have also increased over this interval.

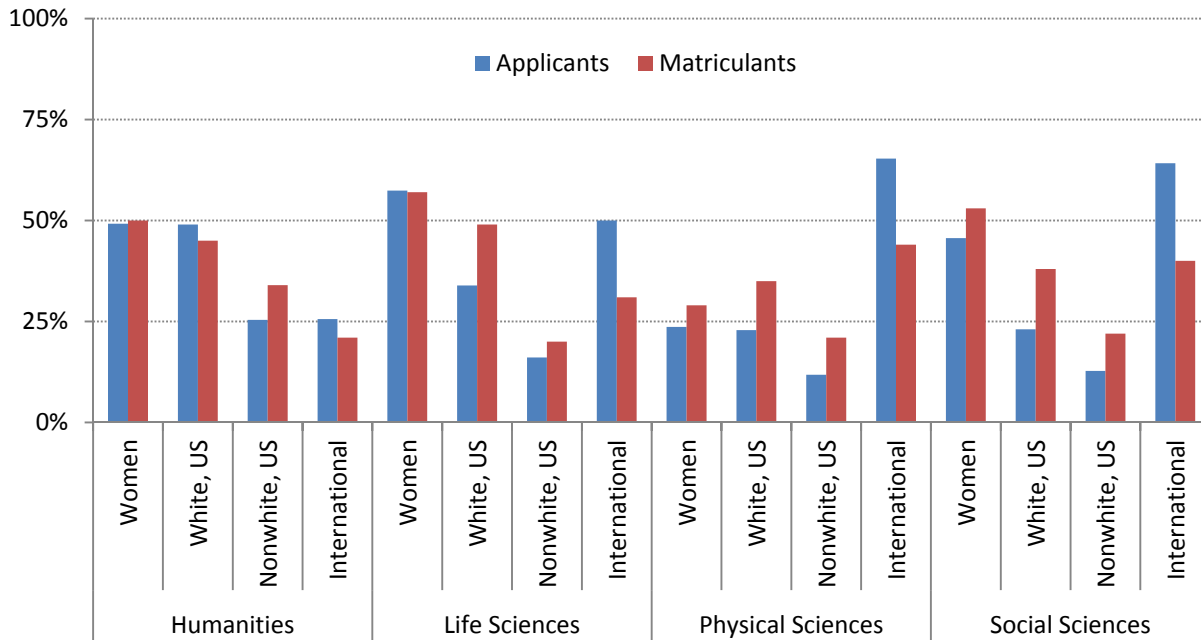
At the graduate level, students from other countries are a major component of enrollment: while about 10% of our undergraduates are foreign nationals, just over a third of graduate/professional students are citizens of other countries.²⁶ The diversity of the graduate applicant pool and the subsequent matriculant population varies substantially by discipline: in the sciences, half of all applications to the graduate school are from international students; in the humanities, it is closer to a quarter (see Figure 5.4).

The professional schools also encourage minority applicants. The Law School invites applications from underrepresented groups using a national database maintained by the Law School Admission Council. Among other initiatives, the school recruits at schools and in regions with large populations of underrepresented groups and hosts a diversity weekend in conjunction with an open house for admitted students.

²⁵ See p. 15 of http://www.gradschool.cornell.edu/pubs_and_forms/pubs/Annual_Report_2008_09_Final.pdf.

²⁶ Within the University Factbook, see <http://dpb.cornell.edu/documents/1000437.pdf> and <http://dpb.cornell.edu/documents/1000199.pdf>.

Figure 5.4. Applicants (fall 2007) and matriculants (fall 2008) to graduate-level research degree programs (including master's), by sex, race/ethnicity and citizenship



At the Johnson School, programs to reach prospective students of color and encourage them to apply include partnerships with the Consortium for Graduate Study in Management and Management Leadership for Tomorrow (MLT); the Johnson Means Business annual recruiting weekend; and Mosaic events to welcome new and returning students and facilitate their networking with each other, faculty, and staff. The Johnson School also works with student clubs and organizations such as the Black Graduate Business Association (BGBA), and Latino Business Students Association (LBSA) to provide support for members and events.

At the Vet College, recruitment of underrepresented minorities includes outreach to high school and college students. At the high school level, activities include travel to talk with students about veterinary medicine careers; representation at conferences and symposia for minority students interested in health careers and/or biomedical sciences; an electronic pre-vet newsletter; and the opportunity to communicate with a current DVM student through the Admissions Student Ambassador Program. At the

undergraduate level, recruitment efforts include presentations at colleges with large minority populations; development of links with minority pre-vet groups; and presentations at meetings of colleges that participate in the Collegiate Science and Technology Program, which aims to increase the number of underrepresented minority students who pursue careers in health sciences or related professions.

At Weill Cornell Medical College, as a result of robust pipeline programs that have been in existence for 30 years, 20–25% of each medical student class is from groups underrepresented in medicine. The patients and staff at New York–Presbyterian Hospital and affiliated institutions are also remarkably diverse, reflecting the New York City populations.

5.3 Graduation and Completion

5.3.1 Undergraduate Graduation Rates

Of the first-time freshmen entering Cornell in fall 2003, 92% earned a baccalaureate degree within six years, an increase of nine percentage points over the class that entered in fall 1980. As illustrated in Table 5.3, six-year graduation rates have consistently improved since 1980 for six of the seven undergraduate colleges; rates have not significantly improved within Architecture, Art, and Planning, a small college housing Cornell's only substantial five-year baccalaureate program.²⁷

As at many institutions, graduation patterns differ somewhat by the race/ethnicity of students (see Figure 5.5). The differences by race are larger in the four-year graduation rate than in the six-year graduation rate; for example, 87% of white freshmen in 2003 graduated within four years, as compared to just 75% of African-American freshmen—a gap of 12 percentage points. After six years, the gap was reduced to 6 points, with 92% of white U.S. citizens and 86% of black U.S. citizens graduating.

²⁷ See pages 4-6 of <http://www.irp.cornell.edu/documents/1000403.pdf>

Table 5.3. Six-year graduation rates by matriculating college

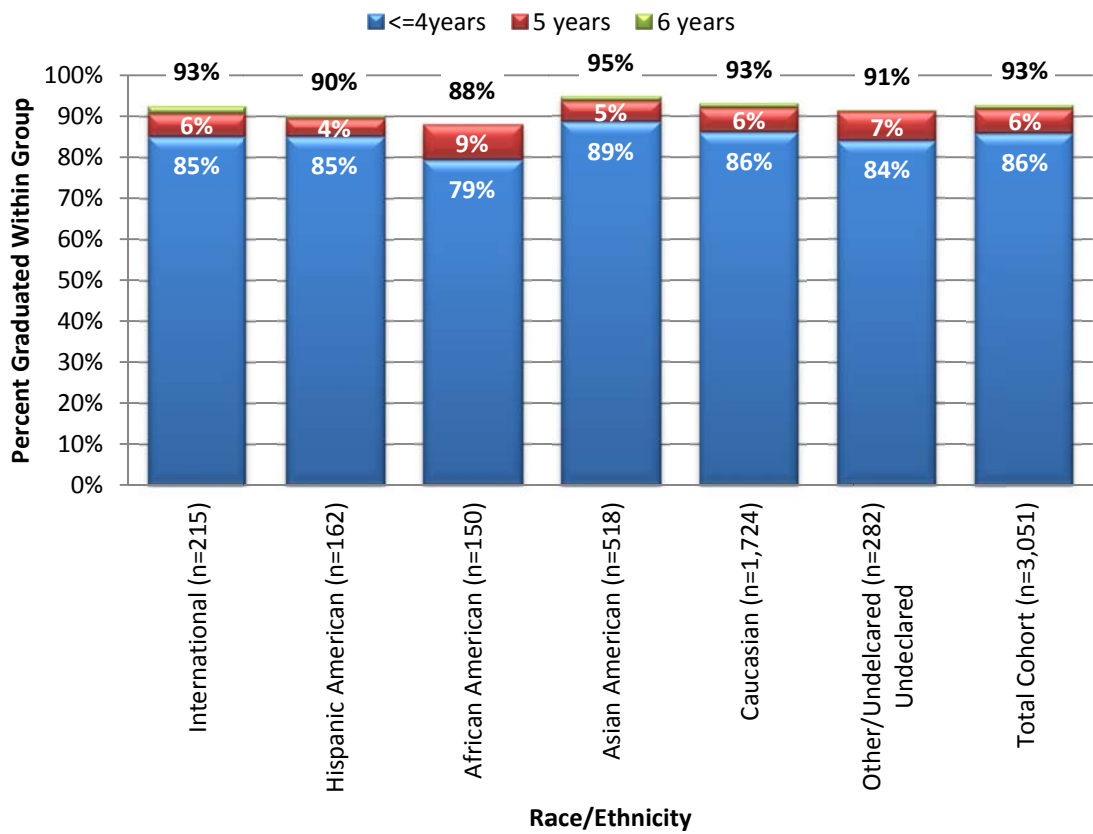
First-time freshmen entering in:							
Entering fall:	AAP	A&S	Eng.	Hotel	CALS	HE	ILR
2004	88.7%	92.8%	92.5%	90.9%	92.0%	94.7%	99.4%
2003	66.7%	92.0%	92.2%	94.2%	93.0%	95.9%	94.4%
2002	85.2%	93.7%	91.4%	92.7%	93.3%	95.8%	95.9%
2001	68.1%	92.4%	93.7%	90.1%	93.6%	93.4%	93.2%
2000	78.3%	92.0%	92.2%	90.5%	93.5%	95.7%	94.4%
1999	76.5%	92.4%	93.7%	92.2%	93.0%	97.8%	94.0%
1998	81.1%	90.7%	93.7%	94.9%	94.8%	96.4%	94.7%
1997	77.0%	91.5%	91.7%	92.8%	94.4%	95.8%	92.6%
1996	69.7%	88.7%	89.9%	91.8%	91.9%	95.0%	95.1%
1995	73.3%	92.4%	88.3%	89.0%	93.6%	94.3%	93.1%
1994	68.1%	89.8%	90.3%	85.5%	93.2%	92.0%	93.7%
1993	81.1%	90.1%	90.3%	88.4%	93.8%	96.0%	95.0%

Since 1995 the four-year graduation rates for white and Asian students have remained relatively stable at or just above 85%. The four-year graduation rates for Hispanic and black students have been somewhat less stable over this period, but have trended upward overall.

In general, women graduate at a slightly higher rate than men, but the gender gap is quite modest in size for all racial/ethnic groups *except* African-Americans. Among 2003 freshmen, the six-year graduation rate was 92% among African-American women but only 75% among African-American men.

Transfer students graduate at a rate comparable to that of the general student population. As noted above, about 90% of external transfers entering in the 2003–2004 academic year graduated within four years of entering.

Figure 5.5. Fall 2004 entering students' graduation in 4, 5, and 6 years by race/ethnicity



While there are some differences by race and ethnicity that cause concern, Cornell's graduation rates are exceptionally high. Institutional efforts to address the graduation rate gap are described below (see "Under-represented Students: Strategies for Success").

5.3.2 Completion Rates in the Graduate School

As illustrated in Table 5.4, Cornell's graduate programs display higher completion rates and shorter time-to-degree than the national averages by discipline area.²⁸ While there are many factors in degree completion, these

²⁸ Doctorate Recipients from United States Universities, Summary Report 2005, Survey of Earned Doctorates. https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=408

data suggest that Cornell's graduate field system serves students reasonably well.²⁹

Table 5.4. Completion rates and time to PhD by discipline

Discipline area	Completion rates		Time to degree (years)	
	Cornell ^a	National ^b	Cornell ^a	National ^c
Biological sciences	78%	63%	5.5	7.0
Humanities	64%	53%	6.6	9.7
Physical sciences & engineering	74%	64% ^d 55% ^e	5.4	7.2 ^d 6.9 ^e
Social sciences	68%	56%	5.6	8.2

^a Cornell University Graduate School 2005-2006 Annual Report

^b Ph.D. Completion and Attrition, Analysis of Baseline Program Data from the Ph.D. Completion Project, Council of Graduate Schools, 2008

^c Doctorate Recipients from United States Universities, Summary Report 2005, Survey of Earned Doctorates

^d Engineering

^e Math and physical sciences

However, while such comparisons may help identify severely underperforming programs, better data are required to inform effective decisions. Degree completion data from select peers could be helpful in comparing programs and assessing quality, but those data are difficult to access on a regular basis. The recently completed NRC Assessment of Research Doctorate Programs project allows us to examine peer data in more detail—and Cornell developed a public, on-line tool to make that analysis easier³⁰—but as other critics have noted, the NRC-collected data were already dated at the time of the public release.

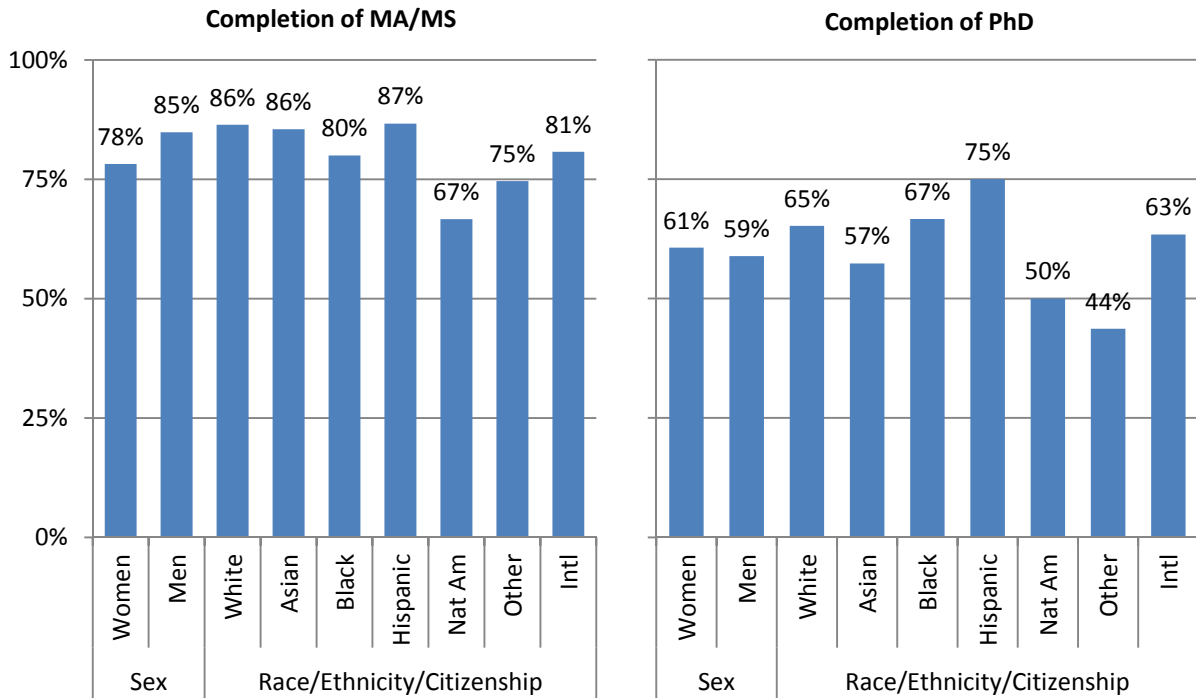
Because peer data are scarce, Cornell relies most heavily on internal comparisons of fields within their discipline groupings within the university. This approach has been used with support from a Council of Graduate Schools Completion grant. Fields that show significant negative deviation from the mean for the overall discipline area within Cornell have been selected for further study and interventions.

²⁹ The working group's interview with the faculty-elected General Committee of the Graduate School in 2009 confirmed that this is the generally held view of the field system across campus.

³⁰ This analysis tool was developed by the office of Institutional Research & Planning in collaboration with Cornell's Key Performance Indicators (KPI) project <http://testsvr1.kpi.cornell.edu/views/NationalResearchCouncilReports2/StatsbyFieldPOST>

Internal-to-Cornell comparisons of research degree completion by gender, and race/ethnicity/citizenship are illustrated in Figure 5.6. In these figures, it is important to note that the sizes of the groups vary substantially. For example, only nine doctoral students in this analysis of PhD completion self-identified as Native American. Further, 15–20% of these students did not self-identify any race or ethnicity and are included in the “other” category. However, these data suggest that timely degree completion rates are quite high among black, Hispanic, and international students, sometimes exceeding that of white American students.

Figure 5.6. On-time degree completion of research degrees at the master’s and doctoral levels, by gender and race/ethnicity/citizenship



Notes: On-time degree completion is defined as 3-years at the master’s level, 6-years at the doctoral level in the physical sciences, and 7-years at the doctoral level in all other disciplinary areas. For more details on this analysis, see https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=411

Information provided from the most recent Survey of Earned Doctorates (SED) also suggests that Cornell’s PhD recipients are more successful than PhD’s from other “very high research institutions” in finding positions

after graduation. For example, results from the 2009 SED indicate that 76% of our new PhDs have definite employment plans (including post doctoral positions), as compared to 69% of graduates from peer institutions.³¹

In general, because of the decentralized field system model, the role that central units (such as the Graduate School or the colleges) can play in assessing and improving admission processes—and associated educational outcomes such as completion or time-to-degree—is limited to financial controls or providing training and professional development opportunities for graduate students and faculty to better understand factors affecting successful completion of graduate studies. Both the annual teaching assistantship allocations from the colleges to departments and the fellowship allocations from the Graduate School—conducted in coordination with the individual colleges—are influenced to some extent by data on selectivity in admissions (measured both by GRE scores and the percentage of applicants admitted), the percentage of admitted students who decide to matriculate (yield), time-to-degree, attrition, and job placement. There are factors, however, that limit the effectiveness of these controls:

- Programs with weaker standards may graduate students quickly or have higher completion rates, so reliance upon attrition and time-to-degree measurements alone can be misleading.
- The allocation of teaching assistantships corresponds most directly to undergraduate enrollments, not graduate enrollments. To avoid disruptions to the undergraduate experience, there are rarely radical shifts in teaching assistantship allocations to reward excellence in a particular graduate program.
- Cornell's land grant mission responsibilities and the State of New York's interests in particular areas of study influence resource allocation, so investment levels may not be related only to the quality of the graduate program.

³¹ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=412 for more information on post-graduate plans.

As a result of these factors, changes in resource allocation—the primary means by which a college can influence graduate admissions—tend to be small.

5.4 Advising, Well-Being, and Community

5.4.1 Undergraduate Advising

With seven undergraduate colleges and nearly 80 majors from which to choose, Cornell students face an enormous range of academic options.³² Each college has its own distinctive advising system and structure to assist students as they navigate through these options. The systems range from those having faculty acting as primary academic advisors (as in Arts and Sciences, Engineering, and CALS) to having professional staff as advisors (ILR), though in practice all colleges have a blend of faculty and staff advising. Advising needs differ somewhat in colleges where students enter without a declared major (A&S, for example) and colleges such as CALS that accept students directly into a major.³³

Beyond the college advising structure, a notable source of undergraduate advising is the Biology Advising Center, part of the Office of Undergraduate Biology. Students can major in biology through either CALS or A&S, and the center's staff can guide them from their initial application to the major through planning for graduate school.

Survey data suggest that student satisfaction with undergraduate advising leaves room for improvement, especially in pre-major advising. Data from the 2010 Senior Survey, for example, indicate that 45% of Cornell students

³² See “Undergraduate Major Fields of Study” at <http://www.cornell.edu/academics/majors.cfm>.

³³ See advising office home pages for each college:

Agriculture and Life Sciences: <http://www.cals.cornell.edu/cals/current/advising/index.cfm>

Architecture, Art and Planning : <http://www.aap.cornell.edu/student-services/>

Arts and Sciences: <http://as.cornell.edu/academics/advising/index.cfm>

Engineering: <http://www.engineering.cornell.edu/resources/advising/index.cfm>

Hotel Administration: <http://www.hotelschool.cornell.edu/academics/ugrad/advising.html>

Human Ecology: <http://www.human.cornell.edu/student-services/advising/index.cfm>

Industrial and Labor Relations: <http://www.ilr.cornell.edu/student-services/>

who had used pre-major advising were either “generally dissatisfied” or “very dissatisfied.” In Arts and Sciences, more than 50% of students answered in this way. However, this pattern is quite consistent with the pattern at peer schools.³⁴ For example, 71% of our seniors indicated that they were “somewhat satisfied” or “very satisfied” with academic advising in their majors, as compared to 70% of seniors from a small group of very elite institutions with whom we share data. Nevertheless, improving academic advising at all levels is an institutional priority at Cornell.³⁵

Anecdotal evidence—such as that gleaned from open-ended comments on student surveys—suggests that students are frequently disappointed by faculty members’ engagement in fine-grained, detailed analyses of bureaucratic rules and processes, such as whether a particular course addresses a particular distribution requirement. Colleges and the university have taken steps to ameliorate these moments of disconnect by designing (in some cases) and implementing computer systems that provide students, faculty, and staff with up-to-date and accurate information about courses, requirements, and student progress toward fulfilling degrees. Distributed Undergraduate Student Tracking (DUST) is one such degree audit and advising review system, designed and implemented by CALS and A&S. Other colleges have expressed interest in implementing DUST as well. With the final phase of the university’s implementation of Peoplesoft, Cornell hopes to launch a campus-wide system for tracking students’ degree progress. In other words, the university will look to automation to take on the “bean-counting” aspects of advising, freeing the faculty and staff advisors for more of the substantive intellectual engagement that typifies the successful advising relationship.

5.4.2 Relationship between Admissions and Advising

In at least five of the undergraduate colleges at Cornell, admissions staff and advising staff overlap to a large degree. A great benefit is that

³⁴ See pages 2 and 3 of <http://dpb.cornell.edu/documents/1000456.pdf>

³⁵ For example, see the recent report from Vice Provost for Undergraduate Education, https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=521

information on students' academic progress that advisors monitor can be used to assess and improve admissions processes. For example, when an applicant indicates an interest in a mathematically challenging field like physics, admissions staff can assess the applicant's high school curriculum, in addition to the other elements of an application, to ascertain whether he or she is prepared. When students arrive on campus, advising staff, armed with strong familiarity with high school curricula, can assist them in judicious course selection.

The close collaboration between (and overlapping of) advising and admissions staffs has been particularly useful for students who are identified as university priorities, especially underrepresented minority students, first-generation college students, and recruited athletes. Many of these students come from under-resourced high schools and have had few opportunities for advanced academic work. Advising staff in collaboration with other university offices and resources work with these students to make certain that the deficiencies of their high school preparation are addressed by the course selections for their first semesters at the university.

5.4.3 Career Services

Cornell Career Services (CCS) educates students about career planning and the job-search process and promotes linkages between students and employers and graduate/professional schools. In line with this mission, the CCS supports students as they progress through three stages of the career-development model: Understand Yourself (interests, values, strengths, goals); Explore Options (career research, networking, activities, internships); and Take Action (job and graduate-school applications, letters, resumes, interviews).

Cornell Career Services has central offices in Barnes Hall as well as career offices in each of the undergraduate colleges. The Law School, Johnson School, College of Veterinary Medicine, and several professional master's programs have their own career offices or career-related positions that are independent of CCS. There is currently unmet demand for career services among students enrolled in the Graduate School, particularly those who

choose not to pursue an academic career track and those in certain expanding master's programs.

At the Weill Cornell Graduate School of Medical Sciences (WCGSMS), the Career Pathways seminar series introduces students to a wide range of career opportunities such as academia, biotechnology, consulting, investment banking, private equity, patent law, publishing, pharmaceuticals, and government service. Consulting firms such as McKinsey and Boston Consulting come on campus to recruit WCGSMS students. WCGSMS Alumni actively participate in these seminars by giving advice and sharing their experience.

Particular strengths of CCS include the alumni-shadowing programs that enable students to spend time in the workplace with alumni and other Cornell friends to explore career fields; the Health Careers Program, coordinating a comprehensive cross-campus advising network and a dossier preparation service; graduate school advising; prestigious fellowships advising and application support; readily available career advising, through daily walk-ins and scheduled appointments; and robust employment services, offering career fairs, recruiting consortia, and on-campus recruiting.

Use of services is high. For example, in a recent year CCS staff met individually with students in nearly 14,000 appointments or walk-ins and offered 500 programs and presentations as well as special events such as career and graduate/professional school fairs. In the class of 2010, 69.1% of seniors surveyed reported being generally or very satisfied with career services on campus. This compares favorably to 56.4% at other Ivy League institutions.

Cornell graduates fare well in their postgraduate endeavors. Bachelor's degree recipients in the Class of 2009 reported activities as follows: 50.0% employed, 34.3% attending graduate school, and 15.7% engaged in other endeavors (pursuing graduate admission or employment, volunteering, travel, etc.). The acceptance rate for Cornell applicants to law schools in 2009 was 92% (compared to a national average of 67%), and for Cornell applicants to medical schools, 70% compared to 44%.

5.4.4 Underrepresented Students: Strategies for Success

Cornell has numerous campus-wide programs that address the challenges known generally as the achievement gap.³⁶ For many years, a breadth of services has been overseen by the Office of Minority Educational Affairs (OMEA), which sought to facilitate academic and personal adjustment to Cornell and to increase the graduation rate of minority students. The university is working, however, to revise that structure to increase its effectiveness in delivering services. The core of OMEA is evolving into the Office of Academic Diversity Initiatives— led by the assistant vice provost for academic diversity initiatives and reporting directly to the vice provost for undergraduate education—and will provide leadership and coordination for initiatives designed to promote academic achievement of the undergraduate student body. This office will partner with another new position— associate dean of students for intercultural programs—to address broader issues of diversity, community-building, and inclusion across campus. The new associate dean of students will operate out of a newly renovated facility at a prominent location on North Campus.³⁷

The Office of Academic Diversity Initiatives will oversee and coordinate the New York State Opportunity Programs Office—which includes the Education Opportunity Program (EOP), the Higher Education Opportunity Program (HEOP),³⁸ the Collegiate Science and Technology Entry Program (CSTEP), and the Cornell Professional Opportunities Program (CPOP)³⁹—as well as provide direction for the Committee on Special Educational Projects (COSEP).⁴⁰

Other programs to address the achievement gap at Cornell include:

- **Biology Scholars Program.** Based in the Office of Undergraduate Biology in collaboration with the College of Agriculture and Life

³⁶ For an investigation of the achievement gap by Cornell's deputy provost and committee, see David Harris et al., *Eliminating Racial Disparities in College Completion and Achievement: Current Initiatives, New Ideas, and Assessment* (A Teagle Foundation Working Group White Paper, September 2006). http://www.teaglefoundation.org/learning/pdf/2006_cornell_whitepaper.pdf.

³⁷ <http://www.news.cornell.edu/stories/Sept10/626Thurston.html>

³⁸ <http://www.omea.cornell.edu/heop/>.

³⁹ <http://www.omea.cornell.edu/cstepcpop/>.

⁴⁰ <http://www.omea.cornell.edu/about/index.cfm>.

Sciences and the College of Arts and Sciences, this program is designed to support academic excellence for underrepresented students majoring in biological sciences.

- **Mellon-Mays Undergraduate Fellowships.** The Mellon-Mays program was established in 1988 in response to a nationwide concern with increasing the number of higher education faculty members from historically disadvantaged groups. The program aims to encourage Native Americans, Latinos/as, African-Americans, and other U.S. citizens and permanent residents who are committed to eradicating racial disparities to pursue doctoral degrees in anthropology, area studies, art history, classics, computer science, demography, earth science, ecology, English, ethnomusicology, foreign languages and linguistics, geology, history, literature, mathematics, musicology, philosophy, physics, political theory, religion, and sociology.
- **Leadership Alliance.** The mission of the Leadership Alliance is to support and develop young scholars from groups traditionally underrepresented in the academy. Cornell was one of the 13 founding members of the alliance, which has now grown to 31 members. Since 1990 Cornell has offered summer opportunities for students in all disciplines studied at Cornell, and hosts programs both in Ithaca and in New York City at WCMC. Eleven of the 88 students who have spent a summer here have returned to matriculate in a Cornell graduate program.
- **Pre-freshman Summer Program.** The Pre-freshman Summer Program (PSP) is designed to help students prepare for the challenges of the freshman year at Cornell. Participants must be selected by college or special-program offices; some students are required to attend as a condition of admission, and others are invited to participate. The course schedule for each student is determined by the student's college, and field trips, guest lectures, and social and cultural activities are included. The program covers tuition, fees, room, and board for all students.

In addition to these university-wide programs and initiatives, each of Cornell's undergraduate colleges have staff who work to promote the success of our diverse undergraduate population, particularly students from groups traditionally underrepresented in U.S. colleges and universities.⁴¹

Periodically, these programs work with the office of Institutional Research and Planning (IRP) to evaluate outcomes (such as grades and graduation rates) or examine perceptions (using survey data) associated with program participants in relation to other students. Sometimes completed as part of a larger program review, these assessments have been quite comprehensive, but there is no regular program of data reporting and analysis relating to these program offerings. An explicit charge of the new Office of Academic Diversity Initiatives is to work with IRP to monitor progress toward stated goals and to report progress regularly to the provost, the college deans, and the University Diversity Council.

5.4.5 Support for Students with Disabilities

Cornell's office of Student Disability Services has been providing reasonable accommodations for students with disabilities for decades and has well-established procedures to ensure that students with disabilities have the same exceptional opportunities as their peers.⁴² Cornell is responsible for and committed to providing equitable access to all of its programs, services, events, and meetings. The university is currently in the process of creating a campus-wide Disability Access Management Strategic Plan, including an Educational Programs and Services Plan, based upon the unique organizational structures of the individual schools and colleges. The Educational Programs and Services Plan will serve as a

⁴¹ For links to the college programs dealing with underrepresented students, see:

CALS: <http://www.cals.cornell.edu/cals/current/multipro/index.cfm>

AAP: <http://aap.cornell.edu/student-services/diversity/index.cfm>

A&S: <http://as.cornell.edu/information/diversity.cfm>

Engineering: <http://engineering.cornell.edu/diversity/>

Hotel: <http://www.hotelschool.cornell.edu/students/programs.html>

HE: <http://www.human.cornell.edu/administration/diversity/index.cfm>

ILR: <http://www.ilr.cornell.edu/student-services/advising/multicultural/>

⁴² See <http://sds.cornell.edu>

template to be adapted by each college/division. The purpose of the plan is to define compliance responsibilities; to make this information readily available to program planners (faculty, staff, and students); to make access information easily available to campus visitors and program participants; and to identify resources for disability access in courses, programs, workshops, services, meetings, and events.

5.4.6 Students in Trouble: Identification and Response

Cornell employs a campus-wide, community-based approach to identifying and supporting students who experience academic and/or personal difficulties.⁴³ During the past 10 years, the university has expanded considerably its support network, which is guided by the Council on Mental Health and Welfare.⁴⁴ President David Skorton's call to make Cornell "an ever more caring community"⁴⁵ reflects the view that support for mental health is vital to the learning mission of the university.

The university has developed multiple strategies for informing faculty, staff, students, and parents about the signs of distress and available campus resources. Mental health professionals have delivered presentations on student mental health to numerous academic departments and staff units. In response to research indicating that Cornell students are most likely to turn to friends and parents when facing personal difficulties,⁴⁶ educational resources targeting these groups have also been developed.

Within the colleges and professional schools, advising staff members monitor the academic progress of students. To identify potential problems early, academic deans systematically request information from faculty members regarding students whose performance or behavior is of concern. Faculty responses have been effective in identifying students who were beginning to struggle academically, including cases in which poor performance was the first indicator of a serious mental health problem. In

⁴³ See <http://www.gannett.cornell.edu/cms/campus/council/framework.cfm>

⁴⁴ See "Council on Mental Health and Welfare Commission and Charge" at <http://author.gannett.cornell.edu/campus/council/index.cfm>

⁴⁵ http://www.cornell.edu/president/speeches_2007_0818.cfm

⁴⁶ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=525

addition, each of the undergraduate colleges periodically (especially late in the semester) convenes a committee of faculty and staff who review the records of students experiencing academic difficulties. The committees make recommendations that may lead to placing students on academic warning or suspension.

The Graduate School uses a “case management” approach for students experiencing difficulties. Graduate students in distress may be identified by their fields or by concerned individuals on campus, or the student may self-identify by coming to the Graduate School for assistance. Once identified, the student is assigned to either the assistant dean for student life or the associate dean. These administrators work with a therapist at Gannett Health Services to ensure that students receive appropriate assistance and access to the full range of university resources as outlined in this section.

In 2005 the university established an Alert Team of key administrators who meet weekly to coordinate communication regarding students whose behavior has concerned members of the community.⁴⁷ The team serves as a bridge between student services offices, and between these offices and the colleges. In 2008–2009, the team reviewed 48 cases.

The Council on Mental Health and Welfare’s Mental Health Policy Group fosters development of policies and procedures that facilitate support for troubled students. In 2008 Cornell modified its interpretation of the Family Educational Rights and Privacy Act in order to facilitate communication with parents regarding students’ academic difficulties. This change has allowed designated faculty members and administrators to share academic information with parents of financially dependent students in exceptional cases, such as when a student demonstrates erratic behavior.

The university provides a range of support services.⁴⁸ Academic advisors and residence hall staff serve as a first line of support for many students who are contending with developmental or situational issues. The Learning Strategies Center is a key resource for students in need of academic support. For students with high levels of distress, Gannett

⁴⁷ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=526

⁴⁸ See, for example, the Notice & Respond website, <http://www.gannett.cornell.edu/notice/>

Health Services provides comprehensive health care, including Counseling and Psychological Services (CAPS). Between 1999 and 2009, the number of visits to CAPS each year doubled from approximately 10,000 to 20,000. In 2009, 14% of students utilized CAPS services. These figures are consistent with trends in higher education generally.

Innovations in Gannett services have fostered increased access to care for troubled students. In 2003 a CAPS phone triage system was implemented to assure contact with a counselor within 24 hours. Community Consultation and Intervention was developed to assist faculty and staff in dealing with students with mental health problems, and to reach out to students who are reluctant to seek services. The “Let’s Talk” program places counselors in locations around campus for walk-in hours. This approach has been effective in increasing utilization of services by students of color and international students, groups that report disproportionately high levels of emotional distress. In 2007, 55% of students using “Let’s Talk” were from these two groups, compared to 32% of students who received services in CAPS. In addition, regular screening of patients during primary medical care visits has been effective in identifying mental health problems among students who had not previously sought counseling.

Empathy, Assistance, and Referral Services (EARS) is a student-run organization that offers nonjudgmental, short-term counseling by skilled volunteers who have undergone a three-semester training program and have passed through a rigorous selection process. EARS counselors can provide referrals for services within the Cornell and Ithaca communities. Services are free and confidential. Anyone in the Cornell community is welcome to train to be a counselor. Due to the confidential nature of the service, all counselors are strictly anonymous. Working with an advisor from the Office of the Dean of Students, EARS counselors and trainers offer free, interactive workshops upon request for any campus group. Topics can be in any area related to human relations, communication, counseling, personal growth, or conflict management.

In the wake of the 2007 Virginia Tech tragedy, Cornell's strategic approach to student mental health was featured in both the *New York Times* and the *Wall Street Journal* as a model for other institutions to emulate.⁴⁹

Despite considerable attention to student mental health over the last decade, the Cornell campus was shaken by a statistically anomalous number of suicides in the 2009–2010 academic year. A total of six students ended their lives, with three suicides transpiring within a month in the spring semester. After consultation with experts and a review of the literature on suicide clusters, the university took the bold step of erecting temporary 10-foot chain-link fences along seven of the campus's bridges.⁵⁰ These have since been replaced with shorter, less aesthetically objectionable black wire fences, and in September 2010 the university contracted with an architectural firm to design permanent suicide barriers.⁵¹ In addition to these steps, President Skorton has called for the campus to take a fresh look at the academic policies of the university and the relationship between these policies and student stress.⁵²

5.4.7 The Role of Residences in the Student Experience

Cornell is a residential campus, but compared to our Ivy peers, a lower percentage of our undergraduates live in university-owned housing. As illustrated in Table 5.5, the percentage of students in university housing varies substantially by class year; essentially all freshmen live on campus, while most seniors do not. Much of the available off-campus housing is quite close to campus—such as in Collegetown, or just west of the West Campus House System.

⁴⁹ For Cornell's approach, see these news articles: *New York Times*: http://www.nytimes.com/2008/04/20/education/edlife/mental.html?_r=1&ex=1209355200&en=0ab634c28a7fe2fc&ei=5070&emc=eta1 and the *Wall Street Journal*: <http://online.wsj.com/article/SB119881134406054777.html>.

⁵⁰ <http://cornellsun.com/section/news/content/2010/03/29/university-installs-fences-campus-bridges>

⁵¹ <http://cornellsun.com/section/news/content/2010/09/02/cornell-selects-architect-permanent-bridge-barriers>

⁵² <http://cornellsun.com/section/opinion/content/2010/04/05/way-forward>

Table 5.5. Students living in university-owned campus housing, fall 2010

Year	Students in university housing
Freshmen	99%
Sophomores	56%
Juniors	26%
Seniors	11%
Graduate/professional	11%

Cornell manages approximately 6,370 undergraduate beds in traditional residence halls, program houses, and the house system on West Campus, with about 160 additional beds in university-owned cooperative houses. Freshmen as well as sophomores who want to live on campus are guaranteed housing, as are transfer students on campus for the first time. A smaller number of beds are available to upper-level students.

Evidence described in the 2009 Housing Master Plan⁵³ suggests that Cornell does not meet student demand for on-campus living and that undergraduates find the housing lottery a daunting and stressful process. Given the recent substantial investments in housing on campus coupled with the current fiscal environment, however, it seems unlikely that Cornell will commit to substantially increasing the number of on-campus beds in the short term.

North and West Campus Residential Initiatives

As described in Chapter 1, “Introducing Cornell University,” programs created on both North and West Campuses over the last decade are designed to promote and support student engagement with the intellectual life of the university. These programs create opportunities for students to participate in the governance and direction of their living communities, to interact in meaningful ways with faculty, to engage in service, and to build community within the residential environment. The “living-learning environment” established by these programs is described more fully in Chapter 7, “Educational Offerings.”

⁵³ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=293

The North Campus and West Campus Residential Initiatives each have an explicit research and evaluation component. On North Campus, a staff position has been dedicated to analyzing data about various aspects of the residential initiative. On West Campus, beginning in 2005, the West Campus Research and Evaluation Committee (WC-REC) created a research and evaluation plan drawing on a general model of student development and linking data analysis of institutional surveys (such as the Enrolled Student Survey, the Housing Choice Survey, or other Cornell-administered surveys) to the goals of West Campus. As West Campus matures, we anticipate building a more robust and comprehensive body of evidence to describe and assess the residential experience.⁵⁴ In addition, senior administrators and trustees periodically request scheduled or ad hoc reviews of residential life, including reviews of Cornell's program houses and the Greek houses.

Greek Life

Cornell's Greek system has been an integral part of the residential community since six fraternal societies were established in 1868, the year that the university admitted its first students. In 1881 the first sorority was established at Cornell. Today approximately 30% of undergraduates are members of chapters within the Interfraternity Council, Panhellenic Council, or Multicultural Greek Letter Council. Cornell's current Greek system is one of the largest in the country, with 65 chapters and 49 residences. Not all members live in official fraternity or sorority houses, but Greeks who live in independent off-campus residences sometimes cluster together in apartments or houses that begin to resemble satellite facilities.

Cornell administrations have consistently affirmed their support for the Greek system as a valued residential option for undergraduates. Through the Office of Fraternity and Sorority Affairs (reporting to the dean of students), the university officially recognizes chapters and provides staff

⁵⁴ See "What Do We Know About How Our Residential Programs Are Working and Issues for the Future" (Presented to the Trustee Committee on Student Life, January 24, 2008) https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=438 and "Sophomore Year Experiences of the First Sophomore Cohort in Alice H. Cook House," p. 6. https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=437 .

to advise the system. The relationship may be characterized as a partnership between the university and the 65 self-governed small residential communities. Greek life at Cornell has promoted student initiative and created important leadership opportunities for its members, but the university's influence on the quality of fraternity and sorority experience is limited.

The Greek system can provide opportunities for leadership development and community service, and membership can foster a sense of connection that may otherwise be difficult to establish within Cornell's large student body. The social ties created through fraternity or sorority life can be the most meaningful for members during their undergraduate years and often persist well beyond graduation. At the same time, the system has deep-rooted cultural problems—hardly unique to Cornell:

- **Hazing.** Six chapters have been found responsible for hazing during the past decade.⁵⁵
- **Compromised academic achievement.** Analysis from the Office of Institutional Research and Planning found that the grade point averages of male students engaged in the Greek “rush” period (primarily during the spring of the freshman year) decline significantly. Further, the GPAs of those men who join fraternities do not rebound and remain lower compared to male non-members throughout their undergraduate education (GPAs of sorority members, by contrast, do not differ significantly from non-members).⁵⁶
- **Drug and alcohol abuse.** High-risk drinking, other drug use, and related consequences (e.g., vandalism, drunk driving) occur among fraternity and sorority members at two to three times the level reported by non-members.⁵⁷

⁵⁵ See “Fraternity and Sorority Committee One-Year Progress Report,”

https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=527

⁵⁶ See “Creating Chapters of Excellence” at http://author.dos.cornell.edu/dos/cms/greek/info_for_students/chapters_excellence/index.cfm.

⁵⁷ See “Behaviors Among Cornell Fraternity and Sorority Members” at https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=528

In response to these and related findings, student and alumni leaders worked with university officials on a plan for addressing challenges within the Greek system beginning in the fall of 2009.⁵⁸ These efforts complement the system's Creating Chapters of Excellence initiative launched in 2003 to increase mentoring of chapter members, foster cultural and educational programming, and improve chapter operations.

In October 2010, the Board of Trustees amended the existing Recognition Policy for Fraternities and Sororities⁵⁹ such that recognized organizations

- Shall refrain from using, furnishing, or having alcohol and other drugs present during the recruitment, education, initiation, or intake of new members;
- Will not implement or tolerate hazing, as defined by the Campus Code of Conduct, in any form, at any time; and
- Shall comply with the initiation deadline determined by the University each semester.

Residential Experiences of Transfer Students

Although transfer students are smoothly integrated into the academic life of the university, their integration into the campus community through their residence life experience is challenging. Student leaders among transfer students have criticized the closing of the Transfer Center (a residential facility specifically for transfer students) in 2007–2008. Prior to its closing, 94% of students who lived in the house reported a positive or somewhat positive first-year living experience, while only 64% of transfer students who matriculated in the year after the closing responded similarly. Efforts to “block” transfers in groups of six on West Campus have not assuaged the concerns of transfer-student leaders, who continue to advocate for a return to a Transfer Center located on central campus. Thus, the picture is mixed, with transfers expressing high satisfaction with the education and advising they receive at Cornell but also pushing for a dedicated residence hall where they can socialize with others facing

⁵⁸ “Call 2 Action Summit” https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=546

⁵⁹ See <http://dos.cornell.edu/cms/greek/upload/RECOGNITION-POLICY.pdf> and https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=564.

similar challenges. More effort should be focused on providing stronger social support for these students.

Housing of Graduate and Professional Students

Cornell presently provides on-campus housing for a relatively small percentage of its graduate and professional students. In October 2010 only 778 (11.4%) of the 7004 graduate and professional students were living on campus. (Comparable figures from 2008–2009 are 74% at Princeton, 58% at Stanford, and 22% at Yale.) It has long been Campus Life’s plan to provide additional, up-to-date housing for graduate and professional students. The university is currently examining creative means to achieve that vision within resource constraints, and is exploring the possibility of public-private partnerships.

5.5 Student Grievances and Privacy Protections

The university’s foundational policies addressing integrity and ethical behavior are the Campus Code of Conduct and the Code of Academic Integrity. Violations of the Campus Code of Conduct—assaults, thefts, etc.—are adjudicated through the Office of the Judicial Administrator. Academic grievances—alleged plagiarism or cheating, for example—are governed under the Code of Academic Integrity,⁶⁰ which is administered by an academic integrity board in each college. A full description of these procedures and the role of the Office of the University Ombudsman is given in Chapter 4, “Integrity, Governance, and Administration.”

For undergraduates, these mechanisms provide satisfactory ways to address grievances and appeal judgments. However, the special conditions of graduate education—in which students’ circumstances can be tied quite closely to individual faculty members— require additional procedures.

⁶⁰ See <http://cuinfo.cornell.edu/Academic/AIC.html>

5.5.1 Graduate School Grievance Procedures

The Grievance Procedure for Graduate Students Relating to Graduate Education and Support⁶¹ provides a mechanism for dealing with most grievances involving graduate students and faculty members. The most frequent issue brought to the grievance procedure is resignation of a special committee chair resulting in termination of a student from a degree program. The procedure may also be used to address matters of academic integrity, remuneration issues, alleged violations of written agreements and guidelines, and issues of joint publication.

The grievance process begins with informal steps by the aggrieved person: speaking to the source of the grievance, contacting the director of graduate studies, and consulting with the dean of the Graduate School. If these steps do not lead to resolution, the aggrieved party (either a student or a faculty member) refers the case to the Graduate Grievance Review Board. The five-member board (two graduate students, two faculty, and a faculty chair) issues a recommendation to the provost, whose ruling is final.

The grievance procedure is readily available in Graduate School print publications and on the Graduate School website. In addition, when a special committee chair resigns from a student's committee, the student receives a letter from the Graduate School referring to the grievance procedure. Students, however, seem to find the information less than perfectly clear, as Figure 5.7 indicates.

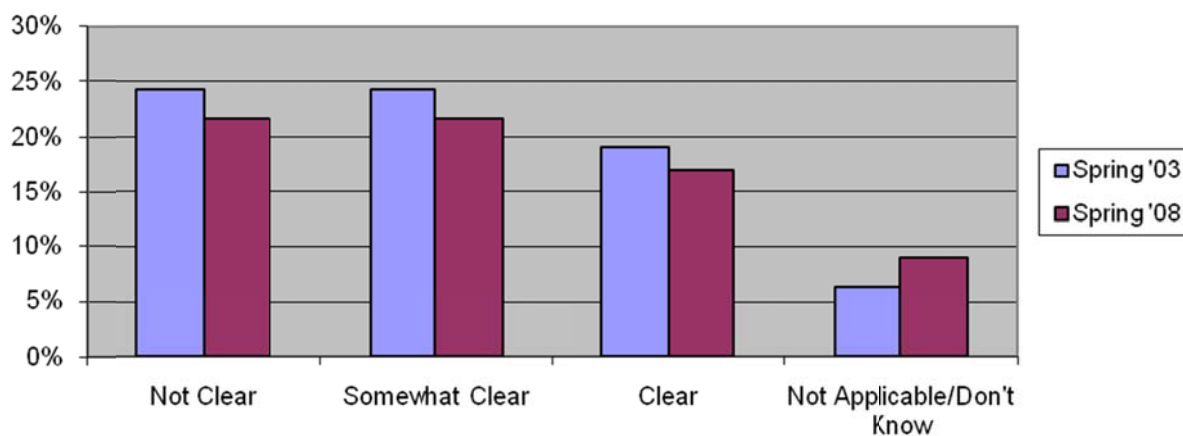
The grievance procedure may not have been given sufficient prominence within publications and websites. A new searchable website and a new Living/Learning publication may help to make the information more accessible.

While the grievance procedure offers an appeals process, the inherent power imbalance between graduate students and faculty may impede students from filing an official grievance. Although some students have successfully navigated the process and continued in the graduate program, the grievance procedure frequently introduces an irreparable rift between student and advisor. The risk to students is great: an inability to

⁶¹ See <http://www.gradschool.cornell.edu/?p=125>

find a new advisor, jeopardized letters of recommendation, or termination of funding. Faculty colleagues who might otherwise accept responsibility for chairing the student's committee may decline, fearing retribution from the original chair. Without an assurance that the Graduate School can guarantee a new chair or continued funding, many students choose to accept the current situation rather than to file a formal grievance. The Graduate School therefore works with students to pursue informal mediation before a formal grievance.

Figure 5.7. Graduate student responses to the item "How clear is information from the university on grievance procedures?" (2003 and 2008)



5.5.2 Access to Confidential Information: Policies, Practices, and Protections

The Cornell University Policy on Access to Student Information, Policy 4.5,⁶² states: "It is the policy of Cornell University to comply with the Family Educational Rights and Privacy Act, 20 U.S.C. §1232g ('FERPA')." General university practices that comply with this policy are available in a detailed supplement covering frequently asked questions.⁶³

⁶² See <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/studentinfo.cfm>

⁶³ The supplement "Frequently Asked Questions" may be accessed at <http://www.dfa.cornell.edu/dfa/cms/treasurer/policyoffice/policies/volumes/governance/upload/asifaq.pdf>

While Cornell takes seriously the privacy issues represented by FERPA and health privacy laws and regulations, recent changes to how FERPA is implemented have allowed Cornell to be more proactive in helping students who are experiencing difficulty. The “Frequently Asked Questions” document⁶⁴ for Policy 4.5 clarifies when and how default protections of confidential information should be overridden. For example, in response to the hypothetical question, “May information from a student’s education records be disclosed to protect health or safety?” the supplement explains:

Yes. FERPA permits the disclosure of information from student education records to appropriate parties either inside or outside of Cornell in connection with an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals. For example, if a student sends an e-mail to his resident advisor saying that he has just been diagnosed with a highly contagious disease such as measles, Cornell could alert the student’s roommate, and perhaps others with whom the student has come in close contact, to urge them to seek appropriate testing and medical care. Safety concerns warranting disclosure could include a student’s suicidal statements or ideations, unusually erratic and angry behaviors, or similar conduct that others would reasonably see as posing a risk of serious harm. This exception permits limited disclosure to a limited number of people... [for example,] professionals trained to evaluate and handle such emergencies, such as campus mental health or law enforcement personnel, or college dean who can then determine whether further and broader disclosures are appropriate.

The FAQ also describes special circumstances in which the educational records of dependent students can be disclosed to their parents/guardians, even though students may not have given written consent for the university to do so.

Cornell has specific policies for data custodians and data stewards, consistent with Policy 4.5, that guide the uses of different types of student information. For example:

- **Grades and Personal Information.** Employees of the registrar’s office and other staff requiring access to personal information

⁶⁴ Ibid.

follow a detailed set of practices stipulated in “Student Data: Guidelines for Use.”⁶⁵ These policies are communicated to students and their families, in compliance with FERPA, on an annual basis (see “Student Record Privacy Statement: Annual Notification Under FERPA”⁶⁶). Relevant staff are notified of these policies and practices each year by the registrar’s office. Faculty receive a yearly communication from the dean of the faculty via email.

- **Health Records.** Gannett Health Services has a well-developed “Commitment to Confidentiality”⁶⁷ that is posted on its website (via a link in the footer of every page). In the waiting rooms of its physical facilities, Gannett has also posted a “Notice of Privacy Practices”⁶⁸ and “Patient Rights and Responsibilities.”⁶⁹ The Gannett confidentiality policy is also printed in many general Cornell outlets, such as websites for new students and international students and scholars, the “Campus Watch” brochure of the Cornell University Police Department, the “Cornell University Teaching Assistants Handbook,” and a faculty handbook, “Recognizing and Responding to Students in Distress.” Parents and guardians are informed of these policies through a dedicated portion of the Gannett website.⁷⁰ Finally, protected health information is released by Gannett to other medical offices only after patient authorization. Gannett employees receive annual confidentiality training, after which they sign confidentiality agreements. (Gannett also offers regular training for residential, student services, and academic advising staff on procedures to protect confidentiality of health information.)
- **Disciplinary Proceedings.** The Campus Code of Conduct⁷¹ stipulates expectations and procedures for disciplinary

⁶⁵ <http://registrar.sas.cornell.edu/Faculty/studentinfo.html>

⁶⁶ <http://registrar.sas.cornell.edu/Student/records.html>

⁶⁷ <http://www.gannett.cornell.edu/gannett/cms/staff/confidentiality/>

⁶⁸ <http://www.gannett.cornell.edu/cms/staff/confidentiality/privacy.cfm>

⁶⁹ <http://www.gannett.cornell.edu/gannett/cms/staff/confidentiality/rights.cfm>

⁷⁰ <http://www.gannett.cornell.edu/for/parents/privacy.cfm>

⁷¹ See <http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/governance/campuscode.cfm>

proceedings. The Office of the Judicial Administrator is the custodian of the records of all disciplinary proceedings, and Section III.G.4 specifies the confidentiality of these records. Unlike health records, no absolute commitment to confidentiality can be given. The Campus Code of Conduct specifies the cross-cutting obligations as follows. First, section III.G.4.b states:

All who are involved in the complaint, investigation, hearing, appeal, and reporting processes are obliged to maintain confidentiality of the proceedings, except as otherwise specifically provided in this Code. They shall protect the confidentiality of all judicial records, except those records specifically referred to in Article II.B [which provides illustrative examples]. Copies of judicial records shall not be released to outside sources without written consent of the subject of such record, except as may be required by law.

Second, section III.G.4.c clarifies:

The University will take reasonable measures to ensure the confidentiality of the proceedings and records; however, the University cannot and does not guarantee that confidentiality can or will always be maintained. The University may disclose otherwise confidential information when required by law, or when authorized by law and necessary to protect the safety or well-being of the University community members or to preserve the integrity of proceedings under this Code.

5.6 Recommendations

5.6.1 Admission and Retention

Cornell is proud of its combination of excellence and access, as well as its academic support structures and living-learning environments that help support and retain students, including underrepresented minority students. We recommend

- that Cornell maintain need-blind admissions and the competitiveness of need-based financial aid packages for undergraduate students;
- that Cornell continue and improve support mechanisms designed to promote the academic success and retention of underrepresented minorities at Cornell, focusing not simply on six-year graduation rates but on a broader definition of academic success.

Currently the university allows applicants to designate a primary and an alternate college, but it is not clear that this procedure is beneficial. We recommend

- that Cornell reassess whether Cornell should continue to offer an “alternate college” option, considering the various costs and benefits to the university and to the applicants themselves.

5.6.2 Support

Cornell has many strong initiatives and practices that foster student health and well-being. We recommend

- that Cornell continue to be a national leader and innovator in promoting the health and well-being of students (undergraduate, graduate, and professional) as a foundation for academic and life success; provide sufficient resources for proactive outreach and intervention and timely availability of services to students; ensure that faculty, as teachers and advisors, recognize the importance of student health and well-being for learning, academic success, and

general success in life; make the health and well-being of students a community-wide responsibility; and find ways to foster even closer ties between faculty and students (through improved advising and academic programming on North and West Campus).

As described in this chapter, surveys indicate that a significant number of students are less than satisfied with the academic advising they receive.

We recommend

- that Cornell continue to improve academic advising and in particular expand institutional mechanisms to involve undergraduates in research with faculty; encourage faculty to involve undergraduates actively in their research projects.

Cornell's career services for undergraduates are quite comprehensive, but the needs of graduate students are not fully met. We recommend

- that Cornell further develop career service programs for graduate and professional students, particularly those interested in careers outside academia.

With regard to transfer students, surveys suggest that their academic experiences at Cornell are excellent but their social and residential experiences are less so. We recommend

- that Cornell examine the housing issues related to transfer admission policies and, in particular, evaluate whether guaranteeing housing for transfer students is essential for success or whether removing the need to honor the guarantee of on-campus housing might expand the number of transfer students who would take advantage of a Cornell education.

6. Faculty

Standard:

10: Faculty

Cornell's superb reputation rests upon that of its faculty, a community of "otherwise-thinking" men and women who have fostered excellence in teaching, research, outreach, and service.¹ As Cornell strives toward even greater distinction, however, a number of priorities emerge with respect to maintaining a faculty, "one faculty," adequate to Cornell's complex institutional mission, across all colleges, programs, and departments. As outlined in the Strategic Plan, these include the need to renew faculty ranks given anticipated retirements of an aging faculty; keep abreast of and deal with intense competition from peer institutions; reduce loss of valued faculty; enhance diversity; and mitigate the disadvantages and leverage the advantages of Ithaca's status as a relatively small, isolated community.

In the first section of this chapter we give a broad outline of the composition of Cornell's faculty. Our second section reviews measures of faculty excellence in both research and teaching.

Our third section, "'Faculty' Broadly Understood," considers the host of titles and differing responsibilities indicated by the term "faculty." The roles of Cornell's lecturers and other non-professorial faculty members have been seriously examined since the last accreditation and self-study, and we address their important contributions in this section.

¹ "Otherwise-thinking" is historian Carl Becker's phrase, from *Cornell University, Founders and the Founding*, Cornell University Press, 1943.

In our fourth section, “Gender, Diversity, and Work Life,” we analyze the status of ethnic and gender diversity among Cornell faculty and efforts to enhance that diversity.

In the fifth section, we focus on faculty and university responsibilities and the tools available to faculty to increase their understanding of university policies and practices. We describe institutional support for faculty in the form of mentoring, the tenure system, and compensation, and we examine both the physical links and interdisciplinary structures that connect faculty across Cornell’s colleges and schools as well as geographically separate campuses.

Finally, in “Recommendations,” we highlight ongoing institutional steps to assure faculty excellence and diversity as well as specific recommendations of this working group.

6.1 Faculty Size and Composition

The professorial faculty—defined as assistant, associate, and full professor and including part-time, clinical, visiting, and acting appointments—on the Ithaca campus numbered 1,591 in fall 2010,² and close to 1,200 at the Weill Cornell Medical College in New York City. For the distribution of Cornell’s faculty among the colleges and units, see Table 1.1 in Chapter 1, “Introducing Cornell University.” Over the last decade, the size of the faculty has remained fairly stable, but on the Ithaca campus there was a modest but steady increase from 1,516 in spring 2000 to a high of 1,639 in the 2008–2009 academic year, followed by a slight decline in the period after the onset of the recession.

While systems of ranking universities tend to present an over-simplified view, an analysis of the annual rankings by *US News & World Report* is instructive in understanding Cornell’s place in the top tier of research universities, and the relative size of our faculty. Ranked 15th overall on the list of national universities, Cornell was ranked 16th with respect to faculty

² Faculty here are defined as the three professorial ranks (assistant, associate and full) including part-time, clinical, and acting, but excluding adjunct, visiting, courtesy, and emeritus appointments. This practice is in keeping with the University Factbook maintained by Institutional Research & Planning, http://dpb.cornell.edu/F_Factbook.htm.

resources. As is the case at most top-tier institutions, nearly all (98%) Cornell faculty are full-time and nearly all (98%) have earned the highest degree in their field (typically a PhD). Cornell is distinct among the very elite institutions, however, in measures related to the student-faculty ratio and to class size. In the most recent rankings (published in August 2010), Cornell appeared with a student-faculty ratio of 11:1. By contrast, Harvard and Penn (ranked number 1 and number 2 in Faculty Resources) have student-faculty ratios of 7:1 and 6:1 respectively. Indeed, 17 out of the top 20 schools on the *US News* list have student-faculty ratios of 9:1 or less. Consistent with this, Cornell also tends to offer larger class sizes than most of the very highly ranked institutions. On the *US News* national universities list, Cornell is one of only three top-20 schools with less than 65% of classes enrolling 20 or fewer students.

Among the Ithaca faculty, 887 (56%) are full professors, 416 (26%) are associate professors, and 270 (17%) are assistant professors. (For a discussion of these proportions see “Tenure” under “Institutional Support,” below.) The distribution by rank is quite different at Weill Cornell Medical College, with only 26% full professors and 50% assistant professors. The proportions of women and minority faculty are increasing on both campuses, as illustrated in Table 6.1.

Reflected in the fact that the modal faculty member on the Ithaca campus is a full professor, the Ithaca faculty has aged significantly over the last several decades. Indeed, in his October 29, 2010, State of the University Address, President Skorton highlighted that today’s faculty is “the oldest faculty in Cornell’s 145-year history.”³ As illustrated in Figure 6.1, nearly half of today’s faculty are 55 or over. This compares to just over a third a mere 10 years ago, and just 25% in the early 1980s. To replace those who will retire in the near term, the president has stated that we expect to hire between 800 and 1000 new faculty over the next decade. At this historic moment, we are facing a new opportunity to recreate the faculty, and with that, the institution as whole.

³ A transcript is available on-line: <http://www.cornell.edu/president/speeches/20101029-state-of-university.cfm>.

Table 6.1. Faculty headcounts and composition by gender and race/ethnicity,^a fall 2010 and fall 2000/2003

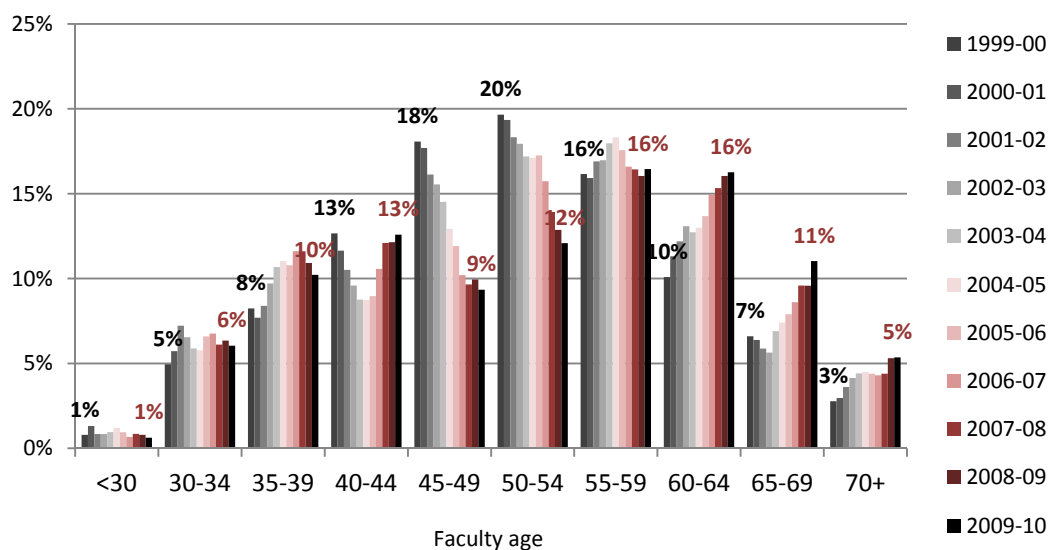
Rank	Fall 2010			Fall 2000 for Ithaca, 2003 for Weill		
	Head-count	% Women	% Minority ^b	Head-count	% Women	% Minority
Ithaca campus						
Professor	887	20%	11%	890	14%	9%
Associate Prof	416	36%	15%	383	32%	11%
Assistant Prof	270	33%	24%	256	34%	20%
Weill Cornell Medical College						
Professor	310	23%	10%	213	21%	[15%] ^c
Associate Prof	288	36%	18%	202	32%	
Assistant Prof	589	48%	15%	391	40%	

^a Faculty are defined as the three professorial ranks including part-time, clinical, and acting. Adjunct, visiting, courtesy, and emeritus appointments are excluded.

^b Minority faculty are defined as U.S. citizens who are Asian, Black, Hispanic, and/or Native American.

^c Minority counts are not available by rank in the 2003 data for WCMC. However, 15% of all WCMC faculty at that time identified as Asian, Black, Hispanic, or Native American.

Figure 6.1. Distribution of faculty by age, academic years 1990–2000 through 2009–2010



The university has recently demonstrated a fresh commitment to renew its faculty in numbers commensurate with enrollment goals. In June 2010 President Skorton announced the establishment of a Faculty Renewal Fund in the amount of \$100 million, half of which is to come from internal university sources and the other half to be raised through philanthropy. Recognizing the financial challenges facing the university, the president noted, “We are at a moment of profound opportunity—with extraordinary talent available at all ranks and the best market for faculty hiring in decades, with our peer institutions hiring at a quarter to a half the normal rate. Acting now to replenish our faculty will give us a comparative strategic advantage if we seize the opportunity.”⁴

6.2 Faculty Performance

Measures of faculty excellence and productivity demonstrate that Cornell’s faculty is exceptional. For example, Cornell has ranked number 12 every year since 2003 in the Shanghai Jiao Tong University Academic Ranking of World Universities, a ranking that is heavily dependent on faculty excellence and productivity.⁵ In the QS World University Rankings—another ranking relying on measures of scholarly impact—Cornell was number 16 in 2010 and number 15 in 2009.⁶

6.2.1 Excellence in Research

Cornell faculty members have earned recognition in every major category of award and distinction in the world. Eighteen current or former Cornell faculty have won the Nobel Prize (not including A. D. White Professors-at-Large).⁷ Thirty-nine are members of the National Academy of Sciences. Twenty-three are members of the National Academy of Engineering.

⁴ <http://www.cornell.edu/president/speeches/20100612-reunion-address.cfm>

⁵ This ranking emphasizes Nobel Prizes, Fields Medals, highly cited researchers, and paper counts. The most recent results are online: <http://www.arwu.org/ARWU2010.jsp>.

⁶ In addition to measures of academic reputation, this ranking emphasizes citation counts. The most recent results are online; <http://www.topuniversities.com/university-rankings/world-university-rankings/2010>.

⁷ http://www.news.cornell.edu/campus/Nobel_Laureates_at_CUk1.shtml.

Eighteen have been inducted into the Institute of Medicine. Seven have won the President's National Medal of Science. Each year, four or five Cornell faculty members are elected to the American Academy of Arts and Sciences. In 2009 alone, 13 were elected to the American Association for the Advancement of Science. Cornell faculty members have won Pulitzer Prizes, MacArthur Foundation "genius" awards, Guggenheim fellowships, Russell Sage fellowships, National Endowment for the Humanities fellowships, Howard Hughes awards, the Crafoord Prize, the Turing Award, the Fields Medal, Fulbright Fellowships, and others too numerous to list here. Their distinction extends to belonging to learned societies, serving on commissions and as officers of professional organizations, receiving national grants and funding, filing patents, and receiving national teaching awards.

Cornell University faculty members are highly cited in professional journals and other literature, including 54 faculty members named as "highly cited researchers" by ISI Highly Cited.com of Thomson Reuters. This standing honors the most highly cited authors for the period from 1984 to 2007 within each of 21 broad subject categories in life sciences, medicine, physical sciences, engineering, and social sciences.⁸ A November 2010 report from Thomson Reuters listed Cornell as the 14th most prolific American university for the five-year period 2005–2009.⁹

Cornell faculty receive an impressive level of funding (for example, see Table 6.2) and recognition for their research activities.¹⁰ Cornell expended \$192 million in funding from the Department of Health and Human Services in FY2009, and \$115 million from the National Science Foundation. Over the last decade, Cornell has consistently ranked in the top three among research universities in total NSF grant awards¹¹ (see also Table 6.3). In addition, Cornell annually ranks in the top 10 U.S. universities in new technologies and number of patents issued. In fiscal 2009, Cornell faculty received 13 NSF Faculty Early Career Development Awards (the second highest total in the nation), two Presidential Early

⁸ Some of these faculty members have subsequently passed away, retired, or left Cornell.

⁹ The November 2010 report, "Global Research Report: United States," is available on-line: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=406.

¹⁰ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=295

¹¹ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=296

Career Awards, and two Department of Energy Early Career Research Awards.¹²

Table 6.2. Twenty institutions reporting the largest FY 2009 R&D expenditures, ranked by FY 2009 amount

2009 Rank	Institution	In millions of dollars		
		FY09	FY08	FY07
1	Johns Hopkins ^a	1,856	1,681	1,554
2	U. Michigan (all campuses)	1,007	876	809
3	U. Wisconsin, Madison	952	882	841
4	UC-San Francisco	948	885	843
5	UC-Los Angeles	890	871	823
6	UC-San Diego	879	842	799
7	Duke U.	805	767	782
8	U. Washington	778	765	757
9	Penn State (all campuses)	753	701	652
10	U. Minnesota (all campuses)	741	683	624
11	MIT	736	660	614
12	U. Pennsylvania	727	708	648
13	Ohio State (all campuses)	716	703	720
14	Stanford	704	688	688
15	UC-Davis	682	643	601
16	Cornell University	671	654	642
17	UC-Berkeley	652	592	552
18	U. Colorado (all campuses)	648	536	528
19	UNC-Chapel Hill	646	526	477
20	Texas A&M	631	582	544

^a The Johns Hopkins University includes the Applied Physics Laboratory, with \$778 million, \$845 million, and \$978 million in total R&D expenditures in FY 2007–09, respectively.

Cornell's National Astronomy and Ionosphere Center (NAIC) are reported separately and not include above.

SOURCE: "InfoBrief SRS", National Science Foundation, Directorate for Social, Behavioral, and Economic Sciences, September 2010, NSF 10-329.

<http://www.nsf.gov/statistics/infbrief/nsf10329/nsf10329.pdf>

¹² Ibid.

Table 6.3. Top 10 Funding Award Recipients from the National Science Foundation, Fiscal Years 2008-2010

<u>Fiscal year</u>	<u>Institution</u>	<u>Funding (in thousands)</u>	<u>Number of grants</u>
2010	National Optical Astronomy Obs.	\$234,312	10
	U. Illinois-Urbana-Champaign	\$184,929	346
	University Corp. for Atmospheric Res	\$153,976	41
	Raytheon	\$130,897	1
	UC-Berkeley	\$125,872	339
	Cornell University	\$119,810	278
	Caltech	\$116,506	114
	Nat. Radio Astronomy Obs.	\$111,183	6
	Dept of Defense	\$95,538	1
	Consortium for Ocean Leadership	\$94,637	6
2009	U. Alaska-Fairbanks	\$204,425	116
	Consortium for Ocean Leadership	\$202,793	6
	Cornell University	\$177,709	327
	U. Illinois-Urbana-Champaign	\$167,474	402
	Raytheon	\$167,144	1
	Nat. Radio Astronomy Obs.	\$149,076	8
	University Corp. for Atmospheric Res	\$145,468	49
	Caltech	\$142,614	150
	U. Wisconsin-Madison	\$122,859	358
	UC-Berkeley	\$120,513	402
2008	Nat. Radio Astronomy Obs.	\$155,333	7
	Raytheon	\$147,915	1
	Cornell University	\$127,786	304
	University Corp. for Atmospheric Res	\$111,428	37
	Caltech	\$106,278	133
	U. Illinois-Urbana-Champaign	\$102,331	353
	UC-Berkeley	\$89,477	344
	U. Wisconsin-Madison	\$89,256	298
	U. Washington	\$81,757	345
	Dept of Defense	\$81,021	1

While there is no question that the Cornell faculty is of an exceptional caliber overall and it is easy to find many instances of faculty excellence across the university, the university could do more systematically to track and monitor faculty productivity. Like so many other aspects of the university, measures of scholarship and scholarly impact tend to be found

within the colleges and largely absent centrally. For example, a number of colleges use a commercial product, ActivityInsight,¹³ to generate annual reports and monitor productivity. This system—and other functionally similar systems—are not directly available to the provost or to the office of Institutional Research and Planning.

Several of the academic task forces established as part of strategic planning in 2009 (see Chapter 1, “Introducing Cornell University”) identified a need for a more robust system of post-tenure (and post-promotion-to-full) performance review. While academic units bear primary responsibility for executing this task, the provost has established the clear expectation that all units must conduct an annual review for every faculty member, that the annual review must include clear data-based indicators (such as the number of publications), and that salary increases will be tied to these measures of performance and otherwise meeting established expectations.

6.2.2 Excellence in Teaching

Cornell rewards its best tenured teachers with the Stephen H. Weiss Presidential Fellows Award. Established by the Board of Trustees in 1992, the award recognizes tenured faculty who have a sustained record of effective, inspiring, and distinguished teaching of undergraduate students. Weiss Fellows receive \$5,000 a year for five years and hold the title as long as they continue to hold a professorial appointment at Cornell. Approximately 50 faculty members have been named Weiss Fellows.

While this program is quite admirable, it rewards only a handful of the most deserving faculty. There is a need at Cornell—as at many research universities—for more consistent practices to assure the highest possible standard of teaching across all units. The overall structure for supporting teaching excellence could be described as informal and not well coordinated. Discussions among faculty reveal differences across units in teacher training, teaching assistant allocations, incentives, and awards for teaching. Resources vary not only across colleges but from department to department, even within the same disciplinary grouping.

¹³ <http://www.digitalmeasures.com/ActivityInsight/>

The university took a valuable step in 2008 when it established the Center for Teaching Excellence (CTE).¹⁴ CTE offers services for both faculty and teaching assistants, with programs designed to supplement training and support provided by individual departments or units. CTE's Teaching Assistant Program provides confidential individualized assistance, seminars, group forums, classroom observation, microteaching, courses, and workshops on teaching issues and skills. Programs are tailored to meet the needs of undergraduate and graduate teaching assistants, graduate students, and postdoctoral students. A new Master TA program, supported by the Menschel Foundation, provides cash incentives for students to participate and complete a certificate program. For faculty, CTE offers individual consultations, classroom observation, and videotaping. The center also presents department-wide workshops on such matters as course design and syllabus development, assessment, and documenting teaching and peer review.

Another entity, the Knight Institute for Writing in the Disciplines, coordinates the training of faculty and graduate students who offer First-Year Writing Seminars—classes designed both to introduce new students to particular fields of study and to help them develop the sophisticated writing skills they will need throughout their undergraduate careers. The graduate students who provide these courses to first-year students enroll in Writing 7100, Teaching Writing—a course that provides an overview of the teaching of writing within a disciplinary context and incorporates readings on pedagogical theories and practices. The Knight Institute also runs the Faculty Seminar, begun in 1986, that offers incentives for faculty members to reconsider the role of writing in their courses and provides an opportunity for faculty to discuss the teaching of writing with the staff specialists of the Knight Institute.¹⁵

The rapidly changing nature of information access due to internet resources continually challenges the faculty to integrate new hardware, software, and on-line materials into their scholarly activities and teaching. Academic Technology Services and User Support (ATSUS) is a unit within

¹⁴ <http://www.cte.cornell.edu>

¹⁵ http://www.arts.cornell.edu/knight_institute/

Cornell Information Technologies that provides wide-ranging services for faculty:

- course and research websites (including the “Blackboard” course management system), audiovisual podcasting for instruction, on-line surveys and quizzes, course communication-collaboration tools, i-Clicker classroom response “polling” systems, workshops to set up faculty blogs and wikis;
- individual and workshop instruction to help faculty integrate these technology tools and practices into classrooms;
- the Academic Technology Center, which provides state-of-the-art computers and creative software like Photoshop and Final Cut Pro, as well as support equipment to prepare multimedia course content for classroom and lab in a web-based delivery system, such as podcasts, audio, and video;
- the Faculty Innovation in Teaching¹⁶ program, which sponsors faculty-initiated projects through grant support to help faculty design and incorporate novel or best practices to improve learning with technology. To date 140 faculty have won grants and about 20 per year are awarded through campus-wide competition.

While the CTE, Knight Institute, and ATSUS programs provide models of teacher training, Cornell could do more to strengthen infrastructure, provide staff support, address assessment procedures, and develop modes of evaluation for existing and new programs.

6.3 “Faculty” Broadly Understood

The professorial faculty is responsible, through the Faculty Senate, for governance and the oversight of instruction.¹⁷ Other academic positions that fall loosely under the designation of “faculty” are academic non-faculty (lecturers, senior lecturers, research associates, and so on),

¹⁶ <http://innovation.cornell.edu/>

¹⁷ For details, see: http://theuniversityfaculty.cornell.edu/handbook/handbook_main.html.

postdoctoral fellows, emeritus faculty, and professors-at-large.¹⁸ People in these positions contribute vitally to Cornell's educational mission and instructional programs.

6.3.1 Non-Professorial Academic Staff

Non-faculty academic staff numbered 1,126 on the Ithaca campus in 2009–10, with an additional 190 at Weill Cornell Medical College. This category includes non-tenure-track instructors, lecturers, and senior lecturers; teaching associates; research and extension associates; and librarians and archivists. While members of the academic staff do not belong to the University Faculty (the faculty's constitutive body, represented governmentally by the Faculty Senate), they are largely treated as members of departmental and college faculties and participate in decisions related to their roles and in hiring at or below their ranks.

Non-tenure track faculty members serve the research, teaching, and outreach missions of the university in very different ways depending upon the terms of appointment: as principal researchers, clinical associates, librarians and archivists, visiting critics, extension associates, or lecturers, to take but a few examples. Academic non-faculty do a great deal of teaching across the university, serving as primary instructors for 44% of all undergraduate classes in the fall of 2009.¹⁹ In some colleges, such as Arts and Sciences and the Hotel School, they teach the majority of classes in the unit (in the former, language courses account for almost 18% of those taught by lecturers and senior lecturers in the college).

While many universities have witnessed dramatic increases in the numbers of non-tenure track instructors, Cornell's figure—about 350—has remained fairly flat over the last decade.²⁰

¹⁸ For the complete list of academic titles, see page 27 of the Faculty Handbook, http://theuniversityfaculty.cornell.edu/handbook/handbook_main.html.

¹⁹ Consistent with definitions of the Common Data Set prepared and maintained by Institutional Research and Planning, sections and subsections of courses are counted as "classes." A single *course* (e.g. Introduction to Chemistry) may have several *classes* (including sections and labs) associated with it. See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=562.

²⁰ From the Factbook, please see <http://dpb.cornell.edu/documents/1000248.pdf> for the ten-year trend.

In relying upon these non-tenure-track faculty members to do a large share of lower-division instruction, Cornell is obliged in turn to codify their institutional positions, not only with respect to oversight, evaluation, professional development, and integration into the university, but also with respect to fundamental issues of compensation and representation.

A task force was convened in 2004 to review the roles of these lecturers, research and teaching associates, and other staff in light of serious considerations about the changing conditions of university labor. As described in the final report,²¹ four principles guided the deliberations of the task force and reflect a sensibility that recognizes debates and disputes over non-tenure-track (NTT) faculty roles:

1. Quality of instruction, research, or public service is enhanced by faculty members' knowledge and understanding of how a department or program functions and of its central goals. This knowledge is acquired over time and represents a form of "workforce capital." Supported by experience and academic qualification, this "capital" can contribute significantly to the effectiveness of NTT faculty. All these should be factors in hiring and retention decisions.
2. The depth of a given labor pool may vary considerably over time, and the only way to guarantee consistent quality of job performance is to hire from an excellent pool and then to assure some form of job security and opportunities for professional development. Constant rotation of NTT faculty brings with it the risk of hires from a less qualified and less motivated pool of candidates. Long retention of qualified NTT faculty and support of their professional development enhances their stake in and their contributions to the life of the institution.
3. Maintaining flexibility is a valid reason for hiring NTT faculty, but the value of this very flexibility must be reflected in adequate salaries, appropriate professional development opportunities, and a respectful workplace climate.

²¹ http://courses.cit.cornell.edu/sad4449/NTTF/NTTF_Report_082004.pdf

4. In this economic climate, no family salary is secondary, and financial well-being cannot be assumed. Adequate salary and resources contribute to a professional workplace climate and permit NTT faculty to perform their duties to the best of their abilities.

Task force recommendations included increased opportunities for professional development for academic staff, which led, for example, to a College of Arts and Sciences program granting a semester's relief from teaching for senior lecturers who successfully proposed ways to use that time to improve their teaching. This program was short-lived, however, due to budget constraints.

6.3.2 Postdoctoral Fellows

Cornell currently has 775 postdoctoral fellows, 300 at the Weill Cornell Graduate School of Medical Sciences and 475 on the Ithaca campus.²² Located in the Graduate School, the Office of Postdoctoral Studies provides general information and referral as well as workshops and other events, while the sponsoring units—more than 80 of them—provide more direct supervision, mentoring, and professional training. Some postdoctoral fellows teach—for example, those at the Society for the Humanities who offer one exploratory or interdisciplinary course during their academic year in residence.²³ Other postdocs primarily conduct research with members of the Cornell faculty.

6.3.3 Emeritus Faculty

Some members of the Cornell faculty extend their work lives beyond retirement by maintaining active scholarly, advising, and mentorship roles as faculty emeriti. Cornell's policies concerning emeritus faculty were substantially codified for those faculty retiring after January 1, 1997, in the Provost's Policy Statement on the Transition of Faculty to Emeritus Status.²⁴

²² <http://www.postdocs.cornell.edu>.

²³ http://www.arts.cornell.edu/sochum/courses_09_10.html

²⁴ The entire provost's statement adopted May 8, 1998, as amended June 17 and December 10, 1998, is available at <http://www.emeritus.cornell.edu/benefits/DMRTransitionToEmeritus.pdf>.

The policy, drafted and amended in 1998, was a positive step forward, addressing topics such as office space, research space for retired faculty who maintain an active research program, hire-back arrangements, voting rights, and the right to attend department meetings. In addition, it provided for the creation of a standing Committee on Emeritus Faculty within each college and the facilitation of service roles for emeritus faculty by the Cornell Association of Professors Emeriti (CAPE).²⁵ One seat on the Faculty Senate is reserved for a member of CAPE.²⁶

That said, the issue of faculty retirements becomes more pressing with the aging of Cornell's faculty. Cornell has over 600 emeritus faculty members at present, reflecting a growth of about 10% over the last decade. In addition, there are currently about 250 active faculty members over age 65, up from 150 in fall 2000 and about 80 in 1990. Twelve years after the articulation of the Provost's Policy Statement on the Transition of Faculty to Emeritus Status, there is a fresh need to assess the role of emeritus faculty so that we may better understand how to enlist their expertise during a period of heightened faculty turnover.

6.3.4 A. D. White Professors-at-Large and Rhodes Professors

Two programs bring distinguished faculty visitors to campus and ensure that Ithaca's geographic isolation does not translate into intellectual isolation for its permanent faculty. These programs represent ongoing ways of bridging Ithaca to the rest of the world.

The Program for Andrew D. White Professors-at-Large²⁷ was established in celebration of Cornell's first centenary and named in honor of its first president, with whom the idea originated. Through this system Cornell hires non-resident professors, selected for their distinguished achievements in diverse disciplines and walks of life, who visit the university periodically. Up to 20 such visitors may hold the title at any given time. During the six-year term of appointment, each professor-at-large visits campus for about a week in each three-year period while classes are in session. Among their activities are public lectures,

²⁵ <http://www.emeritus.cornell.edu/>

²⁶ As described here: http://theuniversityfaculty.cornell.edu/handbook/handbook_main.html.

²⁷ <http://adwhiteprofessors.cornell.edu/description.html>

specialized seminars (typically in more than one field), collaborative research with faculty members, consultation on student theses and research projects, laboratory work, and informal discussions with Cornell colleagues and students.²⁸

The Frank H. T. Rhodes Class of '56 University Professorship,²⁹ named in honor of Cornell's ninth president (1977–1995), was created by the Class of 1956. Rhodes professors are appointed for three years with the possibility of renewal for two additional years and are considered full members of the Cornell faculty. The purpose of the professorship is to strengthen the undergraduate experience by bringing to the university individuals from every walk of life who represent excellence of achievement and to create opportunities for interaction with the undergraduate community. During each year of their appointment, Rhodes professors visit campus and are typically in residence for a week. They are invited to reside in one of the West Campus houses and to spend much of their time interacting with students there, and they give lectures or performances in already scheduled classes as well as for the Cornell community at large. Cornell appointed the first Rhodes professors in 2000. There are currently four Rhodes professors.

6.4 Gender, Diversity, and Work Life

The university has made a consistent effort to monitor and enhance the gender and racial diversity of the faculty, though challenges in this area persist. At the core of Cornell's serious efforts to further increase the diversity of its faculty through recruitment and retention strategies are the CU-ADVANCE Program (which grew out of a study of faculty work life, described below), dual career support on the Ithaca campus, and diversity-related offices in both Ithaca and New York City.

²⁸ The list of all who have served can be found at <http://adwhiteprofessors.cornell.edu/all.html>.

²⁹ <http://rhodesprofessors.cornell.edu/ProgramStatement.html>

6.4.1 Faculty Work Life Survey

At the direction of the Provost's Advisory Committee on Faculty Work Life, a survey was developed and administered to all tenured and tenure-track faculty not in their first year in the fall of 2005. The survey, which had a 65% response rate, gathered data about faculty members' feelings about their work and Cornell's support of it, as well as their level of general satisfaction with life as a faculty member at the university. The report, issued in November 2006, also explored differences by gender.³⁰

Overall, 45% of the faculty responded that they were "very satisfied" and another 32% said they were "somewhat satisfied" with being a faculty member at Cornell. These figures were comparable to rates at other elite research universities with whom we exchanged data. Of some concern was the finding that men were more likely than women to report being very satisfied. Similarly, women reported feeling less integrated in their academic units. An in-depth analysis of the factors most strongly correlated with overall satisfaction found that measures of integration or sense of belonging accounted for the overall gender difference in satisfaction with being a faculty member at Cornell. Differences by race/ethnicity were not statistically significant.

As a follow-up to this study, a revised version of this instrument was administered in the fall of 2010. The survey again enjoyed the strong support and endorsement of the provost, and again attained a 65% response rate. A preliminary analysis of the 2010 data indicates that overall satisfaction increased slightly, from 77% to 80% reporting they were somewhat or very satisfied—a particularly encouraging finding given the changes the university is undergoing as part of strategic planning and the Reimagining Cornell effort. Further, while a gender gap in faculty satisfaction remains, the gap in 2010 appears to be slightly smaller than the gap observed in 2005 (see Figure 6.2).

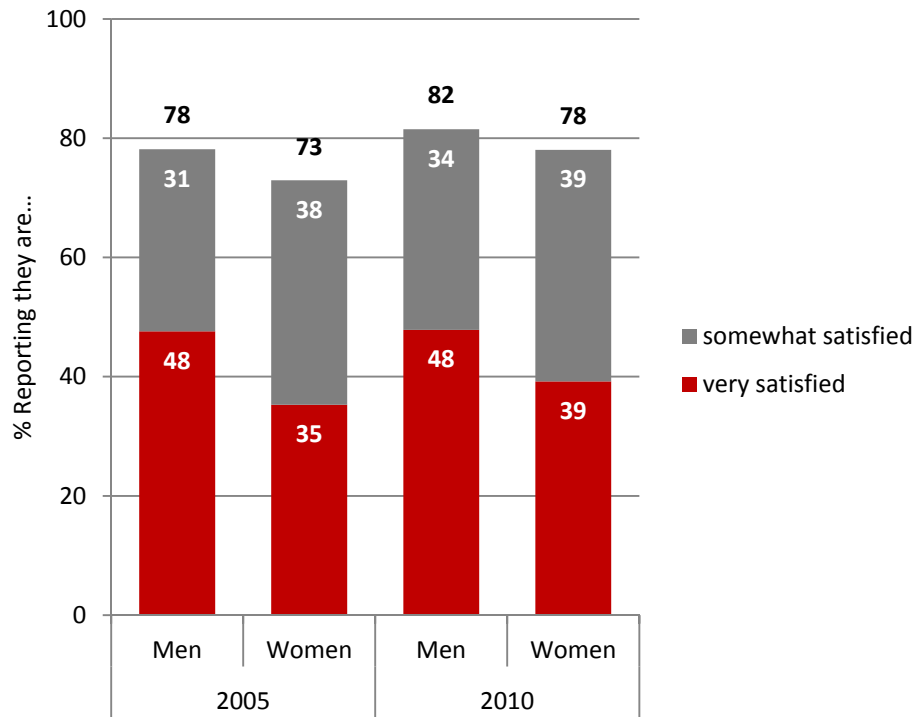
Among the findings of the 2005 Faculty Work Life Survey was that both men and women identified spousal employment as a factor that could cause them to leave the university. An ad hoc series of exit interviews conducted in 2008 underscored this finding, in that the single most

³⁰ http://dpb.cornell.edu/IP_E_Faculty_Work_Life.htm

common reason former Cornell faculty members cited for leaving was an unsatisfactory employment situation for their spouses. Because Cornell is a fairly rural area with limited opportunities for professional employment outside the university, this issue may be more pressing here than at many peer institutions. As discussed below under “Dual Career Support,” Cornell is seeking ways to address this concern.

On the heels of the first Faculty Work Life Survey and report, the provost and a small team of faculty collaborators were successful in securing a National Science Foundation ADVANCE grant to increase the representation of women faculty in the sciences and social sciences.

Figure 6.2. Overall satisfaction with being a faculty member at Cornell, data from the Faculty Work Life Surveys of 2005 and 2010, by sex



6.4.2 CU-ADVANCE

CU-ADVANCE³¹ is a faculty-led center whose mission is to improve the recruitment, retention, and promotion into leadership of women tenure-track faculty in the physical and natural sciences, mathematics, engineering, and social and behavioral sciences. It began in November 2006 with funding from Cornell and from a five-year, \$3.3 million NSF institutional transformation grant. The principal investigator on the NSF grant is the provost, and the three co-PIs are senior faculty in engineering and the social sciences who are in charge of programming and evaluation, respectively.

CU-ADVANCE provides a variety of programs and internal grants to the Cornell faculty through four initiatives. The *recruitment initiative* offers support for science and social sciences departments that are recruiting women faculty. As part of this initiative, CU-ADVANCE collaborated with Cornell Interactive Theatre Ensemble to develop a DVD and workshop on best practices in the search process; this workshop has been seen by 300 faculty at Cornell and 400 outside Cornell. The *“women’s power tools” initiative* includes a variety of professional development programming (e.g., negotiation, leadership, grant-writing, the tenure process, networking) and grants for faculty at various career stages. The *climate initiative* identifies ways to improve departmental and campus climate for women faculty through chair training and community-building efforts to reduce the isolation of women in science departments. The *evaluation initiative* monitors data on faculty outcomes (e.g., recruitment, promotion, retention, salaries, start-up packages, space) and conducts research on the impact of departmental demography on perceptions of climate and faculty turnover.

After four years in operation, CU-ADVANCE has made measurable progress toward the goal of increasing the representation of women in the science faculty. As of spring 2010, women constituted at least 20% of the faculty in 31 (of 56) science and engineering departments, up from 26 departments in 2006. In the same period, Cornell hired 51 new women science faculty, for a net gain of 35 women and an increase in the

³¹ <http://advance.cornell.edu/>

percentage of women from 21% to 23%. Eleven of these new hires were senior women, reflecting an increase in the percentage of women among new senior-level hires. (The percentage of assistant professor hires who are women, by contrast, has been flat or declining.) Other major accomplishments of the CU-ADVANCE program have been to raise college and chair accountability for diversity outcomes, push for more “family-friendly” policies (e.g., by lobbying to eliminate Labor Day classes), and create a community for women scientists on campus.

As CU-ADVANCE enters the last year of its grant, it is focusing on helping departments make the most of scarce search opportunities, developing programs that will facilitate the retention of women faculty (e.g., mentoring, climate change), and finding organizational homes for its most successful initiatives so that they will continue after the grant expires.

6.4.3 Dual-Career Support

The hiring opportunities presented by upcoming faculty retirements, combined with the relatively remote location of the Ithaca campus, require Cornell to develop innovative, leading practices in dual-career recruitment and retention while increasing the diversity of Cornell’s faculty.

Cornell’s dual-career recruitment and retention efforts are coordinated through two offices, depending on whether the spouse or partner is seeking an academic or a non-academic placement. Non-academic placements are coordinated through the Cornell University Dual Career Program³² (CUDCP) in the Office of Human Resources. Academic dual-career placements are coordinated by the senior vice provost for academic affairs.

CUDCP offers job search assistance, information, and support to spouses or partners of all Cornell tenure-track faculty or prospective faculty as well as of high-level non-academic staff. CUDCP services are available to spouses who are considering moving to Ithaca or have moved to the Ithaca area within the last two years. After the two-year window, CUDCP assists spouses at the request of the provost, vice provost, or dean; this allows the

³² http://hr.cornell.edu/jobs/dual_career.html

CUDCP to be a resource in retention as well as initial recruitment efforts. CUDCP is not typically involved when the spouse or partner is seeking an academic position at Cornell. It does, however, belong to the Upstate New York Higher Education Recruitment Consortium, which operates a centralized job bank for academic positions in the area.

Since CUDCP's founding in 2001, it has had at least one contact with 495 clients, of whom 366 have been spouses or partners of faculty recruits. Of the 495 clients, 295 were designated as "active" clients, meaning that they did not remove themselves from the CUDCP program (e.g., because they found jobs through other means, entered self-employment or full-time homemaking, etc.). Among these active clients, 246 were offered jobs and 215 accepted them, for a success rate of approximately 75%.

These statistics do not include dual academic placements, which are typically referred directly to the senior vice provost for academic affairs by the relevant dean. The most common accommodation for academic spouses of junior faculty is a two- to three-year, non-tenure-track position; funding for these positions is often shared between the Office of the Provost, the department or college making the focal hire, and the department or college that is hosting the spouse. Accommodations for advanced junior and tenured faculty vary greatly and seem to depend on the rank and stature of the focal faculty recruit, the aggressiveness of the relevant chair and dean, the budget situation of the recruiting department, and the budget situation, line availability, and teaching/research needs of the potential departmental home of the spouse or partner. We are not aware of any systematic institutional data on the number or success rates of dual-academic recruitment and retention efforts. Some challenges include the following:

- achieving equity in spousal or partner accommodations across faculty of similar rank and stature;
- achieving equity for departments. It is harder for small departments to accommodate spouses or partners, both because lines are scarcer and because most of these departments have perforce adopted strategies of within-discipline specialization (making it less likely that the unrecruited spouse will be an

intellectual fit). It is also the case that some departments are asked repeatedly to host trailing spouses.

- dual-career issues, which have a serious potential to undermine diversity. Departments may (intentionally or otherwise) restrict their pool to, or simply prefer, “moveable” candidates. This criterion eliminates a higher proportion of women from consideration than men, because women academics are more likely than men to be (a) partnered with other academics, (b) partnered with professionals (if not another academic), and (c) have custody of children, if separated.
- ensuring efforts are sufficient. Exit interview data show that “dual-career issue” is the most frequently cited reason for a voluntary departure. The problem is expected to grow with demographic shifts in academia.
- preventing the problem from reemerging after two or three years, after Cornell has made a massive investment in the focal faculty member;
- lack of systematic data or transparency in dual-career retention efforts. (Note: CUDCP has been collecting data, albeit not in a searchable database or one that can be linked to other institutional data. ADVANCE is working with them to devise a more up-to-date database.)
- turning dual-career “problems” or “issues” into recruitment opportunities.

6.4.4 Offices Promoting Faculty Diversity

On the Ithaca campus, as described above, gender and ethnic diversity among faculty is fostered by CU-ADVANCE and by the Office of the Senior Vice Provost for Academic Affairs.

Weill Cornell Medical College launched its Office of Faculty Diversity in Medicine and Science in July 2009.³³ Its mission is to create a palpable culture of Inclusiveness, Diversity and Equity in Academic Leadership (IDEAL) and to develop and sustain a diverse faculty through recruitment, mentoring, promotion, retention, and selection for leadership roles. Among its specific goals are to

- develop and implement strategies for successful recruitment of a diverse faculty
- establish educational, mentoring, and networking programs
- assess the academic climate for faculty
- compare WCMC data with national benchmarking data
- develop programs to address identified issues

6.5 Faculty and University Responsibilities

6.5.1 Faculty Responsibilities

A primary resource for faculty seeking an understanding of their responsibilities and the policies and procedures that affect them is the Faculty Handbook, a 233-page document maintained by the dean of the faculty and available on-line.³⁴ Generally speaking, this document errs on the side of inclusion, listing items that seem of marginal utility (such as the comprehensive list of authorized academic titles) and repeating information readily available elsewhere (such as all university policies applicable to faculty). Yet even with all that it includes, the handbook is not comprehensive with regard to the processes and expectations that stem from the central administration. For example, the provost's office has established the expectation for the peer review of teaching as a key component of the tenure dossier, yet nothing about this practice is

³³ For further information on the faculty of Weill Cornell Medical College, see the college's "Executive Summary Report to the LCME," December 2009. https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=372

³⁴ <http://theuniversityfaculty.cornell.edu/handbook/WEBHANDBOOK2010.pdf>

mentioned in the handbook. Similarly, nothing is mentioned about mentoring, even while the provost's office has asked all units to develop a faculty mentoring practice. Institutional support resources are also underrepresented in the handbook, which includes no mention of the CU-ADVANCE center or CUDCP, discussed just above.

To redress gaps in the handbook, the provost's office regularly produces supplemental documentation that is shared widely with deans, chairs, and/or regular faculty members as appropriate. For the most part, however, this documentation does not have a good presence on the web.³⁵ Meetings of all of the university's department chairs—convened by the senior vice provost for academic affairs at least once a semester—provide another way for campus leaders to exchange information, procedures, practices, and concerns. The provost's office is considering ways to improve the systematic compilation and dissemination of expectations that are not adequately represented in the faculty handbook.

6.5.2 Institutional Support

As is true of many policies and practices at Cornell, the mechanisms for supporting faculty excellence tend to be somewhat decentralized. Tenuring rates and practices as well as the resources available to support faculty vary somewhat by unit³⁶—generally in ways that appropriately reflect differences by discipline. However, a number of resources and initiatives reach across the university.

Career development for faculty members and faculty administrators begins with orientation programs for new faculty developed and delivered by the provost's office and by individual colleges. To supplement this information, the Office of Human Resources has developed curricula that address topics such as conflict resolution and change management. A dynamic unit within the Office of Human Resources is Cornell's Interactive Theatre Ensemble (CITE).³⁷ Through discussion-provoking

³⁵ But see “Tools for Faculty” and “Items of Interest for Faculty” on the provost's web page, <http://www.cornell.edu/provost>.

³⁶ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=226 for tenuring rates by college.

³⁷ See http://www.hr.cornell.edu/life/career/cite_about.html.

dramatizations of faculty meetings and other events, CITE offers programs on unintended bias in faculty hiring and on interviewing skills. These programs are now available on DVD and have been made available to all members of the Cornell faculty as well as shared with other universities. These and other programs have generated considerable discussion of diversity, personnel management, and cooperation among faculty members. These programs are widely regarded as highly successful and effective.

The Office of Human Resources is also taking a larger role in chairs' training. Established through programs supported by the provost's office, starting in the 2010–2011 academic year chairs' training has become a nearly monthly event and includes elements of leadership training, skill development, and information dissemination. In addition, several colleges—including Agriculture and Life Sciences, Arts and Sciences, and Engineering—have developed effective programs and web-based tools to support chair development.

Other resources to support faculty include the Center for Teaching Excellence and the CU-ADVANCE center, both described above.

While many other resources are available across the university, three key institutional support initiatives that have come to fruition in the last decade bear specific mention: faculty mentoring, fine-tuning of the tenure process (which involves changes instigated in 1997 and codified by the Faculty Senate), and a successful faculty salary improvement program.

Mentoring and Career Development

Faculty mentoring matters, as demonstrated recently by a Cornell researcher.³⁸ Over the last decade, the provost has established the expectation that all departments should have an explicit mentoring program, but the form of that practice varies across units. Best practices for mentoring new faculty are available for department chairs on the CU-ADVANCE website, which also posts mentoring guidelines established by several specific units, including the College of Engineering, the College of

³⁸ January 4, 2010 *Inside Higher Ed* coverage of this research is available here https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=410.

Agriculture and Life Sciences, and the College of Veterinary Medicine.³⁹ These guidelines clearly detail the purposes of mentoring and the responsibilities of the mentor, junior faculty person, and chair at crucial points (annual review, third-year review, tenure review). The Vet College guidelines also include a process for evaluation of the mentoring program. There is not currently a mechanism in place for assessing the effectiveness of existing mentoring programs across the university.

Tenure

The tenure review process includes elaborate formal provisions for review and appeal to ensure compliance with university by-laws, policies, and faculty legislation.⁴⁰ As in most institutions, the initial review is conducted by the faculty member's department and then the college. If a dean's final decision is negative, the faculty member may appeal to the University Appeals Committee. Deans may form ad hoc committees to advise them before making tenure recommendations to the provost. The provost obtains input from the Faculty Advisory Committee on Tenure Appointments (FACTA) with respect to all promotions to and appointments with tenure as well as proposed denials of tenure by a dean after a positive recommendation from the department. The ombudsman is available to provide assistance to a faculty member throughout the appeals process.

FACTA comprises 15 faculty members representing the diversity of Cornell's units and faculty composition. Its primary mandate is to determine, in each tenure case, "whether the documentation and the evidence in the tenure file are sufficient to show that the candidate has demonstrated excellence in carrying out the responsibilities of the position, and unusual promise for continued achievement."⁴¹ FACTA advises the provost in an effort to ensure that all tenure decisions are consistent with Cornell's high standards of scholarly excellence but also that no individual is "turned down for tenure wrongfully, capriciously, or

³⁹ <http://www.advance.cornell.edu/mentoring.html>.

⁴⁰ For a more complete discussion, see the Faculty Handbook, http://theuniversityfaculty.cornell.edu/handbook/handbook_main.html.

⁴¹ FACTA Legislation, adopted by the Faculty Senate, November 12, 1997; amended May 12, 1999; amended October 11, 2000; amended April 14, 2004.

without reference to the responsibilities of the position or the mission of the college.”⁴²

Over the past several years, the provost’s office has undertaken to strengthen and codify processes of faculty review, not only tenure review but also appointment and reappointment of junior faculty and promotion to full professor. While the Faculty Handbook explains each step of these processes, the provost’s office has supplemented that discussion with two recent documents: “A Short Guide to the Tenure Process” and “The Role of the Department Chair in the Tenure Process,” the latter emerging from a series of university-wide meetings of deans and department chairs concerning tenure and other topics.⁴³ The provost asked chairs to return to their units for discussion of, at minimum, three key areas of review: the evaluation of faculty teaching, procedures for capturing the substantive views of the faculty in the tenure file, and issues associated with the closure of the file.

The current high proportion⁴⁴ of tenured faculty on the Ithaca campus (83%) is partly attributable to a hiring pause as a result of the budget crisis; with aggressive efforts to renew the faculty as the key priority of the Strategic Plan, the percentage will likely drop in coming years to previous levels (roughly 75% for the endowed colleges and 78% or 79% for the contract colleges⁴⁵). The rate of tenure approval, however, has been consistent over the past decade: on average, roughly two thirds of those hired in a given year will ultimately receive tenure.⁴⁶ The ethos at Cornell has long been that we hire with the expectation of faculty meeting the tenure standard. The “Short Guide” notes: “Because the hiring decision anticipates the long term commitment of University resources, it is done with great care. All hires are based on the reasonable belief that the faculty member will be able to meet the tenure standard.”

⁴² Ibid.

⁴³ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=244 and https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=246, respectively.

⁴⁴ For comparative data on tenure ratios, see data extracted from *Academe* here: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=230 and https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=229

⁴⁵ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=229

⁴⁶ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=244

The university also compiles exhaustive data on cohort survival, by college, by gender, and by minority status. The provost and Board of Trustees annually review these data in addition to hiring and tenure decisions across the University.⁴⁷

At Weill Cornell, the tenure process is similar to that on the Ithaca campus. Faculty are reviewed by their departments, the Committee of Review, and the Executive and General Faculty Councils. The recommendation then goes to the provost for medical affairs and the dean, and, if recommended, to the Board of Overseers for approval.

However, Weill Cornell faculty appointments (other than instructors and lecturers) are made on eight separate tracks, as indicated in Table 6.4. A detailed explanation of this system and definitions of each track are available.⁴⁸ In the Graduate School of Medical Sciences, faculty do not follow these tracks but retain the rank given by their host institution.

Table 6.4. Weill Cornell Medical College faculty by track, December 2010

Track	Total	Full time	Part time
Tenure	555	522	33
Academic-clinical	134	128	6
Academic-research	33	30	3
Clinical	322	303	19
Research	70	64	6
Academic-educator	28	24	4
Voluntary	94	23	71
Non-professorial	11	11	0

⁴⁷ For examples of these analyses, see https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=225 and https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=226

⁴⁸ For track definitions, see https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=414 and for counts: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=413

Compensation

Cornell's previous Decennial Self-Study identified the need to raise faculty salaries to remain competitive with our peer institutions. In 2000 President Hunter Rawlings and the Faculty Senate identified and publicized a goal: "to reach the average of the peer groups (selected by the Financial Policies Committee of the Faculty Senate) by the end of a five-year period for the endowed colleges and by the end of a six-year period for the contract colleges." The multi-year plan extended from 2001–2002 to 2005–2006.

In the endowed units, over the five-year period of the plan, average faculty salaries rose each year by a percentage ranging from 7.0% to 3.6% (the plan was purposefully front-loaded), with a five-year average annual increase of 5.2% among all faculty and 6.4% among continuing faculty.

In the contract colleges, over the same five-year period (noting that the goal allowed for a six-year period for the contract colleges), average faculty salaries rose each year by a percentage ranging from 7.3% to 4.8% (again, purposefully front-loaded), with a five-year average annual increase of 6.0% among all faculty and 6.5% among continuing faculty.

On the endowed side, the end result was that in 2005–2006 Cornell's full professors lagged slightly behind professors at peer institutions while both associate and assistant professors were above the peer averages. This suggests that Cornell became competitive at the point of hire and promotion. Overall, the average faculty salary at Cornell rose from 89% of the peer average in 1998–99 to 99% in 2005–2006.

On the contract side, in 2005–2006 Cornell was slightly above the peer average in all ranks; the contract colleges met the goal of the peer group in only five years. Contract average salaries rose from 88% of the peer average in 1998–99 to 104% in 2005–2006.

Some key observations regarding the salary improvement process:

- The faculty grew by 57 during the five-year plan period.
- Approximately \$9.7 million was added in each of the five years to fund the faculty salary increases.

- Faculty salaries in 2006 accounted for approximately 13.5% of the Ithaca campus operating budget compared to about 12.7% in 2000–2001.
- The increases were funded by a combination of tuition, state appropriations, and investment income.
- Thirty-five new endowed professorships were established during the five-year period.

Following up on the success of this undertaking, the current objective is to remain competitive in these times of financial crisis. As noted earlier in this chapter, the new \$100 million Faculty Renewal fund should enable Cornell to seize the opportunity to hire outstanding faculty at a time when many qualified faculty are seeking jobs.

6.5.3 Linkages

As a large and complex university, Cornell needs more bridges spanning our many units, departments, colleges, campuses, programs and intellectual climates. Both the benefits and the challenges of building “one faculty” have become more acute with budget reductions, mounting demands for financial aid, and other effects of the current recession. The graduate field system, crossing department and college boundaries, is inherently interdisciplinary. Other linkages that contribute measurably and directly to the promotion of faculty diversity and excellence seem all the more important to foster at this moment. Recent successful programs involving faculty connections with colleagues or with students include

- the Linkage Program,⁴⁹ bringing graduate students from Ithaca to Weill Cornell Medical College in New York, to work with WCMC faculty;
- Cornell’s Campus-to-Campus express bus⁵⁰ service, providing direct service between Ithaca and Manhattan seven days a week with two Ithaca departures each day;

⁴⁹ http://www.intercampusaffairs.cornell.edu/grad_lnk_pro.html.

⁵⁰ <http://www.transportation.cornell.edu/tms/coach/index.cfm>

- the Hunter R. Rawlings III Cornell Presidential Scholars Program,⁵¹ enabling students to collaborate with faculty mentors of their choosing in designing and planning an individualized program of research;
- various programs in service learning across the university;
- the College of Agriculture and Life Sciences integration with the Geneva campus undertaken by former dean Susan Henry: merging duplicate departments into a single faculty and establishing bus service between the two campuses to foster interaction among faculty and students;
- living-learning initiatives such as West Campus, in which faculty play a key role.

Interdisciplinarity

At Cornell, interdisciplinarity is an approach for developing innovative infrastructures for addressing changing institutional and intellectual climates. Two of the recent initiatives highlighted in Chapter 1—the New Life Sciences Initiative and the Social Sciences Initiative—actually generated new models for faculty recruitment and faculty collaboration.

The New Life Sciences Initiative (NLSI), extending from 2000 to 2007, sought to change the way life science research was conducted and taught at Cornell, with a new emphasis on cross-disciplinary work involving large teams of researchers. Among the many achievements of the NLSI were the hiring of 73 new faculty, the establishment of 68 new graduate fellowships, and the completion of Weill Hall. That building has become the focus for cross-cutting biomedical computation and engineering research, as well as the home of the new Weill Institute for Cell and Molecular Biology. In addition, the NLSI included the completion of Duffield Hall, dedicated to nanotechnology and nanobiotechnology.

The new faculty hired under the campaign infused life science research into traditionally top-ranked departments at Cornell such as physics, chemistry, computer science, and applied mathematics. During this time,

⁵¹ <http://www.commitment.cornell.edu/cprs/default.php>

the chemistry department changed its title to “Chemistry and Chemical Biology,” a recognition of the NLSI’s impact. The NLSI’s success has brought large cohorts of brilliant graduate students trained in math, physics, and engineering to work in life sciences at Cornell. The effect on the faculty in the life sciences has been invigorating as the spirit of interdisciplinarity diffuses across the campus.

The impetus for the Social Science Initiative came from a recognition that Cornell is unique among top-tier universities in the extent to which its social scientists are dispersed across multiple institutional units. (Social scientists are found in at least seven colleges: A&S, CALS, ILR, Human Ecology, AAP, Law School, and JGSM.) Because of this dispersion, many of the core disciplinary departments are 25–40% smaller than peers in private institutions and 50–60% smaller than peers in public institutions, making it difficult for Cornell to reap the full reputational rewards of its strong social science faculty. Efforts associated with the Reimagining Cornell academic task forces are underway to address these size and structural issues by engaging the social science deans more actively in identifying opportunities for increasing collaboration in the social sciences, business, and management.

The cornerstone of the Social Science Initiative is the Institute for the Social Sciences (ISS), which seeks “to encourage collaborations among social scientists across disciplinary and institutional boundaries, to engage the Cornell community – students, faculty, and staff – in discussions of cutting-edge topics in the social sciences, and to assist departments and programs in retaining top social science faculty and attracting new talent.”⁵²

The ISS engages in three major activities. (1) “Theme projects” bring together faculty from around campus who are interested in the same broadly defined topic. Examples of recent theme project topics include “judgment, decision-making, and social behavior,” “persistent poverty and upward mobility,” and “contentious knowledge: science, social science, and social movements.” Team members receive research and infrastructure support from the ISS. (2) The ISS Faculty Fellows program,

⁵² <http://www.socialsciences.cornell.edu/>.

offered every fourth or fifth year, provides course releases and other forms of support for especially promising early and mid-career social scientists. (3) A biannual competition provides grants of up to \$10,000 to faculty to initiate new research projects, collect data, run conferences, or travel to meet with collaborators.

ISS theme projects have set the stage for ongoing collaborative efforts among faculty in the social sciences. The Cornell Population Program (CPP), for example, is funded by a \$5 million NIH grant that emerged out of discussions among faculty on the first ISS theme project. The CPP serves as the intellectual hub for demographic research and training at Cornell and involves 68 faculty affiliates from 15 different departments.

The Social Science Initiative also supports longstanding social science programs and institutions for faculty, many of which are faculty-led. Among these are the Cornell Institute for Social and Economic Research, the Survey Research Institute, and the Bronfenbrenner Life Course Center, which administers the Cornell Population Program, the Center for Translational Research on Aging, and the Program on Applied Demographics.

Both the life sciences and social sciences initiatives demonstrate that faculty-led efforts to integrate, combine, and build bridges—in other words, faculty-led interdisciplinary efforts—can provide models for faculty renewal that speak to the specificity of Cornell’s strengths and take advantage of this strategic moment.

6.6 Recommendations

6.6.1 Faculty Composition

The Faculty Renewal Fund described in this chapter will greatly assist Cornell in strategically filling the expected vacancies due to retirements and in enhancing faculty strengths in key areas. We recommend

- that Cornell preserve the quality and number of the faculty through planned hiring, renewing Cornell’s faculty in numbers commensurate with enrollment goals;

- that the university continue to develop innovative hiring practices (cluster hires, dual career hires) and to enhance diversity among the faculty.

6.6.2 Faculty Roles and Professional Development

Cornell provides extensive institutional support for its faculty and academic staff, but opportunities for clarification, consistency, and enhancements remain. We recommend

- that Cornell continue to offer professional development opportunities for all academic staff ("academic non-faculty") and faculty;
- that the university further consider the role of emeritus faculty to enlist their expertise, connection to Cornell, and capacity to mentor both students and junior faculty members;
- that Cornell develop shared and consistent university-wide support for teaching;
- that Cornell develop programs for more widespread mentoring of junior faculty and conduct assessment of these programs;
- that the university explore incentive systems to reward units that seek the best integration of faculty members' identities as researchers, teachers, advisors, mentors, and agents of public engagement.

6.6.3 Linkages

Consistent with the Strategic Plan's emphasis on connectivity, we see opportunities for closer links among the university's faculty. We recommend

- that Cornell continue to expand collaborations and linkages across departments, colleges, campuses, and programs, with a particular focus on identifying and implementing greater cooperation and collaboration among the social science and business/management units.

7. Educational Offerings

Standards:

11: Educational Offerings

12: General Education

13: Related Educational Activities

This chapter has four major sections. The first—and longest—focuses on undergraduate education, broadly conceived. Beginning with Cornell’s university-wide learning goals, this section describes the undergraduate curriculum and how it varies across colleges, as well as extra- and co-curricular activities that support the university’s educational mission.

The second section, “Graduate and Professional Study,” first examines the programs administered through the Graduate School, concluding that Cornell’s “field system” and models for funding graduate students provide adequate support for superior graduate education. This section also describes the offerings of the professional programs in law, medicine, business, and veterinary medicine.

“Off-Campus Study” describes the diverse opportunities for Ithaca-based students to study in other locations, within and outside the U.S. While a plethora of opportunities are available across the university, students can find it difficult to take full advantage of the offerings, especially given considerable variability across colleges.

The section titled “Library, Information Technology, and Instructional Facilities” underscores the tremendous asset represented by the Cornell University Library and highlights the relationships between our information technology resources and the academic enterprise.

Following these four sections we offer “Recommendations,” focusing on the analytic conclusions suggested in the chapter.

7.1 Undergraduate Education

This large and complex institution offers many programs of study to a diverse student body. It is an international leader with a tradition of excellence, and it has advanced a rich legacy in many fields since its founding in 1865.

With seven undergraduate colleges operating within a decentralized university structure, there can be tendency to understand the university as a collection of colleges. However, a Cornell education is intended to be greater than the sum of its parts, and the university has established learning goals to be attained by undergraduates in *all* programs and majors.¹

7.1.1 University-Wide Learning Goals

Cornell University expects that all undergraduates, through their courses of study, shall attain proficiency in

- **disciplinary knowledge:** demonstrate a systematic or coherent understanding of an academic field of study
- **critical thinking:** apply analytic thought to a body of knowledge; evaluate arguments, identify relevant assumptions or implications; formulate coherent arguments
- **communication skills:** express ideas clearly in writing; speak articulately; communicate with others using media as appropriate; work effectively with others
- **scientific and quantitative reasoning:** demonstrate the ability to understand cause and effect relationships; define problems; use symbolic thought; apply scientific principles; solve problems with no single correct answer
- **self-directed learning:** work independently; identify appropriate resources; take initiative; manage a project through to completion

¹ See http://www.cornell.edu/provost/assessment/learning_outcomes.cfm.

- **information literacy:** access, evaluate, and use a variety of relevant information sources
- **engagement in the process of discovery or creation:** for example, demonstrate the ability to work productively in a laboratory setting, studio, library, or field environment

In addition, the Cornell environment strives to foster collegiality, civility, and responsible stewardship. Through academic studies, and through broader experiences and activities in the university community on and off campus, Cornell graduates should develop a deeper understanding of:

- **multi-cultural competence:** for example, express an understanding of the values and beliefs of multiple cultures; effectively engage in a multicultural society; interact respectfully with diverse others; develop a global perspective
- **moral and ethical awareness:** embrace moral/ethical values in conducting one's life; formulate a position/argument about an ethical issue from multiple perspectives; use ethical practices in all work
- **self-management:** care for oneself responsibly, demonstrate awareness of one's self in relation to others
- **community engagement:** demonstrate responsible behavior; engage in the intellectual life of the university outside the classroom; participate in community and civic affairs

The learning goals of the university—as well as those of the colleges—are publicized in a prominent location on the web.²

7.1.2 Learning Goals of the Colleges

Each of the individual schools and colleges is responsible for enunciating its own educational goals, which are described on the college websites, in college publications, and on the university's assessment of student

² See <http://www.cornell.edu/academics/> and <http://www.cornell.edu/academics/goals/>

learning web pages.³ These educational goals, listed by colleges in alphabetical order, are as follows:

The College of **Agriculture and Life Sciences** expects students will be able to

- explain, evaluate, and effectively interpret factual claims, theories and assumptions in the student's discipline(s) (especially in one or more of the college's priority areas of land grant-agricultural sciences, applied social sciences, environmental sciences, and/or life sciences) and more broadly in the sciences and humanities
- find, access, critically evaluate, and ethically use information
- integrate quantitative and qualitative information to reach defensible and creative conclusions
- communicate effectively through writing, speech, and visual information
- articulate the views of people with diverse perspectives
- demonstrate the capability to work both independently and in cooperation with others

Architecture, Art, and Planning expects its students will

- be able to address complex problems
- comprehend their discipline and field: historically and globally
- be able to think critically
- be able to create both technically and imaginatively
- be able to communicate effectively through writing, speech and visual media
- engage their field with a social, ethical, and artistic perspective
- be prepared for a role as world citizens

In the College of **Arts and Sciences**, students acquire

³ <http://www.cornell.edu/academics/goals/> and http://www.cornell.edu/provost/assessment/learning_outcomes.cfm

- familiarity with the several different ways of knowing that are reflected within the various disciplines and fields of study within the humanities, social sciences, mathematics and sciences
- cultural breadth, both geographical and temporal
- effective writing and quantitative skills
- facility in a foreign language beyond the introductory level
- imaginative and critical thinking

The College of **Engineering** expects its students, in terms of their general abilities, to

- have a broad education, including liberal studies
- be proficient in oral and written communication
- be proficient in information literacy, i.e., be able to locate, evaluate, and effectively interpret claims, theories, and assumptions in science and engineering
- have experience with teamwork
- be aware of professional and ethical responsibilities

In terms of their discipline, students will be well grounded in the mathematical, scientific, and engineering skills that are the basis of their discipline. More specifically, they will

- have the ability to design experiments, to analyze the data, and to interpret the results
- have the ability to design, model, and analyze engineering systems
- have the ability to formulate and solve problems
- have the ability to use the techniques and tools necessary for the practice of their discipline

The School of **Hotel Administration** expects its students will be able to

- understand, critically evaluate, and apply key business principles across a variety of hospitality contexts, both domestic and international
- demonstrate the leadership, communication, and team skills required for effective management within the diverse and global hospitality business environment

- demonstrate awareness of ethical and personal responsibilities as a hospitality leader
- build the competencies and habits required for life-long learning

The College of **Human Ecology** expects its students will be able to

- comprehend disciplines and fields: explain principles and methods; identify emerging issues; describe practice expectations; communicate effectively within disciplines and fields
- think critically: critique and evaluate information, design, and claims; interpret visual information; demonstrate quantitative reasoning and statistical inference; explain scientific method; distinguish between objectivity and subjectivity
- apply multi-disciplinary perspectives: identify complex interactions between individuals and their environments; explain interactions within and between the natural, physical, and social sciences; manage diverse and changing social, technological, and material environments; collaborate across disciplines to understand and analyze issues
- innovate in research, design, or practice: synthesize ideas; use research methods to generate knowledge; develop new practices; solve problems
- write, speak and use visual communications effectively: speak and write logically, clearly and persuasively; use effective visual communications; adapt communications to audience and goals
- work effectively with others: display effective leadership and teamwork; appreciate diverse perspectives; cooperate within and across diverse groups; engage effectively with communities
- display commitment to ethical principles: identify ethical and moral issues; know and adhere to ethical principles in academics, research, design, and practice; recognize conflicts of interest; attribute source materials
- direct own learning: demonstrate curiosity, skepticism, objectivity; access information in a changing technological

and social environment; work independently; make decisions; manage a project through to completion; use resources to address problems

School of **Industrial and Labor Relations** students are expected to be able to

- engage in critical, reasoned analyses of issues and ideas
- explain ideas and analyses through written and oral communication
- evaluate and apply theories and assumptions of the social science disciplines to workplace issues
- analyze workplace issues from a variety of perspectives, including the historical, cultural, institutional and ethical perspectives
- access, evaluate and analyze qualitative and quantitative data, so as to enhance understanding and inform decision-making
- work independently and in cooperation with others

Although many educational goals are shared among the colleges, the shared goals are not always explicitly articulated.

Opportunities exist for greater coherence in undergraduate education, with greater focus on the university-wide learning goals.

7.1.3 Distribution Requirements of the Colleges

The learning goals of the university and the colleges are embodied in the distribution requirements of each college. Like the guiding educational goals, distribution requirements are established and reviewed by a faculty committee in each college. A complete description of college distribution requirements is available in *Courses of Study*⁴ and on college websites.

A comparison of the distribution requirements across the seven undergraduate schools and colleges shows that *all* Cornell undergraduate degrees require students to take at least one quantitative or science course and one humanities course. Further, the four largest schools—Arts and

⁴ http://www.cornell.edu/academics/docs/courses_of_study_201011.pdf

Sciences, Agriculture and Life Sciences, Engineering, and Human Ecology, which together award approximately 85% of Cornell's baccalaureates—all share the following minimum distribution requirements:

- at least two semesters of writing
- two or more courses in science
- at least one course in mathematics or quantitative reasoning
- a minimum of three courses in social sciences and/or humanities

Two of the other colleges—Hotel Administration and Industrial and Labor Relations—offer only one major. The third—Architecture, Art, and Planning (AAP)—offers three distinct majors, and all requirements in AAP are major-specific. As one of AAP's majors, city and regional planning, shares the above list of requirements characterizing the larger colleges, there are four Cornell majors that have slightly less diverse distribution requirements:

- **Art majors** in AAP are not explicitly required to take courses in science or quantitative reasoning. However, required courses in sculpture, photography, and electronic imaging convey materials from these disciplines.
- Undergraduates enrolled in AAP's five-year bachelor's program in **architecture** are required to take several courses within "Architectural Science and Technology" rather than more general scientific training. Architecture majors are also required to take only one course in writing.
- **Hotel Administration** requires only one course in science but otherwise has the distribution requirements above.
- **Industrial and Labor Relations** students need only one course in science and/or technology studies but otherwise meet the distribution requirements above.

7.1.4 Creative and Performing Arts

The creative and performing arts at Cornell are located primarily in two colleges and secondarily in two others. The creative arts are the central

focus of AAP, two of whose three departments, architecture and art, are devoted to the study and practice of design. By contrast, the College of Arts and Sciences has no department exclusively concerned with the arts. A&S does, however, have three departments that combine scholarly and creative activities: the Departments of English; Music; and Theatre, Film, and Dance. Within the Department of English, the creative section consists of poets and fiction writers, who provide a sequenced undergraduate curriculum in creative writing; in the Department of Music, the curriculum integrates the creative work of the department's performers and composers; and in Theatre, Film, and Dance creative efforts include work in acting, directing, filmmaking, choreography, and design (costume, scene, lighting, sound). The College of Agriculture and Life Sciences devotes one department, Landscape Architecture, primarily to the practice of design. And finally, the study and pursuit of design are important in two of the five departments in the College of Human Ecology—Design and Environmental Analysis, and Fiber Science and Apparel Design. In addition, the Johnson Museum of Art provides an important resource for various areas of art and design.

Opportunities for Cornell students to pursue the arts include voluntary participation in extracurricular activities, attendance at public performances or presentations, and enrollment in a wide range of popular undergraduate courses and majors. Cornell also affords a few opportunities for advanced degrees in arts- and performance-related fields, mainly at the master's level, but also including the Doctor of Musical Arts. In addition, undergraduates in many of these fields have multiple opportunities to present their work beyond the confines of the campus and the community, although of course it is the faculty in these areas who are most likely to pursue such options.

In the context of these many opportunities, however, the arts are purely optional for the overwhelming majority of undergraduate students, in direct contrast with math, science, the social sciences, and the humanities.

7.1.5 Oversight of Curricula

In all undergraduate schools and colleges, a faculty committee oversees and sets policies relevant to the college's educational goals and degree requirements. These committees are listed in Table 7.1.

Table 7.1. College committees overseeing undergraduate curricula

Undergraduate College	Curriculum Committee
Agriculture and Life Sciences (CALs)	College Curriculum Committee
Architecture, Art and Planning (AAP)	<i>The three departments make curricular decisions independently</i>
Arts and Sciences (A&S)	Educational Policy Committee
Engineering	Common Curriculum Governing Board
Hotel Administration	Curriculum Committee
Human Ecology (HE)	Educational Policy Committee
Industrial and Labor Relations (ILR)	Teaching Advisory Committee

We offer examples from two colleges to highlight the ways faculty provide oversight of curricula:

In the College of Engineering the Common Curriculum Governing Board (CCGB), formed in 1981, meets weekly during the semester. This board includes a representative from each department/school within the college, as each department bears primary responsibility for evaluating and reviewing its own particular educational goals, curricula, programs of study, and syllabi. The CCGB also has liaison committees with three programs outside the college: math, physics, and chemistry/biology. The CCGB is responsible for the "engineering core curriculum" and for approving core courses. CCGB also addresses topics such as introduction-to-engineering courses, substitutions for the core courses, liberal studies requirements, transfer students, honors programs, dean's list requirements, assessments of core course offerings, and students in academic trouble. The CCGB is responsible for the overall climate of the

college and thus conducts periodic student surveys.⁵ In addition, it takes up issues brought by faculty and departments. Where necessary, the CCGB establishes committees to oversee formal assessment protocols similar to those of the ABET (the accreditor of engineering programs). Any major changes proposed by the CCGB are voted on by the engineering faculty.

In the School of Hotel Administration, curricular matters are overseen through the Curriculum Committee, chaired by the school's dean of students, with representation from four discipline areas of the school. The committee engages in all questions and issues related to the curriculum and is empowered to review all course proposals and approve courses as provisional. (After two offerings the course must be brought to the full faculty to be considered permanent.) The Hotel School also has a separate group comprised of those currently teaching required courses. This group of about 25 reviews and discusses course goals and integration among courses required in the first two years.

7.1.6 The Use of Capstone Projects

In many programs in various schools and colleges, capstone projects serve as a significant means of evaluating students' grasp of the methods and materials of the discipline. Most undergraduate programs have honors programs, and many of these involve supervised thesis projects. As just one example, the Asian Studies honors program culminates in a senior research project, in which students spend the first term of the senior year engaged in research for a final essay, under the direction of the project supervisor. By the end of the first term, the student must present a detailed outline of the honors essay, which is evaluated by the project supervisor and the director of undergraduate studies. The student is then eligible for ASIAN 4402, the honors course, which entails the writing of the essay. At the end of the senior year, at least two faculty members conduct an oral examination, which covers the honors essay and the student's area of concentration.

⁵ The most recent survey, administered in 2005, was centered on student stress.

Other kinds of capstone experiences are also commonly undertaken at Cornell. For many students, research experiences involve multiple semesters of research demonstrating increasing independence, responsibility, and intellectual contributions to the research program. In the College of Human Ecology (HE), students may work with faculty members within or outside the college on research for credit in an arrangement that requires a formal learning contract with learning goals, expected outcomes, criteria for performance, and evaluation procedures. These experiences may culminate in poster/oral presentations and/or co-authorship of a publication in a professional journal.

Another type of capstone experience is the senior project. For example, advanced students in HE may complete substantive projects for clients such as community groups, organizations, government agencies, businesses, or not-for-profit organizations. Examples of these projects include needs assessment, program development, program implementation, product development, product evaluation, facilities design, apparel design, policy analysis, and marketing plans. Some courses are designed to offer these experiences, but students may also complete such projects as independent study.

A focal senior project is a requirement for all architecture and fine arts students in the AAP. These projects are intended to demonstrate their knowledge and general ability to create a comprehensive artistic or architectural project of their own selection.

7.1.7 Breadth of the Academic Experience

Inspired by the notion of “Any Person ... Any Study,” Cornell is proud of the breadth of course offerings available to undergraduates. This availability has two aspects: first, the sheer number of majors from which undergraduates may choose, and second, the fact that students are able, and sometimes required, to take classes outside their major and even outside their home college.

Data from the spring 2009 PULSE (Perceptions of Undergraduate Life and Student Experience) survey suggest that this availability is an important component of the undergraduate experience, as close to half of all students

commenting on cross-campus access regarded it as “easy” to take courses or programs from across the university. Most colleges and several key majors require students to take courses outside their colleges. The requirements range from the near-universal Freshman Writing Seminars (which are all offered through A&S) to upper division courses in chemistry—offered in A&S, but required for biology majors from CALS.

Perceived limitations on out-of-college course enrollment occur primarily because of college or major requirements that students take a large number of courses within the college.⁶ For example, A&S requires that 100 of the 120 credits required for graduation must come from the offerings of A&S.

Where college boundaries have been identified as obstacles to the pursuit of an academic program, steps have been taken to remove barriers. For example, all biology courses count as in-college credit for both CALS and A&S students, no matter which college “owns” the course. Nutrition courses—offered through HE or CALS—can be counted as A&S courses by biology majors in the nutrition concentration. When students do encounter barriers, colleges may waive out-of-college credit limits in response to student petition.

Policies on the transfer of credits from other institutions are published on each college’s website; these policies include details on how the colleges assess courses for transfer credit. Two of Cornell’s colleges, CALS and Human Ecology, also have articulation agreements with numerous other institutions, primarily community colleges. These institutions are listed in “Transfer Credit Certification” on the Cornell website.⁷

7.1.8 Extracurricular and Nontraditional Opportunities

Close to 900 student organizations, either university or independent, were registered through the dean of students in 2009–2010. University organizations are part of an academic or administrative unit and have an

⁶ Twenty-eight percent of students reporting on this issue in the 2009 PULSE survey cited this as a reason for difficulties in taking advantage of cross-college opportunities. See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=282

⁷ <http://cuinfo-test.cit.cornell.edu/Student/docs/transfer-credit-certification.pdf>.

advisor whose job description includes advising the organization. Independent organizations have an advisor who serves in the role as a volunteer and not as part of job responsibilities. By registering, student organizations may reserve table space in Ho Plaza or in Willard Straight Hall, get free web hosting, and apply for funding from the Student Assembly Finance Commission and the Graduate and Professional Student Assembly Finance Commission.

According to the 2009 PULSE survey, the extracurricular activities with the highest participation rates were exercise or fitness activities, “other” student activities, volunteer work, working for pay (as part of work study or not), and informal competitive sports (e.g., participating in “pick-up” games). These results also suggest virtually all Cornell students (97%) participate in at least one extracurricular activity, with two-thirds reporting involvement in two to five activities within the same academic year.

Cornell is an NCAA Division I institution and provides one of the largest numbers of varsity sports programs of any university in the United States, fielding 36 intercollegiate athletics teams—18 male and 18 female. Cornell competes in the Ivy League, which has higher minimum eligibility standards than other athletic conferences and does not allow athletic scholarships. Cornell student athletes are integrated with the overall student population and generally do not stand apart from other students.⁸ In addition, members of Cornell’s intercollegiate athletic teams have a strong legacy of community outreach and service through the Red Key Athlete Honor Society and through the individual sports teams.

The Faculty Advisory Committee on Athletics and Physical Education is charged to provide advice on how the programs of the Department of Athletics and Physical Education can best complement and support the overall educational objectives of the university. Most Cornell varsity teams also have at least one academic advisor who acts as a liaison between the athletes on a team and all academic entities. At the end of each season, athletes are strongly encouraged to respond to an on-line Coach and

⁸ The NCAA self-study includes a section on academic integrity in Cornell athletics: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=464

Program Evaluation survey—a process now facilitated through Institutional Research and Planning. This type of feedback is extremely valuable and is unprecedented in NCAA Division I.

7.1.9 Undergraduate Research

The many avenues for undergraduate research at Cornell exemplify both the diversity and the individualization of the university's educational opportunities. Like other major research-intensive institutions, Cornell especially attracts undergraduates who hope to work with faculty on research projects, preferably individually or in small groups. These opportunities substantially support the university's educational goals and learning outcomes.

Cornell students have many opportunities to engage in research—for academic credit, as volunteers, and for pay. In the first category are students who earn credit for doing empirical research, students who pursue independent study under the supervision of a Cornell faculty member (including but not limited to honors research that might lead to a thesis), and students who work as part of small project teams under the aegis of a faculty member. Specialized programs that emphasize intensive research training, such as the Hunter R. Rawlings Cornell Presidential Research Scholars Program, also serve select students. The number of students who take advantage of these opportunities varies significantly across the seven undergraduate colleges and among departments and majors within colleges, though the numbers are quite impressive in all colleges. Some colleges emphasize empirical research more than others, whereas others emphasize apprenticeships and studio work. In some colleges, work on project teams is prevalent, and in others paid research experiences are more common.

Data from recent student surveys provide an overview of the extent of undergraduate research. The spring 2009 PULSE survey (administered to all undergraduates) and the spring 2010 Senior Survey (administered to graduating seniors) both asked about credit and not-for-credit research experiences with faculty. As illustrated in Table 7.2, these data suggest that approximately a quarter of all undergraduates and close to half of our

graduating seniors have had some experiences engaged in research projects with faculty members.

Table 7.2. Percent of students reporting that they participated in research with faculty during their time at Cornell

College	2009 PULSE Survey	2010 Senior Survey
Agriculture and Life Sciences	29%	47 %
Architecture, Art, and Planning	13%	13%
Arts and Sciences	24%	40%
Engineering	23%	47%
Hotel Administration	7%	15%
Human Ecology	40%	64%
Industrial and Labor Relations	13%	32%
Cornell, overall	24%	46%

Other data are consistent in suggesting high levels of involvement in research. For example, in 2008–2009 in the College of Engineering 427 undergraduates earned credit for doing research with faculty, and additionally, at least 520 students earned credit on Student Project Teams, which can range from two to a dozen students. In the College of Human Ecology, a minimum of 24% of its majors participated in faculty-supervised research during the 2008–2009 academic year. Given that some students may overlook independent studies or project teams when answering survey questions, it seems likely that at least half of Cornell undergraduates have participated in a mentored research experience with Cornell faculty at some point during their four years. However, because of Cornell’s decentralized administrative functions, it is difficult to compile comparative administrative data on undergraduate research.

7.1.10 The Living-Learning Environment

Cornell has made a major investment in the “living-learning” or “learning community” experience through the residential initiatives on North and West Campuses. Although Cornell offers a small number of themed

program houses, the largest share of living-learning housing on campus is *not* themed. Indeed, in the recreation of North and West Campuses, a conscious effort was made *not* to segregate students by college or academic program in order to build a larger intellectual community—one Cornell—that reflected the great intellectual diversity of the university.⁹

While not tied directly to any specific academic program, the living-learning environment at Cornell is understood as a natural extension of formal classroom activities and is built upon faculty engagement with students in the context of residential life through academic co-curricular programming. The form this takes is somewhat different on North Campus, which houses all first-year students, and West Campus, which is 60% sophomore and 40% upperclassmen.

On North Campus, several programs enrich the connection between first-year students and the intellectual knowledge base of the university.¹⁰ The Faculty-in-Residence Program (eight faculty members and their families live with the students in the residence hall), the Faculty Fellows Program (52 faculty affiliated with a particular residence hall develop programming with and for students), and the Dining Discussion Program (faculty meet with students in the dining halls and discuss relevant topics) represent a successful integration of the social/residential experience and the intellectual/academic experience. That 60 faculty members are involved in the Faculty Fellows Program on North in 2010–2011 is a considerable evidence of faculty dedication given that this is an uncompensated activity.

Cornell's West Campus is a "house system," designed to promote intellectual community, citizenship, personal discovery, and growth. Each of the five houses has approximately 350 undergraduates and is led by a tenured faculty member (the house professor), who lives with his or her family in the house. The house professor is supported by an assistant dean and by graduate resident fellows, who serve as mentors to the student residents and three undergraduate assistants. In addition, 30 faculty and

⁹ See, for example, <http://westcampushousesystem.cornell.edu/campuslife/wchs/upload/AVisionResLife.pdf>

¹⁰ See <http://campuslife.cornell.edu/campuslife/resprog/index.cfm> for information on residential programs.

senior staff serve as house fellows in each residence. The houses are overseen by the West Campus House Council, comprised of house professors, students, and others. The council reports to the vice provost for undergraduate education.

One of the overarching goals of this system is to create new opportunities to connect students with faculty in both informal and formal settings. Thus, a range of programs is provided within each house—informal talks and lectures, field trips, and a host of other innovative learning experiences. Students as well as house fellows suggest themes, and visiting speakers frequently address small house-sponsored gatherings.

That each house has both its own dining room and a faculty suite to house visiting speakers allows for the development of a unique approach to community life, learning, and student-faculty interaction. For example, House Dinner is a special weekly event, open only to residents, at which particular themes, guests, or projects are featured. Attendance is expected, and faculty and students sit together to discuss a range of social and intellectual issues of the past week. Once every semester each student resident may invite one faculty member to dinner to engage with the students. The House Councils also plan events that combine social and intellectual activities. One such program happened in Becker House in October 2009, when students competed in an egg drop contest testing their application of physics and engineering. The contest judge was Becker House fellow Jim Bell—an astronomy professor involved with the NASA Mars Pathfinder and the Mars rovers projects.

The West Campus houses also sponsor one-credit courses for house residents. For example, during fall 2009, Keeton House sponsored a course on environmental living, taught by the house professor, the assistant dean, and a graduate resident fellow as well as guest speakers. This course exemplifies the ways in which the West Campus living-learning experience connects students both with faculty and with the community around them, allowing academic learning to evolve beyond the campus.

To further enhance the delivery of the living-learning mission, future plans for the West Campus House system include more inter-house

collaborations and a systematic connection between West Campus and North Campus.

7.2 Graduate and Professional Study

Graduate study at Cornell includes the Graduate School, overseeing multiple disciplines; the Ithaca-based professional schools of business, law, and veterinary medicine; and in New York City, the Weill Cornell Medical College and Graduate School of Medical Sciences.

7.2.1 Graduate School

Reflecting Cornell's culture of relative independence and autonomy within one university, graduate research degrees are directed by an independent Graduate School and organized according to fields of study; as described in Chapter 1, "Introducing Cornell," fields are distinct from departments. The Graduate School Code of Legislation defines fields as follows:

Graduate fields are voluntary groupings of members of the graduate faculty who have academic interests in common and who wish to exercise shared responsibility for an area of inquiry and for the admission, education, and, as appropriate, financial support of graduate students. Fields are independent of traditional college or department divisions, so they may draw together faculty members from several colleges, departments, and related disciplines in accordance with scholarly interests.

The Graduate School offers 18 degrees through 92 major fields of study and also has 17 minor fields. Responsibility for altering or eliminating fields rests with the Graduate School General Committee,¹¹ as laid out in the Code of Legislation. New fields are created through a petition from a group of graduate faculty to the committee, which decides whether to recommend the proposed degree to the Faculty Senate. From the senate, the proposal goes to the Board of Trustees and the New York State Department of Education for approval. If the faculty members proposing the degree represent one of Cornell's four contract colleges or schools, the

¹¹ <http://www.gradschool.cornell.edu/?p=162>

degree must also be approved by the Board of Trustees of the State University of New York.

Aspirational goals and general learning proficiencies for master's and doctoral degree candidates, available on the web,¹² are:

Cornell University has expectations of Cornell graduates that may defy explicit measurement scales. These aspirational goals (listed below) are intended to encourage students' growth and development but do not necessarily lend themselves to assessment as readily as the learning proficiencies. In some fields of study, these aspiration goals may be measured, whereas in other fields they may not have quantitative or qualitative assessment.

- Serve as an ambassador for research and scholarship
- Effectively engage in one's broader community through various forms of outreach
- Explore interconnections
 - Focus on plural contexts and cultures
 - Respect research in other areas
 - Understand and articulate the impact of research on society

Both master's and doctoral level candidates are "expected to demonstrate mastery of knowledge in the chosen discipline and to synthesize and create new knowledge, making an original and substantial contribution to the discipline in a timely fashion."¹³ Expected proficiencies include:

- Make an original and substantial contribution to the discipline
- Demonstrate advanced research skills
- Engage with the discipline
- Demonstrate commitment to values of scholarship

Responsibility for graduate curricula for research degrees rests primarily with the graduate student's Special Committee within the framework of rules and guidelines created by individual fields. The Graduate School

¹² <http://www.gradschool.cornell.edu/index.php?p=169>. Also available are assessment metrics and suggested rubrics: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=473

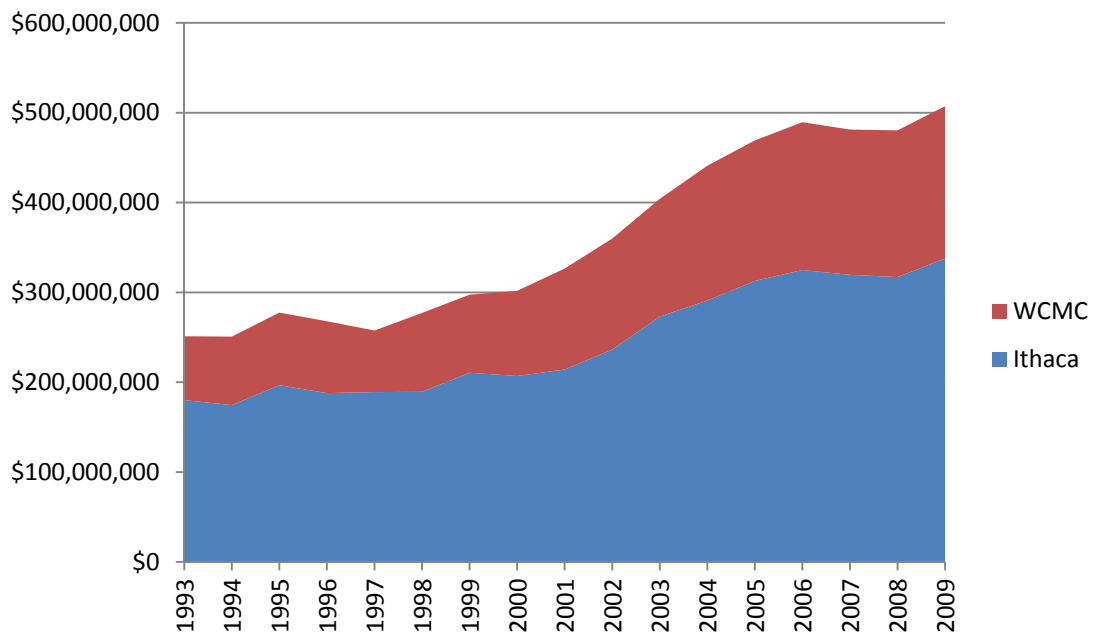
¹³ <http://www.gradschool.cornell.edu/index.php?p=169>

legislation requires the committee to administer an examination for awarding a terminal master's degree and an examination for admission to candidacy to the doctorate known as the A Exam. The same committee administers the final examination of the completed dissertation, known as the B Exam.

The field system balances central maintenance of standards with flexibility in individual education and training needs. It is in line with practices at peer schools and is generally thought to serve graduate students well—to provide them with considerable autonomy and flexibility in the definition of their programs as well as with the opportunity to alter their course of study as needed through the selection of their committees. The field system also ensures that high scholarly standards are maintained, while also allowing for innovation and interdisciplinary connection. Fields can be created, merged, and altered more readily than can departments and programs, and—especially important given Cornell's multi-college structure—fields cross colleges and bring together faculty from different areas of the campus. One drawback of Cornell's current field structure, however, is that the smallest fields may not have enough students for optimal interaction in graduate seminars and may find it difficult to recruit strong students.

Graduate funding at Cornell, as at peer institutions, mixes university-funded fellowships and teaching assistantships with external funding. This mixture allows the institution to tailor funding across the campus to specific needs, and to supplement support for graduate education in areas with fewer opportunities for external funding. However, in areas where such opportunities exist, the university expects grants to provide for graduate student support. As shown in Figure 7.1, Cornell has seen a consistent and solid growth in its external funding, especially since 2001; over the last decade, the externally funded research portfolio has nearly doubled. This represents a marked increase in funds essential for the support of graduate education.

Figure 7.1. Total sponsored research dollars, Ithaca and WCMC, 1993–2009



7.2.2 Teaching Assistants

The teaching experience that graduate students obtain through assistantships is essential to job placement in some fields. But teaching is valuable more broadly, because it requires graduate students to translate their advanced and potentially esoteric materials into subject matter that is accessible to an undergraduate audience.

Cornell offers a broad range of programs to train graduate students in undergraduate teaching, beyond the resources in their individual fields and departments. The John S. Knight Institute for Writing in the Disciplines, housed in the College of Arts and Sciences, provides excellent support to graduate students who teach undergraduate first-year writing seminars and “writing in the disciplines” courses.¹⁴ TAs in these courses enroll in a graduate pedagogy course, Teaching Writing. The program also offers an archive of teaching materials and opportunities to collaborate and team-teach with other TAs.

¹⁴ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=460

The Center for Teaching Excellence offers course design and planning materials, an electronic Handbook for Teaching Assistants, a course titled *The Practice of Teaching in Higher Education*, and the Graduate Teaching Assistant Excellence Series, consisting of weekly discussions and workshops. Experienced TAs may apply for the Master Teaching Assistant Program, in which they develop leadership skills and work collaboratively to design and implement teaching programs, events, and resources that foster teaching excellence and innovative pedagogical practice.

Additionally, in fall 2009 the Center for Teaching Excellence piloted a university-wide Future Faculty Teaching Certificate program (FFTC). Participants completed the two-credit course mentioned above (*Practice of Teaching in Higher Education*),¹⁵ created an electronic portfolio, designed a syllabus, identified a faculty mentor, and conducted research on the impact of a specific learning theory or teaching approach on undergraduate learning. Participants' research projects covered a range of pedagogical models including service-learning, peer-based learning, problem-based learning, and teaching with various forms of technology (e.g., Google mapping, i>clickers). Students presented their findings in a spring 2010 seminar series. Data from FFTC participants' course evaluations and portfolios indicate that they gained greater knowledge of teaching methods and learning theories and became more reflective about what it means to be a successful teacher.

As described in Chapter 6, "The Faculty," Center for Teaching Excellence also offers an International Teaching Assistant Program (ITAP). While the program includes language assessments, it is not intended to serve as the primary language training unit for foreign graduate students; it is focused on teaching skills—helping international TAs reach their full potential as classroom leaders and offering an engaging forum for discussion of cross-cultural communication and academic life. This program offers a summer training program as well as a series of courses given during the academic year. In 2008–2009, the program provided two full semesters of training to 183 teaching assistants from 18 countries.¹⁶

¹⁵ <http://www.cte.cornell.edu/tap/als6015.html>

¹⁶ <http://www.cte.cornell.edu/itap/index.html>

Although ITAP improves teaching skills, it does not fully address the language needs of many international TAs. (As described in Chapter 5, “Student Admissions and Supports,” more than a third of graduate students enrolled are not U.S. citizens or permanent residents.)

Cornell has recently revised language course offerings for graduate students who need additional language training. The graduate-student language program, English for Academic Purposes, is now administered by the School of Continuing Education and Summer Sessions and funded by the colleges based on the numbers of students served.

7.2.3 Professional Schools in Ithaca

The **Johnson Graduate School of Management** offers the following degrees:

- The two-year full-time residential MBA program is a deliberately small (approximately 270 students per class) program that fosters intense collaboration and community interaction.
- The one-year full-time residential program, the Accelerated MBA (AMBA) program, attracts 50-60 students each year who have a graduate degree in a scientific or technical field and strong quantitative skills. This program fosters a close-knit community while expanding the size of the second-year class.
- The Executive MBA program (EMBA) at the IBM Palisades Conference Center near New York City is a 21-month program.
- The Cornell-Queen’s Executive MBA (CQ EMBA) is a 17-month program offered in partnership with Queen’s University in Canada and delivered through 6 weeks of on-campus sessions and weekend classes taught through real-time interactive videoconferencing to students at various locations across the U.S.
- The PhD program, administered through the Graduate School, comprises 35–40 students. Unlike the MBA programs, which focus on business leadership, this program focuses on research, scholarship, and teaching.

For detailed information on learning goals for these programs and other related matters, see the Johnson School's AACSB Maintenance Review 2009, Executive Summary.¹⁷

The **Law School** offers the three-year Juris Doctor (JD), the one-year Master of Laws (LLM), the Master of Science – Legal Studies (MSLS), a number of international dual degrees, and various joint degrees, as well as the Juris Scientiae Doctor (JSD) administered through the Graduate School. As prescribed by the American Bar Association, the Law School requires that its students receive substantial instruction in

- the substantive law generally regarded as necessary to effective and responsible participation in the legal profession
- legal analysis and reasoning, legal research, problem solving, and oral communication
- writing in a legal context, including at least one rigorous writing experience in the first year and at least one additional rigorous writing experience after the first year
- other professional skills generally regarded as necessary for effective and responsible participation in the legal profession
- the history, goals, structure, values, rules and responsibilities of the legal profession and its members

In addition, the school offers substantial opportunities for

- live-client or other real-life practice experience, appropriately supervised and designed to encourage reflection by students on their experiences and on the values and responsibilities of the legal profession, and the development of one's ability to assess his or her performance and level of competence
- student participation in pro bono activities
- small group work through seminars, directed research, small classes, or collaborative work

¹⁷ See the 2009 AACSB Maintenance Review at https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=462

The **College of Veterinary Medicine** offers a balanced and innovative DVM curriculum that combines self-directed learning and didactic components, emphasizes animal experience in all phases, and fosters access to enhanced clinical and research experiences throughout the DVM program. The college also offers integrated postgraduate training opportunities that include the PhD administered through the Graduate School, the post-DVM PhD, DVM/PhD, residency, and fellowship programs. All graduate students take field-defined courses, undergo mandatory laboratory rotations, and are exposed to research programs across the campus.

The college recently (fall 2010) completed a self-study prepared for the Council on Education of the American Veterinary Medical Association.¹⁸ In addition to the strengths just described, the self-study identified areas of weakness or challenge and formulated recommendations on that basis. Among the recommendations are several related to educational offerings:

- Increase continuing education courses and develop distance learning courses.
- Utilize the Syllabus Review process to address issues related to content and sequencing, and to provide greater coordination between courses.
- Create additional introductory clinical rotations for first and second-year DVM students.
- Strengthen the curriculum in areas of food safety, business and finance, public health, and regulatory policy.

7.2.4 Weill Cornell Medical College

The following information is excerpted from the Weill Cornell Medical College “Executive Summary Report to the LCME [Liaison Committee on Medical Education],” December 2009.¹⁹

¹⁸ See the 2010 Self-Study Report for the AVMA Council on Education at https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=524

¹⁹ WCMC self-study: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=372

In the first two years, the curriculum consists of integrated, sequential courses. Students take one basic science course and one clinically oriented course at a time. In total, there are five required basic science courses (Molecules, Genes, Cells; Human Structure and Function; Host Defenses; Brain and Mind; Basis of Disease) and two clinically oriented courses in the first two years (Medicine, Patients, and Society (MPS) I and II). Year 3 begins with two introductory courses: the Introductory Clerkship, and the Anesthesia, Ventilation, and Circulation Clerkship. There follow the clerkships in Medicine, Neurology, Obstetrics-Gynecology, Pediatrics, Psychiatry, and Surgery. Students take the Public Health course in year 3 or 4. Year 4 completes the clerkships and includes three additional courses: a subinternship in medicine or pediatrics; MPS III; and the Advanced Biomedical Science course. In addition, students must complete sixteen weeks of electives.

Our educational program provides a general professional education that prepares students for all career options in medicine. The WCMC curriculum can identify content that covers all of the areas and disciplines required for accreditation. This includes the required clerkship experiences and more general topic coverage in disciplines such as ethics, psychosocial medicine, communication skills, geriatrics, and applied radiology and pathology. The educational program provides each student with the fundamental academic grounding in the basic, clinical, and social sciences necessary for the practice of medicine. In addition, each student is exposed to the major fields of clinical practice, and, through elective time, can explore potential career choices. The school has a strong tradition of fostering basic and clinical medical research. The curriculum trains all students to critically analyze scientific information in journal club formats in courses, and to understand hypothesis testing, study design, data analysis, and translational research. The excellent results of our students' USMLE [US Medical Licensing Examination] performance are additional data to support the comprehensive nature of the curriculum at WCMC.

In addition to the positive results of the Residency Program Director surveys on the competencies of our graduates, our National Residency Match Program results corroborate the general breadth of our educational program and its ability to prepare students for all disciplines of medicine. WCMC graduates enter a wide spectrum of medical disciplines and specialties and a wide variety of practice settings, successfully navigating the many kinds of health care delivery and payment systems. WCMC graduates are fortunate to be able to enter a wide range of career opportunities, including basic science and clinical research, clinical careers, administrative and faculty positions, clinical

informatics, health policy, and public health. Over the past ten years, while most graduates entered residencies in Internal Medicine, Pediatrics, General Surgery, and Psychiatry, our graduates have chosen virtually all fields of medicine, evidencing the appropriate preparation and opportunities for career exploration offered by the Medical College. The Medical College, in achieving the curricular goals of integrating clinical and basic sciences, developing problem-solving and critical analysis skills, and exposing our students to the broader issues related to primary care and ambulatory care, is in an excellent position to continue to produce physicians who can excel in any field and adapt to changes in the future healthcare environment.

7.2.5 Professional Schools' Connections with Undergraduate Education

Weill Cornell Medical College (WCMC) faculty participate in a range of activities that are relevant to undergraduate education. The Urban Semester Program (see below) brings Cornell undergraduates interested in health care careers to WCMC to be exposed to clinical arenas and to participate in a seminar series. The Travelers Summer Research Fellowship Program provides 25 pre-medical students with experience in laboratory or clinical research as well as a lecture series exploring topics in cardiovascular physiology, with an emphasis on problems in minority communities. The summer fellows attend talks by minority physicians about various medical specialties, and hospital rounds with advanced students provide further exposure to the clinical facets of medicine. The summer fellows also receive counseling on financial planning for medical school.²⁰

In the **College of Veterinary Medicine**, seven biomedical sciences faculty members currently participate in teaching approximately 250 undergraduates per year, in 10 courses that contribute to the Program of Study in Biology and Animal Physiology. Five other faculty from the Department of Microbiology and Immunology teach over 300 undergraduates per year in five courses that include microbiology, parasitology, virology, bacteriology, and immunology. Many faculty members across the Veterinary College employ undergraduate students as

²⁰ See http://www.med.cornell.edu/education/programs/tra_sum_res.html.

assistants in their research laboratories, exposing pre-medical and pre-veterinary students to relevant biomedical or clinical research and diagnostics, and enabling them to meet other faculty and staff who may serve as mentors and role models.

Veterinary College faculty, staff, and students also contribute informally to undergraduate education through their involvement with student organizations and special interest groups such as the Pre-Vet Club, and with minority students interested in veterinary medicine enrolled in the College of Agriculture and Life Sciences. The college offers opportunities for service learning through its pet visitation program, Cornell Companions, which serves more than a dozen local community organizations. Cornell Companions collaborates with Cornell's Public Service Center to offer undergraduates opportunities to volunteer and to participate in special events.

Faculty of the **Johnson Graduate School of Management** collaborate with colleagues and contribute to the curricula in the undergraduate programs of the Dyson School of Applied Economics and Management (in CALS) and the School of Hotel Administration. Courses, workshops, and academic events are accessible to students across these programs. In addition, particular strengths of each program support the others. The Hotel School contributes strengths in the services aspects of business; the Johnson School contributes a strong accounting program; and the Dyson School contributes strengths in agribusiness and particularly the food business.

In addition, the Johnson School makes its classes available to undergraduate students in two ways. First, open seats in MBA elective courses are made available to the larger Cornell student body. Second, the Johnson School offers a number of courses that are open to non-Johnson School students; these include versions of the core, required courses and several courses in topics proven to be of interest to the wider student community, such as Leadership, Negotiations, and Entrepreneurship.

The **Law School's** relationship with undergraduates is limited to some Law School faculty teaching courses open exclusively to undergraduates:

The Death Penalty in America; Nature, Functions, and Limits of the Law; Competition Law and Policy; and Gender, Public Policy, and Law.

7.3 Off-Campus Study

In addition to the Ithaca and New York City campuses, Cornell has a smaller campus in Geneva, New York, about 50 miles from Ithaca—the New York State Agricultural Experiment Station.²¹ A renowned horticulture research and extension institute, the station serves as a venue for research and teaching for the Departments of Entomology, Food Science, Horticulture, and Plant Pathology and Plant-Microbe Biology. Activities at the Agricultural Experiment Station are conducted under the aegis of the College of Agriculture and Life Sciences, and are thus under the oversight of the Ithaca departments and their curriculum committees, as well as the College Curriculum Committee and the College Faculty Senate.

Cornell University also includes Weill Cornell Medical College in Qatar, but the great distance precludes this from being an educational exchange or resource program for Cornell students. The Qatar programs were set up to deliver Cornell courses to students in the Mid-east region.²² Thus, Cornell students from the Ithaca campus or Weill Cornell Medical College in New York City do not take courses in Qatar, even though they are equivalent.

Cornell also offers a host of off-campus programs around the globe. Provided qualifying standards are met, every Cornell student is eligible to participate in these programs, which may be divided into three types: credit courses and internships, noncredit internships and work experiences, and distance learning courses.

²¹ <http://www.nysaes.cornell.edu/>

²² “Launching of an American Medical College in the Middle East: Vision, Challenges and Future Directions” https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=550

7.3.1 Credit Courses and Internships

Credit courses and internship programs for off-campus study are available through all schools and colleges at Cornell. While there are differences among them, together they provide Cornell students with numerous opportunities to study and learn in cultures and institutions beyond the Ithaca campus. The following synopsis of these programs indicates the possibilities.

The **Cornell Abroad** program is one of the largest on campus, drawing students from all undergraduate schools and colleges.²³ In recent years approximately 20% of the graduating class has participated. Most students attend programs in Western Europe, but certain areas of the world have seen a substantial increase in recent years, notably South Africa, China, and especially the Middle East and North Africa.

Students may enroll in Cornell-affiliated or unaffiliated programs abroad. Locations where Cornell University has affiliations with other American universities or with host institutions include Nepal, Paris, Seville, Berlin, Kyoto, and Israel. Where Cornell is a partner in the program—as, for example, in Paris—it shares with other partners (Duke, Emory, and Tulane universities, in this case) the responsibility of providing, in rotation, a faculty member in residence to direct the program, as well as a commitment to support the on-site administrative staff. A similar arrangement exists in Seville, with the University of Michigan and the University of Pennsylvania. Cornell is also an associate member in a number of other programs. In each of these categories, Cornell has either participated fully in the program's creation or applied for associate status after a full review by Cornell faculty and senior administrators.

Cornell students may also apply to unaffiliated programs offered by other U.S. colleges and universities. The Cornell Abroad office maintains a list of such programs, each of which is evaluated by faculty and Cornell Abroad staff before being included.

While procedures differ slightly across the schools and colleges, certain features of an evaluation process are common. Students studying abroad

²³ For more information, see <https://www.cuabroad.cornell.edu/>

are usually required to obtain approval of courses to be taken before leaving, and often must provide a syllabus on return for the courses they actually enrolled in while abroad. The pre-approval is usually done by an academic advisor, to be sure that while abroad the student remains on track to fulfill university and/or specific major requirements. Some students also do internships while abroad; whether this work experience receives academic credit is the decision of each school or college faculty, as is the determination of requirements to be met beyond the work itself. As indicated, Cornell faculty are involved at every step in the evaluation process. Where Cornell Abroad or its partners have faculty and/or staff in-country, evaluation is ongoing. Cornell programs also rely on the evaluations of students, and particularly their complaints, for indications of potential problems.²⁴

During the past three years, the **College of Agriculture and Life Sciences Study Abroad and Exchange Program** has sent approximately 140 CALS undergraduates to study abroad each year.²⁵ Of these, the majority went under the auspices of Cornell Abroad, but 21% traveled as exchange students through college-sponsored programs to universities in Australia, Sweden, New Zealand, Hong Kong, and various African countries. The procedures for approving these college-sponsored exchanges are rigorous. CALS staff and faculty, through the college's International Studies and Student Exchange Committee, require a thorough examination of a potential host's course offerings, internship and research opportunities, and support offices for international students, as well as clarity about such practical matters as housing, costs, and health insurance, before approving the application. Students are asked to complete an evaluation after they return.

The School of Industrial and Labor Relations operates two off-campus programs for students. The larger, the ILR Credit Internship Program, places approximately 80 ILR juniors and seniors in internships each year.²⁶ Some 30% of these are outside the United States, with the largest group in

²⁴ Cornell Abroad Annual Summary, 2008–2009, is available at:

https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=475

²⁵ For program details, see <http://www.cals.cornell.edu/cals/current/abroad-exchange/index.cfm>

²⁶ Credit Internship Program: <http://www.ilr.cornell.edu/creditInternships/>

Geneva, the headquarters of the International Labor Organization. The program is administered by a tenured ILR faculty member who, with other faculty and staff, ensures that the intern sites offer both a serious learning opportunity and supervisory direction for the students.

The other program is a joint program of ILR and the Quinn School at University College, Dublin.²⁷ Each fall semester since 2007, 13 ILR students have entered the Quinn School program on work and workplace relations in the context of the European Union. The faculty directors in Dublin and Ithaca are in frequent contact to discuss and evaluate the program, and students are graded in accord with the standards at University College, which are in line with those of other top European universities.

The **Urban Semester Program** is offered by the College of Human Ecology each semester and during the summer.²⁸ During the academic year students are housed at the 92nd Street Y on the Upper East Side of Manhattan and perform a three-day-a-week internship that they obtain on their own. (These internships range from working on Wall Street to working with community service agencies.) In addition, students carry out community service in Brooklyn in partnership with community-based organizations. Pre-med students typically design their own set of rotations at any of the five New York Presbyterian Hospital locations and other hospitals and clinics in New York City. They have interned in many hospital areas, including surgery, pediatrics, AIDS, nutrition, and geriatrics. The summer program expands the internship to four days a week with the fifth day devoted to discussions and seminars with professional practitioners.

The **Cornell in Washington** program, based in the College of Arts and Sciences, brings about 50 undergraduates each semester to Washington, DC, where they live in a university-owned dormitory.²⁹ The program has four major components: an eight-credit core course on public policy or American history that focuses on research skills as well as subject matter; a major research paper related to the themes of the course; elective courses taught by Cornell faculty and/or selected faculty from area institutions;

²⁷ Semester in Dublin Program: <http://www.ilr.cornell.edu/dublin/>.

²⁸ Urban Semester Program: <http://www.human.cornell.edu/academics/urban-semester/index.cfm>

²⁹ Cornell in Washington: <http://www.ciw.cornell.edu/>

and a noncredit, three-day-a-week internship that students obtain on their own, with the aid of the program. (These internships have included a variety of media organizations, governmental agencies, Congressional committees, financial institutions, and nonprofit groups.) Beginning in spring 2011, Cornell in Washington includes a service-learning component, the Cornell Urban Scholars Program. Students in this program pursue internships with nonprofit or local government agencies and take a special class, Social Justice and Urban Issues: The Case of Washington DC and Its Environs.

Students take a total of 12 credits and are graded by faculty teaching in Washington. In addition, academic tutors are available to meet weekly with students to discuss their major research project. The program is evaluated periodically by a committee of Cornell faculty, headed by the dean of continuing education and the program director. In addition to the reports of the resident staff and the director's own observations, they consider course evaluations by the students and internship evaluations by both students and sponsors.

The largest off-campus offering of the College of Architecture, Art, and Planning is its **Cornell in Rome** program, which enrolls upwards of 50 students each semester.³⁰ The program is led by on-site Cornell faculty who work in close collaboration with universities in Rome to assure the quality of the academic programming. Detailed evaluations by both faculty and students provide the basis for review and assessment. The college also runs a smaller program, **AAP NYC**, in New York City, with the focus on art, architecture, and city planning according to the student's interest.³¹ As with the Rome program, on-site Cornell faculty work with institutions in New York to provide the variety of courses and experiences needed. Assessment is done through a combination of on-site visits, student evaluations, and faculty analysis, and overseen by a committee of faculty and senior staff in Ithaca.

³⁰ Cornell in Rome: <http://aap.cornell.edu/rome/>

³¹ AAP NYC Program: <http://www.aap.cornell.edu/nyc/>

Additional, smaller programs in focused areas include the **Environmental Sciences** courses on the island of Hawaii and the **Shoals Marine Laboratory** in Maine.³²

Cornell's many programs for study abroad and at other off-campus locations present a rich array of opportunities for students. However, students seeking to study abroad encounter challenges resulting from the different models, programs, and financial arrangements across the campus. These include tuition differences, college fees, impact on financial aid, insurance requirements, and variations in prerequisites across colleges. A faculty committee, chaired by the vice provost for international relations, produced a report in November 2009 offering a number of recommendations to improve study abroad.

7.3.2 Noncredit Internships and Work Experiences

Noncredit internships and work experiences also augment the educational opportunities of Cornell's undergraduate colleges. One example is the **Engineering Cooperative Education Program** in the College of Engineering, which enables students to work in their fields of interest for six to seven months while still completing their Cornell degree requirements in the normal four-year period.³³ Students must be studying one of the major academic fields offered by the college, or be a major in either computer science in A&S or biological engineering in CALS. While there is a slight variation in which semester a student begins with an engineering company, over 90% of coop students leave campus for one semester of their junior year and return to or continue with the company the following summer. The benefits of the experience are clear, as evaluations from both faculty and students attest. Students gain interview experience when applying for the position, and they augment their learning with sustained work experience. They also earn an average of \$3400 per month to offset their living expenses in cities throughout the United States and, occasionally, abroad.

³² Shoals Marine Laboratory: <http://www.sml.cornell.edu/>

³³ http://www.engineering.cornell.edu/academics/undergraduate/special_programs/coop/index.cfm

Over a fifth of engineering majors enter a coop program. They receive no academic credit, but successful completion is noted on their transcripts. They must have completed five semesters of work at Cornell, maintained at least a 2.7 GPA, and been admitted by the program faculty and staff. To maintain the student's graduation schedule while providing this learning opportunity, the college offers required fifth-semester courses during the summer between sophomore and junior years.

College oversight of the program is close. Faculty and staff visit sites and engage in discussions with company executives before approving them, and a periodic visitation occurs when a student is in residence. Staff in Ithaca are in contact with students and with the on-site company supervisor. A clear "Expectations Agreement" is signed prior to the internship by both student and supervisor, and each also writes periodic evaluations during the student's in-company residence as well as a comprehensive final evaluation.

The Cornell **Public Service Center** (PSC) has grown significantly in recent years and has become an innovative campus leader in fostering engagement between students and various communities locally, across America, and abroad.³⁴ The goal of PSC is to foster service learning opportunities in which students utilize aspects of their training in supportive roles in a local community's efforts to achieve its plans.

In part because of the work associated with the PSC, The Carnegie Foundation for the Advancement of Teaching recently designated Cornell an "institution of community engagement," making Cornell one of only 311 U.S. colleges and universities to receive this classification.

In 2008–2009, more than 5600 Cornell students participated in various programs off-campus, and many of them also prepared for their involvement in one of the more than 60 service learning courses in the university's curriculum. For students wishing a deeper exposure to the intellectual foundations of service learning, the Public Service Scholars Program is an academic-immersion program that explores the intellectual, cultural, and political dimensions of democratic citizenship through service coupled with community-based research and public scholarship. In

³⁴ <http://www.psc.cornell.edu/>

this fashion this academic work helps frame the broader dimensions of the particular work experience.

The students' community service is volunteer, noncredit work, and in 2008–2009 some 3300 students participated in community service activities. In 25 student-led projects, over 2000 students worked in various capacities with local community leaders—in Ithaca and elsewhere—on issues of aging, homelessness, rural poverty, racial and ethnic disparities in school success, and social entrepreneurship. Some 250 students, for example, worked part-time for Tompkins County and elsewhere in a variety of capacities, while another 400 volunteered as tutors and mentors for K–12 students in local public schools. PSC also sponsors an annual “Into the Streets” event, involving 1,500 students in October 2010, participating in a great variety of community service activities. In all of these noncredit activities, PSC provides opportunity for ongoing evaluation through student journals and participant discussions during and after the project. Finally, some 800 Cornell students and alumni across the country participated in a Cornell Cares day, a national adaptation of the Ithaca-based “Into the Streets” program.

A core aspect of the PSC program involves more prolonged engagements with local communities in the United States and abroad. Groups of students may initiate the proposal, work with PSC staff to develop it, and involve knowledgeable faculty to offer panels and informal seminars to help them prepare. These programs occur during the summers, the long winter break, and the week-long spring break. Groups have built homes in New Orleans and joined a variety of community-led projects dealing with micro-economic initiatives, literacy, homelessness, and other issues. PSC has also expanded significantly its international involvements. An initiative in Ghana has focused on malaria prevention and wellness; in Costa Rica, on aiding an non-governmental organization run by local women to develop eco-tourism by building a hiking trail. In Rwanda students taught English and helped construct a system of manually operated solar panels to provide one community with energy. In all of these projects, faculty and PSC staff worked with student volunteers prior to departure—through panels, seminars, lectures, and discussions—to

provide some grounding in the culture, politics, and social traditions of the community they were entering.

Though not relevant to Cornell students enrolled for a degree, various educational activities sponsored by the university deserve some comment here. Both Human Ecology (HE) and Industrial and Labor Relations (ILR) have extensive course offerings across New York State in partial fulfillment of their land grant mission. For example, during 2008–2009 HE offered 428 noncredit instructional activities, the majority providing vocational and professional training. Similarly, more than 21,000 individuals enrolled in noncredit programs offered through ILR; topics included dispute resolution, labor law, safety and health, economic development, and employment disability.

7.3.3 Distance Learning

Distance learning credit courses have been an aspect of Cornell's offerings for almost 20 years. Under the aegis of the **School of Continuing Education and Summer Sessions**, Cornell faculty offer courses already approved by the Educational Policy Committees of their respective schools, by the department chair, and finally by the associate dean of the School of Continuing Education. Approximately 10 courses are offered during the winter session and 15 in summer session.³⁵

Beyond these efforts, individual schools and colleges have entered distance learning as well. ILR has two dedicated classrooms for credit distance learning that are used to bring students from abroad, as well as Cornell students spending a semester in New York or Washington, into the Ithaca classroom. These efforts are expected to grow and diversify over the coming years.³⁶

7.3.4 Graduate Study Abroad

Graduate students have various opportunities for study abroad, including the options described below.

³⁵ See <http://www.sce.cornell.edu/> for current courses.

³⁶ The process by which the identity of distance learning students is verified is described here: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=291

The graduate fields of Food Science and Technology and of Plant Breeding partner with **Tamil Nadu Agricultural University (TNAU)** in India to offer students in India and the U.S. a dual master's degree program.³⁷ Selected students earn an MPS in food science from Cornell and a master of technology in food processing and marketing from TNAU.

The **Cornell-Nanyang Institute of Hospitality Management**, administered by the School of Hotel Administration, offers a master's of management in hospitality (MMH).³⁸ The intensive, twelve-month program commences with a half-semester at Nanyang Technological University in Singapore, followed by one and a half semesters in Ithaca and a final semester in Singapore. About 55% of those enrolled are international students.

The Cornell International Institute for Food, Agriculture, and Development (CIIFAD) and **Bahir Dar University (BDU)** in Ethiopia collaborate on a joint program for an MPS degree in international agriculture and rural development with a specialization in integrated watershed management.³⁹ The degree is conferred by Cornell University, with all coursework and examinations undertaken at Bahir Dar. Cornell faculty travel to Ethiopia to offer courses in three-week blocks with faculty from BDU. Cornell and BDU faculty jointly supervise students' research/development projects.

7.4 Library, Information Technology, and Instructional Facilities

7.4.1 The Cornell University Library

The Cornell University Library is woven into the diversity and individuality of educational opportunities across the campus, as it supports student research and initiatives and is an integral component of

³⁷ See <http://www.tnau.ac.in/>

³⁸ See <http://www.cni.ntu.edu.sg/>

³⁹ See <http://ciifad.cornell.edu/initiatives-bahir.cfm>

the many educational programs and research projects under way at Cornell. Library staff partner with faculty and with technology and educational experts to facilitate learning opportunities for students, increase access to our resources, and showcase the university's research.⁴⁰

The Cornell University Library consists of 17 unit libraries, about 8 million printed volumes, over 360,000 e-books, and thousands of journals available to users wherever they are located. The library consistently receives high user satisfaction ratings. For example, in the Class of 2010 Senior Survey, 98% of respondents were “generally” or “very” satisfied with library facilities and resources.⁴¹ Similarly, the 2010 Faculty Work Life Survey (see Chapter 6, “Faculty”) shows high satisfaction with the library.⁴²

Over the past 10 years, the university has invested heavily in its library facilities, and has reconfigured spaces to meet evolving needs. In collaboration with Cornell Information Technologies, three Cornell libraries have created learning spaces with specialized, state-of-the-art facilities to promote collaborative group study practices, multimedia development, and software engineering for the visual and digital world.

The library serves a Cornell population of 35,000 students, faculty, and staff as well as a broader state, national, and international audience, in accordance with its land grant mission. To that end, the library maintains an outstanding collection (ranked 10th out of 113 in the Association of Research Libraries Investment Index) consisting of strong digital resources, a substantial print collection, and unique special collections. The collection in the coming years will be increasingly digital in all subjects and transformed by changing scholarly communication processes. Our collections—print and on-line—are easily accessible over the web. Students and faculty can connect to thousands of electronic journals via an easy database portal, or through Course and Subject Guides, created by librarians on specific subjects. The library adopted WorldCat Local in 2009 to connect users more easily to holdings in libraries around the world. The Cornell community also can take advantage of the holdings of other

⁴⁰ Visit the CUL website: <http://www.library.cornell.edu/aboutus>

⁴¹ See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=520, p 7.

⁴² See https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=544, p. 5.

universities through the library's ongoing participation in the Borrow Direct network, as well as traditional interlibrary loan.

The library's Division of Rare and Manuscript Collections contains materials ranging from ancient cuneiform tablets to extensive collections documenting 20th- and 21st-century history and culture. Special collections of national renown include the Kheel Center for Labor-Management Documentation and Archives and the Division of Asia Collections, which offers one of North America's most significant collections of Asian historical and literary materials. Our collections are open to all and serve as vehicles for primary resource research for undergraduates. In fact, an impressive number of undergraduates (55%) use special collections materials at least occasionally for a project.⁴³

Maintaining access to collections, spaces, and resources is a priority. The libraries on campus receive close to 4 million visits per year and are open approximately 150 hours per week, while on-line resources remain available around the clock, recording over 1.7 million patron sessions in the main library website in one month alone (example from November 2008). Over 1 million books, journals, DVDs, and other items are borrowed and renewed yearly.

Cornell's librarians facilitate information-gathering through instruction, websites, and Library Guides. Each year library staff answer over 78,000 reference questions and actively participate in the teaching of information competency skills. Library staff provides both in-person and on-line help through reference consultations, 24-hour reference chat services, and text messaging, and connect with students with Web 2.0 tools (e.g., Twitter and Facebook).

The library has an extensive undergraduate instruction program with over 1700 instruction sessions and tours yearly. Library staff develop a range of instructional aids, many using the LibGuides platform; they also teach or co-teach credit-bearing courses, and several hold appointments in academic departments. In addition, some of these instruction sessions involve students in primary research, using collections from our archives

⁴³ See page 17 here <http://www.dpb.cornell.edu/documents/1000407.pdf> or for longitudinal comparisons, https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=551

in classes such as the Researching Hip-Hop class offered by the Department of Music in 2009–2010.

Two collaborative programs worth highlighting are the Information Competency Initiative and the Digital Literacy Resource.⁴⁴ The first provides participating faculty with the funding, opportunity, and assistance to transform the curriculum, explore creative and effective ways to engage students, and integrate research skills into the classroom. The second is designed to promote information competencies outside of formal instruction by teaching or reference librarians, by providing an on-line, multimedia site which explores issues of copyright, plagiarism, research, privacy, and information technology tools in the context of undergraduate academic research.

In the face of recent university budget deficits combined with accelerating acquisition costs, the library participated actively in Cornell's strategic planning process and conducted thorough reviews of unit libraries. As a result, one small unit, the Physical Sciences Library, essentially became a virtual library in late 2009. Hard-copy materials were moved to other locations, the electronic collections were enhanced, and the physical space became a study space with subject librarians on-site. Changes are in progress or expected in other units as well. For example, the Entomology Library will be moved into the larger Mann Library. The Engineering Library will enhance efficiency by relocating some physical materials to the Library Annex. The Hotel, ILR, and Management Libraries are seeking ways to share resources.

7.4.2 Cornell Information Technologies

Cornell Information Technologies (CIT) provides and maintains the infrastructure necessary to conduct research, teach, and facilitate collaboration in geographically dispersed units and to keep Cornell seamlessly connected with the rest of the world.⁴⁵ This involves the creation and maintenance of a computing and wireless infrastructure with secure access to licensed on-line resources, a unified seamless printing

⁴⁴ Information Competency Initiative: <http://infocomp.library.cornell.edu>

Digital Literacy Resource: <http://digitalliteracy.cornell.edu/>

⁴⁵ See <http://www.cit.cornell.edu>

service across all libraries and computer laboratories, and the integration of course management software (Blackboard) to library holdings to facilitate teaching and learning.

CIT services enable faculty to offer on-line access to course materials, lead discussions on-line, and assess student learning via course management software, course websites, and blogs. Faculty may use polling devices (i>clickers) to engage students in large lecture courses or have them create their assignments using multimedia materials. Students have access to materials 24/7 via a wireless network, post comments within a secure network and authentication system, and launch innovative projects using high-end software available in computer laboratories.⁴⁶

As described in Chapter 3, “Institutional Stewardship,” Cornell’s strategic planning process identified areas where information technology services could function more efficiently and effectively. As a result, current efforts are focused on more centralized coordination of desktop support and application development.

7.4.3 Instructional Facilities

There are more than 260 major buildings on the 745 contiguous acres that comprise Cornell's central campus in Ithaca. Consistent with the large size of the campus and the decentralized nature of academic administration, classroom management is largely decentralized. Instructional spaces are “owned” by the colleges, and the colleges take the lead in monitoring their quality and adequacy. Leadership is informed about the quality and sufficiency of those spaces by faculty, students, and the college and university registrars who monitor the spaces. When problems are found, Maintenance Management and Building Care—a unit within the Division of Facilities Services—frequently partners with colleges and departments to implement improvements. When technological upgrades are required, CIT partners with others to provide appropriate audiovisual solutions.

While only 56% of faculty reported that they were “somewhat” or “very” satisfied with “classroom space” in the 2005 Faculty Work Life Survey, that percentage increased to 65% in the 2010 administration of this survey,

⁴⁶ For more on CIT support for teaching and research, visit <http://www.cit.cornell.edu/teaching/>

perhaps reflecting substantial investments in facilities over the last several years.⁴⁷

Classroom scheduling is handled through centralized tools (including Resource 25, also known as R25) and decentralized practices (including hand scheduling). In general, these scheduling tools have mechanisms to take into account faculty requests, including geographic location, room configuration, capacity, AV equipment, and board type (white, chalk). The Office of the University Registrar recently acquired an analytic tool (X25) to evaluate utilization by time of day and seat fill as well as the match between the demand requests and the supply provided.

As part of its ADVANCE funding to facilitate the recruitment, retention, and promotion of women in engineering and the sciences, the university recently completed a large-scale study of space at the university. While this study focused on personal office and research spaces, a walkthrough of over 2 million square feet revealed that the quality of spaces at the university is fairly high. Of approximately 8000 rooms visually inspected, only 49 were judged to be “poor” in quality: not renovated, peeling paint, dirty, old, poor lighting, and/or noisy. By contrast, nearly 2000 of these rooms were judged to be “best of their type”: clean and either recently renovated or new construction.⁴⁸

The office of Space Planning, in collaboration with Facilities Services and Campus Planning, is actively engaged in enhancing the university’s capacity to monitor space, space usage and space quality in order to enhance our strategic use of this important resource.

7.5 Recommendations

7.5.1 Common Academic Experience

Though university-wide educational goals, reflecting the shared learning goals of the undergraduate colleges, have been explicitly articulated and

⁴⁷ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=544

⁴⁸ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=299

though there is considerable overlap in distribution requirements across colleges, the discrete nature of each college has tended to prevent or even to prohibit the creation of university-wide or general studies courses. Thus undergraduate education at Cornell lacks a general coherence across the campus. We endorse the relevant objective given in Cornell's Strategic Plan:

- "Provide a more unified and shared educational experience for Cornell undergraduates."

Specifically, we recommend

- that the university create a program that provides for a common academic experience for all undergraduates, in which formal coursework is supported by living-learning activities and which supports the idea of Cornell as "one university."

7.5.2 Integration Across Colleges

We underscore the several recommendations of the Strategic Plan that focus on integration. Specifically, we endorse the following initiative, listed in the Strategic Plan as one of seven strategic initiatives for the next five years:

- "Develop stronger connections or ties across colleges that enhance educational opportunities for students and the quality and stature of disciplines or fields."

We also endorse the following Strategic Plan recommendation for one means of achieving these enhanced educational opportunities:

- "Review the academic necessity and justification for policies and procedures that limit or create obstacles to the capacity of students in one college to take courses in another."

7.5.3 The Creative and Performing Arts

We find the integration of the creative and performing arts into a Cornell undergraduate education to be a potentially important challenge, and we recommend

- that Cornell conceptualize and implement an integral role for the creative and performing arts.

7.5.4 Undergraduate Research

Cornell has had great success in encouraging undergraduates to integrate research opportunities with their education, but because of the university's highly decentralized administrations it is difficult to compile comparative data or institution-wide summaries. For purposes of institutional research and long-term planning, we recommend

- that Cornell establish a centralized data collection, as well as an organized system or resource to provide liaison, communications, and facilitation to support and highlight undergraduate research; to make current students' research accomplishments more visible to faculty, students, prospective students, and members of the public; and to make it more possible to build upon those accomplishments.

7.5.5 Fields of Graduate Study

The graduate field structure at Cornell is an innovative way for graduate students to integrate studies across departments and colleges and develop strong partnerships with faculty through the committees they are required to form to guide their education. However, some graduate fields have very low enrollments and thus provide less interaction in seminars and a narrower range of opportunities for learning, and may have difficulty recruiting strong students. We recommend

- that the General Committee of the Graduate School examine whether to reduce the number of graduate fields by merging or closing some very small fields, or by clustering related fields in order to improve students' educational opportunities.

7.5.6 Graduate Student Language Instruction

One serious challenge currently facing the university is how to prepare graduate students whose first language is not English for graduate

coursework and research and undergraduate teaching in English. As described in this chapter, Cornell offers a strong program to improve the teaching skills of international TAs. The university's language skills offerings for these students have recently been revisited and have been relocated to the School of Continuing Education and Summer Sessions. We recommend

- that Cornell continue to monitor both the larger issue of the language skills of entering graduate students and the specific issue of the extent to which the courses currently provided address the goals and needs of graduate education.

7.5.7 The University Library

The library system at Cornell is foundational to excellence in virtually all departments and programs, and it is integral to the educational experiences of students at all levels. As the library system moves forward with changes approved under the Strategic Plan, we recommend

- that Cornell ensure that collaborations and partnerships with merging libraries and other non-Cornell libraries serve the needs of faculty and students;
- that the university examine and track the library needs of students (undergraduate, graduate, and professional) to ensure strong services that are effectively integrated with academic priorities.

7.5.8 Study Abroad

With regard to study abroad and at other off-campus locations, Cornell offers an abundance of diverse opportunities. However, as noted earlier in the chapter, students who want to study abroad face a number of administrative and financial hurdles. According to the Study Abroad Task Force,

Undergraduate participation in study abroad activities is constrained by our tuition structure, organization of study abroad programs and program offerings. Cornell's fee for study abroad, which is the highest in the country and more than twice as high as that of any of our Ivy peers, is a significant impediment to study abroad. The Task Force calls for a revised

financial structure so that the administrative fee no longer represents a barrier that discourages international study or encourages students to take a leave from Cornell in order to go abroad. . . . The amount of tuition collected and its allocation for international programs require further study to reduce internal discrepancies in fees paid by students and to provide sufficient funds to make these programs affordable and of high quality. . . . The Task Force recommends creation of a single student-focused office to promote and support international education opportunities at Cornell. This office would assume responsibility for publicizing overseas opportunities, providing information and administrative support on application procedures, health precautions, immigration and work permits, risk mitigation, orientation. . . . Initiation of academic programs and advising will remain faculty responsibilities. . . . The Study Abroad Task Force strongly supports creation of a “re-imagined” Cornell Abroad program working under a different financial model with stronger integration with college programs and faculty.

We recommend

- that the university give due consideration to the recommendations presented by the study abroad task force in late 2009, particularly
- that the university should develop a new university-wide model to support international education, and should consider implementation of the recommendations of the 2009 Study Abroad Task force, contingent on new budgetary and organizational structures.

8. Assessment of Student Learning

Standards:

14: Assessment of Student Learning

In a profound sense, assessment and improvement are a way of life at Cornell; an institution does not reach the success and recognition that Cornell has attained without thoughtful and continuous self-examination. The pursuit of excellence is fundamental to Cornell's institutional identity, at all levels and across all colleges and programs. That said, the history of our assessment practices around student learning could be characterized as informal and sporadic, rather than systematic and documented.

Cornell recognizes that more systematic and widespread assessment practices is essential in continually improving its educational offerings. As described in the first section below, "Steps Towards a Culture of Assessment," the university is quite seriously engaged in creating a more formalized culture of assessment of student learning across the campus.

"Effects of Cornell's Diversity and Complexity," reviews some of the reasons for the lack of universal attention to systematic assessment practices: Cornell's diversity, complexity, and decentralized system, with each college independently responsible for its degree programs. At the same time, we make clear in this section that assessment *has* been going on, in many different ways, and with many different assessment tools.

"Oversight of Assessment of Student Learning," looks more closely at the structures that Cornell has created to build a culture of assessment: a central administrative unit, a university Core Assessment Committee

comprised of associate and assistant deans from all colleges, and a leadership structure within each college to engage with assessment processes in departments and programs.

The fourth section, “Status of Assessment in Undergraduate Majors,” describes the progress-to-date in the undergraduate colleges and outlines the plans for further development of assessment. The professional schools, as described in the next section, have good assessment-of-student learning processes already in place. The Graduate School, which oversees more than 90 graduate fields of study, has developed student learning proficiencies and associated rubrics for its master’s and doctoral research degree programs, and will be working with the graduate fields as they develop field-specific assessment plans.¹

Finally, in “Other Assessments of Student Learning” we describe how assessment practices in some university-wide programs help improve learning and help to infuse the faculty with a culture of assessment. Local or specific projects of various kinds can contribute to learning and innovation in teaching.

This chapter concludes with “Recommendations.”

8.1 Steps Toward a Culture of Assessment

Cornell has taken several major steps to develop a comprehensive approach to assessment that will have a long-lasting effect on student learning. Among the steps taken thus far are:

- designation of responsibility for assessment to the provost’s office, with a specific charge to the vice provost for undergraduate education;
- creation of a half-time position of assessment project manager, filled by an assistant dean, to support assessment planning and implementation at all levels;

¹ See *Assessment of Student Learning in the Graduate School*, https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=346.

- establishment of the Core Assessment Committee, led by the vice provost for undergraduate education and including, generally, an associate or assistant dean from each of Cornell's colleges and schools. The goal: to oversee the assessment process across the campus, provide advice and support, and serve as a central resource for communication and coordination throughout Cornell. The committee meets biweekly during the academic year.
- participation in Middle States workshops on assessment: in September 2009 by 10 faculty and staff, 8 of whom were associate and assistant deans, and in September 2010 by 6 faculty members representing chairs or directors of key departments or programs;
- creation of a leadership structure within each college or school, including an associate or assistant dean, to oversee assessment of student learning;
- development of a timeline in each college/school to implement formal assessment practices in each degree program;
- development of learning goals at the university level and for each college/school;
- planning and implementation in Acalog, the new web-based software used for the university's online *Courses of Study*, to incorporate learning outcomes at all levels; development of mechanisms for reporting on the support of outcomes at all levels (course, degree program, college/school, university);
- hiring of an associate director for assessment by the Center for Teaching Excellence (CTE); creation of workshops and individual support opportunities for faculty on assessment practices by the CTE;
- utilization of learning outcomes in instructional activities in the Cornell Library, including the Information Competency Initiative. Librarians give 1500 instructional sessions per year in courses. Their use of outcomes-based approaches in discussing their sessions with the faculty helps instill an assessment-based perspective among faculty.

In sum, a plan has been developed to fully implement and support an exemplary pattern of student-learning assessment practices across Cornell. Parts of this plan are fully implemented, but the culture of assessment is still young. To date, the university and all the colleges/schools have enunciated educational goals. Many majors (degree programs) and courses already follow effective assessment practices, and there is a timetable for the remaining departments and programs on campus to adopt such practices. Cornell's size and complexity make assessment a complex project and, appropriately, assessment practices will vary among colleges, departments, and courses.

8.2 Effects of Cornell's Complexity and Diversity

As described throughout this self-study, Cornell's founding mission, to create "an institution where any person can find instruction in any study," led to an unusually diverse set of educational opportunities. Ezra Cornell's interests in the application of science to agriculture and engineering created a university that, while deeply engaged in classical liberal education, prepared students for a wide range of career paths. These diverse aims led to a new, decentralized model of separate colleges and schools that persists today, and that creates a culture of independence and autonomy within the individual units. Each of the seven undergraduate colleges and schools and five graduate and professional schools independently oversees the academic programs offered by the units under its jurisdiction.

The colleges and schools share some common educational themes and goals (see Chapter 7, "Educational Offerings"), and they collaborate in many ways, but historically, the learning goals within the academic context have not been explicitly integrated with each other or with the goals of programming that support the broader student experience (e.g. residence life, athletics, student services).

As examples of the substantial differences in scale, size, and complexity of the various colleges/schools, consider:

- The College of Arts & Sciences (A&S) has 28 departments, offering 42 majors, each with its own distinct requirements.
- In the College of Engineering 12 departments offer 12 majors, sharing a common engineering curriculum during the freshman and sophomore years. But two of the departments are formally part of other colleges, and two of the majors are offered jointly by two departments.
- The School of Hotel Administration has one department and one major.
- The Faculty of Computing and Information Sciences has three departments but no students; the departments offer degrees in A&S, the College of Agriculture and Life Sciences (CALs), and Engineering.
- The faculty of the departments of the above units (and others) are heavily engaged in research and PhD education. But the departments are not responsible for the PhD degrees; instead, the Graduate School, with its field structure, offers the PhD degrees.
- The Biology Program (not a department) offers the biology major in A&S and CALs and provides service courses to all of Cornell.

These substantial differences necessitate different approaches and procedures in regard to assessment.

Several mechanisms ensure and facilitate collaboration among the colleges:

- The provost meets regularly with the deans of all colleges and discusses any relevant issue, including assessment.
- The Core Assessment Committee, mentioned above and discussed in detail later, meets biweekly.
- The vice provost for undergraduate education convenes a monthly meeting of associate or assistant deans from most colleges and schools. This group deals with academic issues that cross college/school boundaries—access to minors, mental health,

academic integrity, regulations for final exams, assessment practices, etc.

- The Education Policy Committee of the Faculty Senate, the General Committee of the Graduate School, and education policy committees in each of the colleges/schools have broad oversight and coordination responsibilities for academic programs.

These groups provide critical opportunities for developing, coordinating, and monitoring assessment activities university-wide, and they are expected to play key roles in strengthening and deepening assessment activities at Cornell.

8.2.1 Established Approaches to Assessing Educational Programs

Consistent with the Cornell tradition of diversity and local control, there are many approaches to assessment across the university. Some, particularly those of most of the 21 externally accredited programs, fully meet the most stringent expectations for assessment. Others conscientiously monitor curriculum development, course design, the quality of instruction (via mentoring practices and performance reviews), and the academic success of students (via exams and final papers, satisfaction of graduation requirements, and graduate school and professional placements), but they do not systematically measure and document students' attainment of explicit learning outcomes.

Cornell, like its peer institutions, has long relied on conventional practices to measure the quality of its educational programs. One method involves the external rankings of colleges and programs. Cornell as a whole has ranked anywhere from 1st to 16th in the United States or the world in various recent rankings. Most of its colleges and schools rank in the top 15, and most of its departments also fare well in various rankings. There are tangible advantages to being at the top of the rankings, in terms of student and faculty recruiting and competition for funding. Thus colleges and departments work hard to ensure their continuing success in this arena.

A second assessment tool is the use of advisory committees and regular interactions with key employers and prominent alumni. Many of Cornell's colleges/schools focus on supporting specific employment sectors. This

emphasis provides a career path for students, and regular dialogue with external constituents helps to ensure that academic programs produce graduates with competitive skills. Although the College of Arts and Sciences does not focus on specific areas of employment, its advisory committee and prominent alumni do help calibrate the quality of its students' preparation for the varied professions they choose.

A third tool is the use of regular external reviews of departments and programs. Some of Cornell's colleges have had such reviews for decades. Starting in 1996, the university mandated external reviews for all units on a 7-10 year cycle. To date all units have been reviewed at least once, and a second cycle has begun. The Faculty Committee on Program Reviews directs the review process, with members elected by the Faculty Senate. The external review committees evaluate entire department programs, both undergraduate and graduate, and site visits include interviews with students. This process, including both the department self-studies and the review team reports, has proven to be a valuable check on what is going well and what needs attention.

Many other assessment measures are used by individual departments and colleges—senior exit surveys, alumni surveys, course evaluations, data produced by Cornell's office of Institutional Research and Planning, standardized tests such as the LSAT and MCAT, graduation rates, graduate school acceptance rates, job placement, and so on.

Use of these various direct and indirect measures ensures that academic programs keep pace with the evolving needs of well-educated students.

8.3 Oversight of Assessment of Student Learning

8.3.1 The Core Assessment Committee

The Core Assessment Committee, headed by the vice provost for undergraduate education, meets biweekly and is responsible for planning and overseeing implementation of assessment of student learning across the university. Its membership appears in Table 8.1.

The Core Assessment Committee has set up leadership structures to develop and oversee assessment processes in each college/school, created time lines, compiled university learning goals, discussed college/school learning outcomes and their placement in literature and the web as well as methods of assessing them. Finally, the committee has dealt with issues of faculty engagement in assessment, placement of outcomes in the Cornell course catalog, and mechanisms for analyzing and reporting how outcomes at one level support outcomes at the next level above.

Table 8.1. Membership of The Core Assessment Committee

College/School/Unit	Member	Title
	Laura Brown (chair)	Vice Provost
	Kent Hubbell	Dean of Students
Architecture, Art, and Planning (AAP)	Barry Perlus	Associate Dean
Agriculture and Life Sciences (CALS)	Don Viands	Associate Dean
Arts and Sciences (A&S)	David DeVries	Associate Dean
Engineering	David Gries	Associate Dean
Graduate School	Sarah Hale	Associate Dean
Hotel Administration	Judi Brownell	Dean of Students (Hotel)
Human Ecology (HE)	Carol Bisogni	Associate Dean
Industrial and Labor Relations (ILR)	Robert Smith	Associate Dean
Johnson Grad School (JGSM)	Amanda Soule Shaw	Director, Student Services
Law School	Stephen Garvey	Associate Dean
Veterinary Medicine	Katherine Edmondson	Assistant Dean, Assessment Project Manager
Institutional Research & Planning	Marin Clarkberg	Director
Center for Teaching Excellence	Amy Godert	Associate Director
Center for Teaching Excellence	David Way	Associate Director

8.3.2 College Oversight of Assessment Activities

Under the direction of the Core Assessment Committee, each undergraduate college/school and professional school has established a leadership structure to oversee the development and maintenance of assessment (see Table 8.2). Generally, the person in charge of assessment in the college also serves on the Core Assessment Committee.

Each college/school has provided an account of its approach to assessment, giving the history and organization of assessment, the college learning outcomes and where they appear in the literature and on the web, the stage of assessment in its degree programs, and plans for expanding assessment. These documents² demonstrate impressive progress.

Table 8.2. College and school oversight committees

College	Leadership structure
AAP	Assoc. Dean Perlus; Learning Outcome Assessment Team: dean, department chairs, registrar, director of admissions
A&S	Assoc. Dean DeVries; Educational Policy Committee
CALS	Assoc. Dean Viands; Curriculum Committee, Committee on Support of Teaching and Learning, Diversity Committee
HE	Assoc. Dean Bisogni; Learning Outcome Assessment Team: dean, associate deans, department chairs, DUS's, and two others
Engineering	Assoc. Dean Gries; Curriculum Committee
Hotel	Dean Brownell; Educational Policy Committee
ILR	Assoc. Dean Smith
JGSM	Amanda Soule Shaw; Learning Goals Committee
Law	Assoc. Dean Garvey
Vet	Assist. Dean Edmondson; College Curriculum Committee
Grad School	Assoc. Dean Hale; Graduate Assessment Committee

For example, in the College of Agriculture and Life Sciences (CALs), Associate Dean Viands is in charge of assessment of student learning. Under his guidance, the CALs Committee on Support of Teaching and Learning, which includes both faculty and students, meets monthly to discuss improvements in the course evaluation process, workshops to improve teaching, and other issues related to the learning environment. This committee provides leadership in implementing the assessment process.

² See “Examples of Assessment at the Undergraduate Level” documents, https://middlestates-dpb-stg.hosting.cornell.edu/docs.cfm?cat_id=31, “Assessment in the Professional Schools” documents, https://middlestates-dpb-stg.hosting.cornell.edu/docs.cfm?cat_id=32, and Assessment in the Graduate School” documents https://middlestates-dpb-stg.hosting.cornell.edu/docs.cfm?cat_id=391.

Also, under Associate Dean Viand's guidance, the CALS Curriculum Committee meets monthly to create or revise the college distribution requirements and other college policies. In 2009–10, this committee was responsible for condensing the list of 15 "Educational Gains," which had been in existence for some 15 years, down to 7 learning outcomes. The CALS Faculty Senate approved the revised outcomes in March 2010.

The CALS Committee on Support of Teaching and Learning and the CALS Curriculum Committee are the major units involved in assessment of student learning at the college level, though several other units are involved from time to time as well (e.g., the CALS Advisory Council, the CALS Diversity Committee, and the Dean's Student Advisory Committee).

This is but one example of college-level structures in place to ensure that assessment is conducted regularly and that results are regularly reviewed with a goal of improving educational planning, instructional methods, and student learning.

8.3.3 University Activities to Support Assessment

Cornell is transitioning the course catalog system to Acalog,³ replacing its paper- and web-based *Courses of Study* with a dynamic resource. A committee, including a number of members of the Core Assessment Committee, has focused specifically on the question of how the use of Acalog could support aspects of student learning assessment.

With Acalog, course learning outcomes will be an integral part of each course description (along with items like prerequisites and number of credits). Additionally, course proposal forms in all the colleges will be modified to include fields for the learning outcomes. (This has been a requirement in the College of Human Ecology for ten years.) In this way, course learning outcomes will become a natural part of the course description.

In addition, the committee is investigating ways other than *Acalog* of including learning outcomes for majors and colleges and of generating

³ *Acalog* stands for *Academic Catalog Management*. See <http://www.acalog.com/>

reports to show, for example, which courses support the learning outcomes of a particular major.

8.4 Status of Assessment in Undergraduate Majors

The current status of assessment for Cornell's undergraduate degree programs (the majors) by college is summarized in Table 8.3. The second column lists the majors within the colleges that have had assessment practices in place for some time. As shown in the third and fourth columns, 14 majors developed assessment plans by the end of the spring 2010 semester and another 40 by the end of December 2010. By March 2011, all programs in the College of Agriculture and Life Sciences will have assessment plans. In Arts and Sciences, all programs will have assessment plans sometime during spring 2011.

This staggered rollout of assessment allows us to learn from experience and to develop best practices that can guide the implementation of assessment in later-adopting units across the university.

Beginning in fall 2009, workshops have been available to help faculty learn about assessment. These workshops are currently targeted to the majors that are ready to begin developing outcomes and assessing them, providing examples of outcomes from some of their peer departments at other institutions, discussing direct and indirect assessment measures, and determining a schedule for assessing outcomes. The Cornell Center for Teaching Excellence (CTE) is involved in these workshops, and it also holds general workshops and individual sessions for faculty who want them.⁴

⁴ See CTE's schedule of faculty services at <http://www.cte.cornell.edu/faculty/services.html>. See also *Contribution of the Center for Teaching Excellence to Assessment of Student Learning*, here https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=395.

Table 8.3. Assessment practices of majors⁵

Undergrad college	Majors with assessment practices by May 2009	Majors with assessment plans by May 2010	Majors with assessment plans by Dec. 2010
AAP	<ul style="list-style-type: none"> • Architecture (B.Arch.) 		<ul style="list-style-type: none"> • Fine Arts • Urban & Regional Studies
A&S		<ul style="list-style-type: none"> • English • Physics • Psychology 	32 majors; the other 10 will have assessment plans in spring 2011
CALS	<ul style="list-style-type: none"> • Applied Economics & Management • Food Science • Landscape Architecture • Nutritional Sciences (Dietetics option) 	<ul style="list-style-type: none"> • Science of Natural & Environmental Systems • Viticulture & Enology • Nutritional Sciences 	All 23 majors have learning outcomes; full assessment plans by March 2011
Eng	<ul style="list-style-type: none"> • Biological Eng • Chemical Eng • Civil Eng • Electr. & Computer Eng • Environmental Eng • Materials Science & Eng • Mechanical Eng 	<ul style="list-style-type: none"> • Eng Physics • Operations Research & Information Eng 	<ul style="list-style-type: none"> • Computer Science • Science of Earth Systems • Information Science, Systems & Technology in spring 2011
HE	<ul style="list-style-type: none"> • Design & Environmental Analysis (Interior Design option) • Nutritional Sciences (Dietetics option) 	<ul style="list-style-type: none"> • Design & Environmental Analysis • Human Development • Nutritional Sciences • Policy Analysis & Management 	<ul style="list-style-type: none"> • Biology & Society • Fiber Science & Apparel Design
Hotel		<ul style="list-style-type: none"> • Hotel Admin (the only major) 	
ILR		<ul style="list-style-type: none"> • Industrial & Labor Relations (the only major) 	

⁵ For more detailed information on assessment in each of the undergraduate colleges, see “Examples of Assessment at the Undergraduate Level” documents, https://middlestates-dpb-stg.hosting.cornell.edu/docs.cfm?cat_id=31.

It is critical to note, once again, that the academic rigor of the institution, the high ranking of its majors and departments, and its long-term commitment to excellence are clear indications that self-evaluation and continuous efforts toward improvement—and assessment-like activities—have long been implemented across the campus. The fact that Table 8.3 does not yet list all majors and programs does not indicate that those unlisted majors do not perform any assessment activities. They do—but not in a formal, documented fashion.

8.4.1 Examples of Assessment at the Undergraduate Level

Seven of the 12 majors in Engineering⁶ are accredited by the Accrediting Board for Engineering and Technology (ABET), with the most recent accreditation visit in fall 2010. Courses in these majors are assessed periodically, resulting in a post-course assessment that (1) describes the extent to which each learning outcome was achieved and (2) provides recommendations for improvements in the course.

Course assessments are integrated as part of the overall assessment process for each major. Each major has an assessment committee, which may recommend overall changes in the curriculum, learning outcomes of the major, and individual courses. This committee employs a course alignment matrix to indicate which courses contribute to each of the major's listed learning outcomes, thus providing a good overview of how the curriculum is structured to ensure that learning outcomes are met. Both direct and indirect measures are used for post-course assessments, and each major uses a variety of data elements, including but not limited to input from advisory committees, student surveys, graduate school and job placement, and various test scores.

Engineering students join a major only at the end of the sophomore year; during their first two years, they take a number of common *core* courses.

⁶ For assessment in Engineering, see *Assessment of Student Learning in Engineering* here https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=339.

The Engineering College Curriculum Governing Board (CCGB)⁷ is responsible for assessment of courses that are offered by Engineering: computing courses, introduction-to-engineering courses, engineering distribution courses, technical writing courses, etc. The CCGB requires periodic assessment of each course, as explained above for the majors, and may recommend changes in the curriculum based on this overall perspective. For engineering courses taught in mathematics, physics, chemistry, and biology, the CCGB has standing liaison committees with the respective departments; they meet at least once a semester.

In CALS⁸, the bachelor's degree in applied economics and management (AEM), accredited by the Association to Advance Collegiate Schools of Business (AACSB) in February 2009, uses a similar approach but does not rely as heavily on course-level assessment. AEM began its formal assessment of student learning in 2005, when it adopted a series of learning outcomes or goals. By 2008–2009, the majority of AEM instructors had incorporated the department's learning goals into their syllabi, and a course alignment matrix was created to determine which AEM courses (taken by all majors) contribute to each of these outcomes.

AEM assesses learning outcomes at different times. Consider, for example, the assessment of outcome 2: Analytical and Functional Competency in Basic Business and Economics Skills. First, faculty in two core courses (marketing and accounting) created special test questions to gauge proficiency in the skills represented by outcome 2. Second, the department analyzed functional competency through the ETS Major Field Test (MFT) in Business. The MFT was administered to 25% of the graduating seniors during the spring 2008 semester. The results were used for comparing AEM's graduating students' knowledge with that of other students nationally. The results were distributed to each instructor in the functional areas covered by the exam so that improvements could be made in deficient areas, thereby closing the "assessment loop."

⁷ The CCGB consists of one faculty member from each department, the associate dean for undergraduate programs, and a number of other staff such as the dean of admissions, the college registrar, and college advising staff. The CCGB schedules weekly meetings.

⁸ For more information on assessment in CALS, see: *Assessment of Student Learning in Agriculture and Life Sciences*, here https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=337.

Engineering and CALS represent the leading edge of assessment of undergraduate student learning at Cornell, in large part because of external program or major accreditation requirements. Each college has several well-articulated assessment exemplars on which they can draw to expand assessment across all programs. Other colleges may also benefit from these examples as they move forward in adopting assessment activities.

The School of Hotel Administration⁹ offers evidence that current assessment activities can have a positive impact on the adoption of assessment in other areas as well. Faculty in the school recognize the value of identifying learning outcomes and linking assessment activities to course goals, primarily because of positive experience with assessment for the master of management in hospitality (MMH) program, which is offered under the auspices of the Graduate School. As a result, the college is making significant progress with assessment in the undergraduate program.

The College of Human Ecology¹⁰ has built on its current practice of requiring explicit learning outcomes for all courses offered in the college by gleaning best practices from this experience. Methods of assessment for the dietetics option of nutritional sciences (offered jointly with CALS) or design and environmental analysis can provide a basis for implementing assessment more broadly.

In the College of Arts and Sciences, structured assessment of student learning has been in use for some time.¹¹ For example, the Department of Romance Studies has for years spelled out learning outcomes, assessed them, and utilized the results for improving its language instruction programs. The Knight Institute for Writing in the Disciplines has for some time articulated learning goals in relation to its pedagogical training for graduate student instructors and its Teaching Writing graduate courses.

⁹ For more information on assessment in the Hotel School, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=340.

¹⁰ For more information on assessment in Human Ecology, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=338.

¹¹ For more information on assessment in A&S, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=336.

The Department of Physics has a history of utilizing testing (including pre- and post-tests) to measure achievement of conceptualized understanding in introductory courses; as one of the college's pilot programs, the department has broadened its assessment activities to encompass its major.¹² Mathematics has been collaborating with the College of Engineering on the assessment of a new group workshop that was introduced into the first engineering calculus course.

In spring 2010 the English, physics, and psychology departments generated structured assessment plans for their majors, intended to serve as models for the remaining departments.¹³ These departments will be working in coordinated groups during 2010–11 to complete the project of assessment within the college. Learning assessment plans will be completed in all majors in A&S in spring 2011.

At Cornell, especially in A&S but throughout the university, as at our peer institutions, assessment presents a particularly engaging challenge. We are utilizing the instrumental, integrated, and intentional processes of assessment as it is currently practiced in higher education today to make many improvements in programs and courses, and we expect to continue in this direction. But there can be a tension between the coherent system of assessment that generates clear benefits to the institution and the flexible, creative, and sometimes unpredictable exchange that characterizes some of our most effective educational activities.

Especially at the graduate level, in advanced undergraduate and seminar-style courses, and in courses directly engaging processes of creation and performance, the dynamic of the classroom interaction, or the flexible engagement of the participants in the creation of knowledge, generates educational factors that cannot be perfectly accounted for by assertion-of-learning goals, or fully accommodated to a systematic judgment of the connection of those goals to measurable outcomes. This flexibility, for many Cornell teachers, scholars, and researchers, represents one of the most significant and valuable dimensions of the educational process at its

¹² Ibid.

¹³ The assessment models for English, Physics, and Psychology will be available for the evaluation team to review before the March 2011 visit.

best. Indeed, it exemplifies that moment when instruction and knowledge creation meet.

Many at Cornell aspire to become serious contributors to that constant cycle of revision and self-critique that assessment prescribes. A true culture of assessment demands that we use our classrooms, our labs, our libraries, and our sites of unpredictable creation, invention, and innovation as exemplary means of extending, adjusting, and re-understanding what is meant by accountability in higher education. As we understand it, Cornell and its peers have a distinctive role to play in current debates concerning assessment and accountability, a significant responsibility to the future, and a strong stake in the conceptualization and promulgation of the assessment of student learning.

8.5 Assessment in the Professional Schools

The four professional schools (Johnson Graduate School of Management, Law School, College of Veterinary Medicine, and Weill Cornell Medical College) are accredited by outside agencies, all of which require some sort of assessment, evaluation, and continual improvement of the program. Our inspection of their processes leads us to believe that they do a good job of student assessment. Below, we summarize assessment practices in each of these schools and refer the reader to on-line documents for more detailed information.

8.5.1 Johnson Graduate School of Management¹⁴

The school, which offers four MBA degrees and a PhD administered through the Graduate School, was last accredited in February 2009 by the Association to Advance Collegiate Schools of Business (AACSB). The review team wrote that the “Assessment of Learning design is innovative,

¹⁴ For more information on assessment in JGSM, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=342.

structured, thoughtful, and well formatted to access the quality of student learning in the masters' level programs."

The Johnson School's approach to assessment does not rely heavily on assessment of courses. AACSB requires "assurance of learning": learning goals must be set and revised at a level that encourages continual improvement in programs. AACSB Standard 15 requires that "the school use well-documented, systematic processes to develop, monitor, evaluate, and revise the substance and delivery of the curricula of degree programs and to assess the impact of the curricula on learning."

The Johnson School does *not* require formal, documented assessment of each of its courses. (This does not mean that assessment is not done, however; all instructors are encouraged to develop course learning outcomes, to assess their achievement, and to change the course or the outcomes when necessary.)

The school has one set of learning goals for all of its degree programs; these goals were developed by the Learning Goals Committee and approved by the faculty. The committee periodically looks at each goal and determines how best to assess its achievement. The goals are centered around three major themes:

- Fundamentals: the content-focused objectives necessary for all graduates, regardless of specific career objective.
- Integration and Decision Making: using content knowledge in the fundamentals to effectively formulate and communicate sound decisions.
- Getting Results: working with others to achieve specific outcomes.

The Learning Goals Committee established a "progressive system" to draft, test, implement, and update assessments and feedback loops for each goal. This system is used to implement measures across the learning goal themes and among the four MBA programs, and assessment is done periodically. For example, assessment of the Fundamentals goal in the two-year MBA program was performed in 2006–2007. The committee implemented a structured assessment protocol. As a result, several courses that dealt with Fundamentals were asked to add particular assignments

and exam questions to ensure coverage of all relevant learning outcomes. Also, during 2007–2008, assessment of achievement of Integration and Decision Making was conducted using class projects and presentations in certain courses as primary direct measures. Most recently, in 2008–2009, assessment of Getting Results was developed and performed using two measures: (1) student leadership in clubs, symposia, and other activities in which students led a task requiring support from others, and (2) performance of employed graduates in the workplace.

This approach has been accepted more readily by the faculty than the traditional, course-based approach would have been, and it has proven as effective in providing input for continual improvement. The success of this atypical approach underscores the need to adapt assessment goals, methods, and plans to the particular major, department, field, or college in question—not only to promote faculty buy-in, but to produce results that foster meaningful improvement.

8.5.2 Law School¹⁵

The Law School offers the three-year Juris Doctor (JD), the one-year Master of Laws (LLM), the Master of Science–Legal Studies (MSLS), a number of international dual degrees, various joint degrees, and a Juris Scientiae Doctor (JSD), administered through the Graduate School.

The Academic Programs and Planning Committee, chaired by Professor Kevin Clermont, is in charge of assessment of student learning. The Law School's learning outcomes, which are the same for the school and all its graduate degrees, are available on-line¹⁶ and appear in the *Student Handbook*.¹⁷

The assessment practices of the Law School have been sufficient for it to be accredited at regular intervals, the last site visit being in 2004. With respect to assessment, the American Bar Association's 2009–2010 *Standards for*

¹⁵ For more information on assessment in the Law School, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=343.

¹⁶ http://registrar.lawschool.cornell.edu/aba_standards.cfm.

¹⁷ <http://www.lawschool.cornell.edu/studentlife/dean/upload/StudentHandbook2009-2010.pdf>

*Approval of Law Schools*¹⁸ states that “a law school shall demonstrate that it regularly identifies specific goals for improving the law school’s program, identifies means to achieve the established goals, assesses its success in realizing the established goals and periodically re-examines and appropriately revises its established goals.” This the Law School has done. One of its direct measures of achievement of its goals is first-time bar passage rates. The passage rate was virtually 100% in 2008.

In fall 2010, as the Law School prepared for its 2011 accreditation visit, it considered additional mechanisms for assessment evidence to improve teaching and learning. The school also paid close attention to the ABA’s current deliberations on amending guidelines related to assessment of student learning, so as to continue to conform to practices advocated by the ABA.

8.5.3 College of Veterinary Medicine¹⁹

The Vet College offers three graduate degrees: the Doctor of Veterinary Medicine (DVM) and, under Graduate School administration, the Master of Science (MS) and PhD. The college is accredited by the Council on Education of the American Veterinary Medical Association (AVMA), which made its most recent site visit in fall 2010.

The AVMA’s accreditation standard 11 focuses on outcomes assessment. It requires an analysis of student achievement and assessments of graduating seniors and alumni, among other assessments. The college must describe how outcome findings are used to improve the educational program. As noted in the college’s self-study for the AVMA, the Veterinary College assesses outcomes with such metrics as passage rates for the North American Veterinary Licensing Exam, rates of student attrition, and employment rates obtained through surveys of graduates upon graduation and later. The college also surveys employers of its graduates to determine their degree of satisfaction with their employees. Thus, successful reaccreditation (to be decided in March 2011) should

¹⁸ See Chapter 2, Organization and Administration, here www.abanet.org/legaled/standards/standards.html.

¹⁹ For more information on assessment in College of Veterinary Medicine, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=344.

ensure that the Vet College also meets the standard of assessment of student learning stipulated by the Middle States Accreditation Council.

Through Assistant Dean Katherine Edmondson, the Vet College has participated in the Core Assessment Committee. The college's educational goals, developed several years ago and posted on the college website, are assessed regularly.

8.5.4 Weill Cornell Medical College²⁰

Weill Cornell Medical College (WCMC), located in New York City, offers an MD degree and is accredited by the Liaison Committee on Medical Education (LCME) of the Association of American Medical Colleges (AAMC). The LCME accredits medical schools every seven years, based on a comprehensive review of a database and an institutional self-study. WCMC was last visited in March 2010.

The education program and assessment process are overseen by the Medical Education Council (MEC), an appointed group of senior faculty and students, under the direction of Senior Associate Dean Carol Storey-Johnson. The MEC develops assessment methods for each educational objective, reviews the assessment data, and oversees course and curriculum revision to improve outcomes.

Graduating students are expected to demonstrate (1) knowledge in 11 areas, (2) skills in 12 areas, and (3) 11 attitudes, ranging from acknowledgment of altruism and patient advocacy to honesty and integrity. National exams are used in the assessment process, as well as direct assessment of students through course work, exams, and observation.

The MEC is a highly integrated curriculum management structure, overseeing faculty development as well as the curriculum and assessment. This structure has served well to identify and rectify problems in the curriculum. Examples of the kinds of changes implemented as a result of this multifaceted review of the curriculum include the combining of two courses (Molecules to Cells and Fundamentals of Genetic Medicine) to

²⁰ For more information on assessment in the Weill Cornell Medical College, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=345.

form the current Molecules, Genes, and Cells course; the creation of task forces to assess the teaching of pharmacology and microbiology to improve student outcome; clarifying the roles and commitments of departments to the integrated curriculum, ultimately leading to departmental teaching plans; greater emphasis on providing financial support (compensation for course leadership) and engaging in direct faculty recruitment for teaching; and the introduction of more objective observations of student performance in all years of the curriculum.

8.6 Assessment in the Graduate School

Several professional programs administered by the Graduate School already have detailed assessment practices because they are accredited by outside agencies.

8.6.1 Master of Management in Hospitality²¹

The MMH program was last accredited in 2009 by the AACSB (Association to Advance Collegiate Schools of Business). The accreditation required a formal implementation of an “Assurance of Learning” (AOL) process. After the first offering in 2005–2006 of a substantially redesigned program, the AOL process was implemented in 2006–2007.

Continued assessment of student learning is under the direction of the director of graduate studies and the Graduate Committee. The program learning outcomes (PLOs), which were last revised in November 2008, are appropriately publicized on the web and in print in various offices.

Each course in the MMH program has course learning outcomes and links them to the PLOs. For each course delivery, the instructor provides an assessment plan and reports student achievement on a specific form. Annually, the Graduate Committee reviews the reports and makes recommendations for curricular improvements. This process has resulted in some changes. For example, the Graduate Faculty required changes that

²¹ For more information on assessment in the School of Hotel Administration, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=340.

would help develop the student's understanding of operating effectively in a global hospitality industry, and it redistributed course credits to increase the flexibility of the program's educational content.

8.6.2 Master of Engineering

Through the Graduate School, faculty in the College of Engineering offer 15 M.Eng. degrees, which are overseen by the college's Office of Research and Graduate Studies. The development of assessment processes for these programs was postponed until the Graduate School finished its initial deliberations on assessment of MS/PhD programs. Now that general goals/outcomes for graduate degrees are in place,²² the M.Eng. programs will turn their attention to assessment, with the goal of having assessment fully in place by fall 2011. Because these M.Eng. programs are offered by departments that already do assessment of student learning at the undergraduate level, this work is expected to progress smoothly.

8.6.3 Master of Architecture

Professional Master of Architecture (M.Arch.1)

The National Architectural Accrediting Board (NAAB) granted initial accreditation to the M.Arch.1 program for a three-year term beginning January 1, 2009. Assessment of student learning is under the supervision of the chair of the Department of Architecture, the director of graduate studies, the coordinator of M.Arch.1, and the Graduate Programs Committee. As a professional degree track, there are benchmark skills judged at the level of either "understanding" or "ability," terms used by the department and NAAB to assess a range of demonstrated learning including comprehensive design, professional practice, systems, and structures. All architecture faculty are involved with the evaluation of M.Arch.1 thesis projects.

Courses and instructors in the M.Arch.1 program are evaluated by students each semester. M.Arch.1 student representatives have regular meetings with the chair of the department and can make

²² <http://www.gradschool.cornell.edu/index.php?p=169>

recommendations for curricular improvements. The director of graduate studies and the Graduate Programs Committee annually review curricular structure, sequencing, and content and make recommendations for curricular revisions to the architecture faculty and the field.

Post-Professional Master of Architecture (M.Arch.2)

As a post-professional degree, the M.Arch.2 program is not accredited; students entering this degree track already have an accredited degree. Assessment of student learning is supervised by the chair of the Department of Architecture, the director of graduate studies, the coordinator of M.Arch.2, and the Graduate Programs Committee. Within the M.Arch.2 curriculum, students can elect to focus their research and course selection on one of the three areas: urbanism, discourse, or sustainability.

As with the M.Arch.1 program, students evaluate their courses and instructors each semester, and student representatives meet regularly with the department chair and may recommend curricular changes. The director of graduate studies and the Graduate Programs Committee review curricular structure, sequencing, and content each year and offer recommendations for revisions to the architecture faculty and the field.

8.6.4 Master of Landscape Architecture

The Master of Landscape Architecture (MLA) is accredited by the National Landscape Architecture Accreditation Board (LAAB), which in turn is accredited by the Council for Higher Education Accreditation. Two discrete MLA degrees are recognized for licensure purposes by the Department of Education and Board of Regents, Albany, N.Y. The MLA2 is for students with prior professional degrees in landscape architecture or architecture, while the MLA3 is a change-of-career degree. Accreditation occurs on a six-year cycle, with the last site visit taking place in 2009.²³

As part of the accreditation process, the department develops a self-study which becomes the technical document provided at the time of the site

²³ Cornell's program was one of the original 10 chartered and accredited landscape architecture departments in 1936.

visit. However, for programs to remain in good standing, LAAB requires an annual assessment and revision of nine separate indicators included in the self-study. Thus the faculty as a whole review the curriculum based on the assessment indicators provided by LAAB. Indicators include several metrics for the demonstration of outcomes related to teaching and learning. Outcomes can be measured by the professional standing of alumni post-graduation, as shown by job placement and starting salaries relative to national averages. Outcomes in the classroom setting are measured by performance in national/international design competitions and other LAAB-defined indicators. Accreditation is also based on success in achieving learning outcomes as described in the department's self-stated objectives and goals.

8.6.5 Master of Health Administration

The Sloan Program in Health Administration²⁴ (MHA) was last accredited in 2004 by the Commission on Accreditation of Health Management Education (CAHME). The program is now completing a self-study for calendar year 2010 with a re-accreditation site visit scheduled for spring 2011. In 2007–2009 CAHME developed new accreditation criteria which took effect in fall 2010. These criteria require programs to establish goals, objectives, and performance outcomes that are action-based, observable, and measurable. Each program must also identify a set of competencies related to its mission and to the types of jobs its graduates enter, and it must assess learning outcomes based on these competencies.

The Sloan Program adopted a competency-based approach to learning and assessing learning outcomes in 2007. Continued assessment of student learning is under the direction of the program director and the program faculty. Program competencies were last revised in the fall of 2010 and are publicized on the web²⁵ and in materials distributed to students. To assess learning outcomes, the Sloan faculty annually review self-assessed competencies, reported by Sloan students and recent graduates, and

²⁴ For more information on assessment in the MHA program see Cornell University's *Self-Study for Graduate Programs in Health Services Administration*, 2003-2004, here: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=559

²⁵ <http://www.human.cornell.edu/pam/sloan/prospectivestudents/load-er.cfm?csModule=security/getfile&PageID=59247>

graduates' assessments of the importance of competencies in the workplace, as well as a range of other performance metrics. Effective fall 2010, instructors for each course in the MHA program are developing learning assessment plans that are linked to program competency objectives and to student learning outcome criteria developed by the College of Human Ecology and posted on the college's website.²⁶ Review of assessments of student learning and learning outcomes has resulted in such curricular changes as reordering of the sequence of required courses, review of course content, and the introduction of a new core course option in population health and epidemiology. The program has also added new electives.

8.6.6 Master of Public Administration

The MPA program is overseen by the faculty of the Cornell Institute for Public Affairs (CIPA), an interdisciplinary program established to support professional graduate education, research, and service in the broad field of public affairs. CIPA uses instructional resources of many colleges as its curriculum couples the social sciences with other branches of study that contribute to practical solutions for public interest problems facing citizens in the contemporary world. Although not independently accredited, CIPA is an institutional member of the National Association for Schools of Public Affairs and Administration (NASPAA) and operates in accordance with NASPAA accreditation standards. CIPA evaluates learning outcomes through formal assessment of the performance of CIPA fellows in their required internships; supervisors assess interns' capacities to make decisions, gather information, plan and accomplish tasks, take initiative, solve problems, work independently, work in a team, accept criticism, and demonstrate verbal skills, writing skills, and analytical abilities. In addition, CIPA fellows provide self-assessment through narrative reflection on the suitability of their CIPA coursework and plan of study for performing work associated with their internships. Through these mechanisms, CIPA monitors student learning outcomes as they relate to practice and the suitability of CIPA's educational strategy as a whole.

²⁶ <http://www.human.cornell.edu/admissions/mission.cfm>

8.6.7 Research Degrees

The Graduate School offers master's degrees and PhDs in 92 fields of study. Throughout fall 2010, the school's Graduate Education Assessment Committee, chaired by Associate Dean Sarah Hale, met to develop educational goals/outcomes for the PhD and master's degrees and to develop possible metrics to measure them. The goals/outcomes were discussed and approved by the General Committee of the Graduate School and discussed by the directors of graduate studies of the 92 fields. Materials describing aspiration goals, learning proficiencies, assessment metrics, and suggested rubrics for assessing graduate education related to research degree programs are available on-line.²⁷

In spring 2011 the Graduate School will focus on supporting the graduate fields as they develop field-specific assessment plans. A capacity-building workshop on assessment is scheduled on campus for April 2011 with a national consultant. All directors of graduate study and their administrative support staff will be encouraged to attend. The workshop will focus on enabling graduate fields to develop field-specific assessment plans that will link to the Graduate School's learning proficiencies and rubrics, and fields will be expected to articulate their assessment plans during 2011-12 academic year. The Graduate School is developing a time frame for periodic review of field assessment activities and articulation of improvements made in response to assessment data.

8.7 Other Assessments of Student Learning

In an institution as complex and diverse as Cornell, many opportunities for assessment of student learning arise beyond the conventional college-major-course model. A program may cross departmental or college boundaries, as do the Knight Institute for Writing in the Disciplines and the library's instructional activities in information literacy. A program may provide support for innovations in teaching, instead of directly focusing on students. A program may be directed at specific courses but may have broader pedagogical implications. Some programs are long-lasting; others

²⁷ www.gradschool.cornell.edu/index.php?p=169. For more information on assessment in the Graduate School, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=346.

are disbanded once their tasks have been accomplished. This section provides examples of such programs and their contribution to assessment of student learning.

8.7.1 Knight Institute for Writing in the Disciplines²⁸

This award-winning program²⁹ provides writing courses to virtually all first-year undergraduates in all colleges, and its affiliated program, Writing in the Majors, assists faculty in strengthening student writing in upper-level courses in any discipline. The program is built around specific outcomes for student writing, such as development of an effective thesis, argument, structure, and evidence. These outcomes appear in a guide given to all first-year writing seminar instructors and available on-line.³⁰ One strength of the program is the pedagogical support it provides: all graduate student instructors are required to take a preparatory seminar in the teaching of writing, Writing 7100, and faculty may also enroll in a Faculty Seminar for Writing Instruction to improve their teaching methods with the assistance of Knight Institute professionals.

8.7.2 Cornell Undergraduate Information Competency Initiative³¹

The Cornell Undergraduate Information Competency Initiative (CUICI) was launched in 2004 to explore creative ways to increase the information competency of undergraduates. CUICI provides a select group of faculty with funding, opportunity, and assistance to transform the curriculum by creating relevant and engaging research assignments to incorporate into their courses and to teach students more effectively about research. Funding comes from the Cornell Library, the Office of the Provost, and the Center for Teaching Excellence.

²⁸ For more information on assessment in the Knight Institute, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=392.

²⁹ In Sept. 2000, the *Time/Princeton Review* designated Cornell the Private Research University “College of the Year” on the basis of its writing-in-the-disciplines approach to teaching writing.

³⁰ http://www.arts.cornell.edu/knight_institute/publicationsprizes/Indispensable%20Reference%202010-11.pdf

³¹ For more information on assessment in the CUICI, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=393.

CUICI has found that focusing first on the objectives of a learning module and then developing the module's learning outcomes is effective in structuring a dialogue between an instructor and a librarian. As a result, an integral part of the work involves developing learning outcomes, designing assessment tools for them, and assessing the results. Over time, CUICI has proven that it is possible to build support among faculty for assessment of student learning.

An example of this approach is Professor Ed McLaughlin's Marketing 2400 course (fall 2008). In this large class (500–600 students), students learned to assess the need for information, understand differences among a variety of information sources, develop effective search strategies, and interpret information. Using online assignment tools to demonstrate increasingly sophisticated research strategies and understanding, students gained confidence in the research process and the professor identified target areas for improvement.

8.7.3 Instructional Activities in the Cornell Library³²

In addition to the CUICI program, Cornell librarians support student information literacy in three ways: by providing single presentations in a course, by teaching a credit-bearing course, and by partnering with course instructors. Librarians present 1,500 instruction sessions per year, and this number is increasing as more faculty and students learn about the services available.

Single sessions are tailored by the librarian and the faculty member to fit the learning goals of a course or particular assignment. This process requires the use of learning goals and their assessment using direct and indirect measures. Although assessment as a formal, consistent, and holistic component of an information literacy program for the entire library system is still a work in progress, the consistent leadership of the library's Instruction Committee and the influence of CUICI continue to promote assessment awareness in the faculty.

³² For more information on assessment practices in the Library, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=394.

8.7.4 Center for Teaching Excellence³³ and Engineering Teaching Excellence Institute

The overarching goal of the Center for Teaching Excellence (CTE) is to strengthen teaching across the campus. CTE has a variety of programs and resources to support faculty and teaching assistants, including a special program for international teaching assistants. CTE collaborates with the colleges to support instructors' course design, to identify appropriate and effective uses of instructional strategies, and to develop and assess student learning outcomes. CTE is also involved in the information literacy initiatives of the Cornell Library, described above. The primary responsibility of the Engineering Teaching Excellence Institute is to support faculty teaching. CTE and TEI communicate frequently and work together when opportunities arise.

Since fall 2009, CTE has played an increasingly important role in supporting the campus-wide assessment-of-student-learning effort. It has held numerous workshops and luncheons on assessment—28 of them in the past year. In fall 2010, the CTE hired a new associate director for assessment, Dr. Amy Godert. In individual consultations with faculty, both CTE and TEI increasingly use learning outcomes and their assessment as natural tools to help structure conversations and to help faculty improve their teaching. Assessment of student learning is also a topic in most workshops given by CTE and TEI. Both centers practice what they preach: in addition to teaching assessment practices to others, they also undertake assessment activities designed to improve their own workshops and programs.

8.7.5 Faculty Innovation in Teaching Grants

Since 2002 Cornell Information Technologies (CIT) has provided 18–20 Faculty Innovation in Teaching (FIT) grants annually to support innovative use of information technology in courses. About 20,000 students have been enrolled in courses relating to 150 grant-supported projects. FIT grant assessment demonstrates the use of multiple measures,

³³ For more information on assessment practices in the CTE, see: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=395.

both direct and indirect: grades, usage statistics, online student surveys, focus groups, classroom observations, pre- and post-tests, and faculty interviews are reviewed to determine the impact of innovations on teaching practices, curriculum and course development, and student learning.

8.7.6 The Use of VideoNote³⁴

In spring 2009, at the request of a Task Force on VideoNote, E-Learning, and Online Courseware Systems, the Teaching Excellence Institute in the College of Engineering studied the use of videotaped lectures in ten courses across the campus, with a total enrollment of 1,700 students. Each lecture was videotaped, and the video was made available soon after on the web, with an index that made it easy to find and watch any part of the video on demand. This pilot study was designed to explore such questions as whether the availability of VideoNote encouraged students to skip classes, whether its use was a positive or negative influence, and how much students would actually use it.

Assessment of VideoNote employed (1) statistics on usage from VideoNote, (2) logs of time spent by each student using VideoNote, (3) student grades in the course, (4) student cumulative GPA, gender, and ethnicity (extracted from university files), (5) a survey of students by VideoNote, (6) two surveys of students during the course, and (7) comments by instructors of the ten courses.

This project demonstrated creativity in developing rubrics, measures, or benchmarks to meet the particular needs at hand. One innovative idea was to determine whether students over-performed or under-performed in the course, relative to their cumulative GPA. For example, a B-average student receiving an A over-performed in the course, and a B-average student receiving a C under-performed. The data suggest that use of VideoNote helped the middle-to-strong students (B to A) perform better: students with an average GPA of B+ who watched VideoNote for 20 hours or more achieved an average grade increase of almost 0.3 over the B+ students who

³⁴ More information on this project is available here: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=397.

did not. But VideoNote provided little help to the weaker students (C to B-) and actually hurt very weak students (D to C-). We know of no previous study that used this idea of over-performance or under-performance.

Overall, VideoNote was deemed a success, and it was continued in the 2009–2010 academic year with the same level of funding. The difficulty is in finding a funding model that supports the activity but with a lower cost to the university.

8.7.7 Assessing Workshops in Math 1910³⁵

This assessment provides an example of course-level measures as part of an overall assessment model. In the mid-2000's, an engineering task force decided that the first engineering calculus course, Math 1910, would serve students better if one weekly recitation were replaced by a facilitated discussion session in which students would solve engineering problems in groups, using the mathematical concepts they had learned. The engineering faculty approved this change, and math and engineering faculty worked together to integrate this weekly group discussion into the course.

Faculty from both units collaborated to develop the problem sets, and the Engineering Learning Initiatives (ELI) program was chosen to train the undergraduate facilitators, since that program was already responsible for training facilitators for its Academic Excellence Workshops.

A three-year NSF grant, submitted jointly by the ELI and the Department of Mathematics, supports assessment of the discussion groups. This ongoing assessment is exploring two questions:

1. Do the new discussion groups help students understand mathematics as representative of physical phenomena and increase their skill in applying mathematics to solve problems involving physical quantities and relationships?
2. Do the new discussion groups increase students' confidence about their understanding and ability?

³⁵ More information on assessment of Math 1910 is available here: https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=398.

This study is expected to contribute to three of the five research areas that serve as the foundation of a new discipline of Engineering Education.³⁶ The initial work focuses on both direct and indirect measures of assessment from participating Cornell students, and subsequent work may involve data gathering from engineering programs at other institutions.

8.8 Recommendations

The ongoing process of assessment of student learning is currently supported by the faculty in a substantial part of the university, as evidenced by the current success of various assessment activities throughout Cornell. We recommend

- that Cornell take steps to ensure that there is ample central support for the assessment project, in order to continue to expand and improve Cornell's culture of assessment.

Our progress in bringing assessment to all departments and programs is on track. We expect to have full plans in place for most units by the end of 2010–11, with the smaller colleges/schools and programs that have separate accreditation processes among the earliest to be assessing outcomes and improving based on them in a consistent, periodic manner. It will take some time to instill a full culture of assessment throughout the institution, with the larger colleges/schools and those with fewer separately accredited programs to follow. We recommend

- that Cornell use a range of resources to expand assessment activities in a steady and measured way, with the guidance of the Core Assessment Committee or an equivalent cross-college group and utilizing the models and instructions provided by the activities in the Cornell Library, the Knight Institute for Writing in the Disciplines, the Center for Teaching Excellence, the Office of Institutional Research and Planning, and other units;

³⁶ Steering Committee of the National Engineering Education Research Colloquies. The Research Agenda for the New Discipline of Engineering Education. *Journal of Engineering Education* 95 (4): 259-261.

- that Cornell continue to provide additional support in the Center for Teaching Excellence for faculty doing assessment of student learning in the form of faculty workshops and one-on-one consultations;
- that the university create fora for sharing assessment models on campus so that Cornell faculty can learn from their peers.

9. Institutional Assessment

Standard:

7. Institutional Assessment

In this chapter, we consider institutional assessment broadly. Cornell collects many kinds of data about its own performance and that of its students and alumni and then uses these data for many different purposes. Because assessment of student learning is described in detail in Chapter 8, it is discussed only briefly in this chapter, which focuses on other aspects of institutional assessment.

The first section describes the office of Institutional Research and Planning, a central resource in the university that collects and manages data for many of Cornell's institutional assessment activities.

The second section, "Assessment Activities Across the University," describes a breadth of assessment activities that are essential to the university's assessment of its finances, human resources, research programs, educational programs, public service, facilities, and institutional reputation and quality. In the third section we discuss future activities as described in the 2010 Strategic Plan. This plan provides a roadmap for many aspects of institutional assessment, but, as described in our "Recommendations," opportunities remain for more comprehensive assessment of both student learning and the long-term value of the whole "Cornell experience."

9.1 Institutional Research and Planning

The mission of the office of Institutional Research and Planning (IRP) is to support institutional decision making with information. Housed within the Office of the Provost, IRP has nine staff members actively engaged with ongoing assessment of institutional effectiveness.

Through IRP, Cornell presents on the web more extensive statistical information about itself than nearly any of its peers. The on-line Cornell Factbook,¹ for example, has dozens of pages of summary and trend data, slicing and dicing the university along multiple dimensions. Through this and other mechanisms for facilitating wide access to meaningful information, IRP serves this complex institution well.

Through the office of IRP, Cornell actively participates in consortial data exchanges across universities, including the Association of American Universities Data Exchange (with over 60 research universities), and the Consortium on Financing Higher Education (COFHE, which includes 31 highly selective private colleges and universities). The data made available through these exchanges allow us to benchmark the university in ways that provide invaluable insight in our ongoing self-examination. For example, Cornell uses consortial data annually to carefully assess faculty salaries. Cornell also participates in the annual salary survey of the American Association of University Professors, which permits comparisons of Cornell's average faculty salary levels with those of other institutions.²

IRP conducts social scientific research using both qualitative methods (including focus groups and face-to-face interviews) and quantitative methods (such as originally designed surveys) to creatively explore issues of institutional importance, including how students choose colleges; financial aid policy impacts; the impact of the Greek system on campus life; programmatic impacts on student developmental outcomes;

¹ http://dpb.cornell.edu/F_Factbook.htm

² Example of public report in the Cornell Factbook: *Average Salaries: Endowed Colleges*: <http://www.irp.cornell.edu/documents/1000241.pdf>. AAUP 2009-10 Report: <http://www.aaup.org/AAUP/comm/rep/Z/ecstatreport09-10/default.htm>.

demographic trends among employees; faculty compensation patterns; faculty satisfaction; and faculty turnover.

In 2007, three IRP staff members were honored with COFHE's Joseph Pettit Award for exemplary use of COFHE data to illuminate issues of significance to member schools, as well as the originality, elegance and value of their research for the university.³

9.1.1 Suite of Surveys

Cornell administers a suite of surveys to engage in a systematic and robust examination of the undergraduate experience.⁴ The surveys are designed to highlight areas of strength as well as to discern what needs improvement in support of comparative institutional self-study and analysis.

Using consortial instruments, IRP surveys freshmen every year as well as all enrolled students and seniors in alternate years. These student-assessment efforts have matured to the point where they can be useful in longitudinal studies, especially since the results can be broken down by major.

One survey in particular indicates Cornell's seriousness about surveys and assessments. The existing survey of enrolled students, conducted since 2003, was suffering from declining response rates. To remedy the problem, IRP members led a consortium-wide effort to rethink the scope and design of the survey. A cleaner and substantially shorter instrument, dubbed the PULSE (Perceptions of Undergraduate Life and Student Experiences), was first conducted in spring 2009 at Cornell and at other pilot institutions. Response rates improved significantly. A paper by IRP staff members on the design of the new PULSE survey won the best paper award at the Northeast Association of Institutional Research conference in 2008.⁵

³ <http://www.news.cornell.edu/stories/April07/Pettit.award.ND.html>

⁴ Details about the surveys are available in "Cornell's Program of Survey Research," https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=563.

⁵ M. Clarkberg and M. Einarson, Improving Response Rates through Better Design: Rethinking a Web-Based Survey Instrument, 2008 NEAIR (North East Association for Institutional Research) conference, 1-4 November 2008, Providence, RI.

IRP shares survey findings with the university's various decision makers and those who directly interact with students in the classroom and elsewhere, using several avenues to make the data as available and useful as possible. For example, links to the survey instruments and associated tables of results are available through the "IRP Surveys and Results" web page.⁶ As standard practice, IRP prepares comprehensive tables of survey results, showing comparisons between Cornell respondents, as a whole, and students enrolled in our peer institutions; and within Cornell, among students grouped on the basis of sex, race/ethnicity, class year and undergraduate college. Also, IRP has recently begun creating tables of survey results that compare mean scores across the undergraduate colleges.

IRP also customizes reports for particular audiences and purposes. Working with the undergraduate colleges, IRP creates reports that compare their students' responses across departments within the college and across similar majors in other colleges at Cornell and our peer institutions.

IRP does not currently survey graduate and professional students, and we view this as a significant gap in the university's supply of data for adequate assessment of student life and educational experiences at this level. Cornell could also use more information about the careers of its alumni, whether they attended Cornell as undergraduates or as graduate or professional students. IRP does survey undergraduate alumni ten years after their baccalaureate degree, but assessment could be aided by more information about alumni's career development over time.

9.2 Assessment Activities Across the University

Beyond the centralized efforts of IRP, there are significant data-collection and assessment activities across key administrative units. To some extent, data collected and reported within the units is focused more on unit-level needs than university-level needs. However, the administrative officers of the colleges have worked together to build an impressive reporting mechanism called Key Performance Indicators (KPI). Built using the

⁶ http://www.dpb.cornell.edu/IP_E_Surveys_Results.htm.

Tableau business intelligence software tool and hosted in the College of Arts & Sciences, KPI brings together data from many data warehouses across the university into an on-line system that easily provides deans and other college leaders the information necessary to manage and measure performance and progress toward college-level goals. KPI makes central university data accessible and also provides standard and ad hoc reporting functionality, analysis capability, and local data integration. Currently the KPI system includes useful reports about employees (faculty and staff), students, financial information, sponsored research activity, and development.

9.2.1 Financial Data

Cornell's financial condition is reported through various publications produced by the Division of Financial Affairs (e.g., year-end financial statements and reports) and the Division of Planning and Budget (e.g., financial plans and year-end variance reports).⁷ The purposes of these data collections are mid-course correction and long-term planning.

Some of these data are used in a "financial dashboard" of important indicators, prepared monthly for the senior administration and Board of Trustees. These institutional financial data were used in 2008–10 to develop a comprehensive plan for improved institutional efficiency in administration.

For auditing information, see Chapter 3, "Institutional Stewardship."

9.2.2 Human Resources

Cornell conducts several types of assessment for purposes of performance improvement, development of human capital, compliance, and retention of staff and faculty.

Cornell's faculty, staff, and administrators receive regular performance reviews using formal, documented procedures overseen by the Division of Human Resources. Staff performance reviews are described in Chapter 3, "Institutional Stewardship," and additional information on performance

⁷ Posted at <http://www.dfa.cornell.edu> and <http://dpb.cornell.edu> respectively.

reviews for executive staff can be found in Chapter 4, “Integrity, Governance, and Administration.”

For faculty members, feedback is emphasized at the review and informs annual discussions of performance and mentoring. Procedures for faculty reviews at promotion or tenure emphasize evaluation of each area of responsibility, such as teaching, research, and extension/outreach. Service is considered. As appropriate to the faculty member’s type of appointment, input may include letters from peers at other institutions, undergraduate and graduate students, postdoctoral researchers, academic staff, and the department’s directors of undergraduate and graduate studies; review of semester course evaluations; faculty class visits and curriculum or extension work-plan reviews; reviews by colleagues at the departmental and college/cross-college levels and, for tenure, review by the university Faculty Senate (through the Faculty Advisory Committee on Tenure Appointments) and the senior vice provost/provost, with final approval by the Board of Trustees. For more information on faculty assessment, see Chapter 6, “Faculty.”

IRP reports on data on faculty hiring, promotion, and retention that are maintained in Human Resources data systems.⁸ Staff demographic data are also maintained by Human Resources. Responsibilities for reporting on personnel data are shared by HR and IRP. For example, both IRP and the Office of Workforce Diversity track data related to faculty and staff hiring and retention. These offices are increasingly collaborating so as to reduce any duplication of effort.

Cornell periodically assesses employee satisfaction and campus climate through scheduled and ad hoc surveys and other studies. A faculty climate survey has been administered twice: in 2005 and in 2010.⁹ Conversations about an analogous survey for staff have begun, but there is not yet a definite schedule for moving forward with that effort.

⁸ Example of public reports in the Cornell Factbook: *New Tenure-Track Appointments*: <http://www.irp.cornell.edu/documents/1000243.pdf> and *Departure Rates of Faculty*: <http://www.irp.cornell.edu/documents/1000247.pdf>.

⁹ See: <http://dpb.cornell.edu/documents/1000371.pdf>.

9.2.3 Research

Research at Cornell is assessed for purposes of program improvement and compliance with federal and state regulations. Cornell's Office of Sponsored Programs prepares an annual report of research expenditures.¹⁰ Some of this information is also summarized in the Factbook¹¹, and in the financial planning documents.¹²

The Cornell Library Research and Assessment Unit¹³ collects a wide range of key Cornell Library metrics and responds to Association of Research Libraries (ARL) surveys. Some comparative metrics based on ARL survey results are posted in the Factbook.¹⁴

Cornell supports a variety of intercampus, interdisciplinary research and educational activities in biomedical science between its Ithaca campus and Weill Cornell Medical College. Ithaca-Weill collaborations currently include three research centers or groups and nine graduate training programs, in addition to numerous formal and informal collaborations. At present, however, standard institutional reporting of research expenditures, enrollments, and facilities use does not specifically isolate Ithaca-Weill interactions.

9.2.4 Educational Programs, Teaching, and Learning

In all undergraduate schools and colleges, policies and activities relevant to the college's educational goals are overseen and reviewed by faculty committees.

Cornell's Division of Planning and Budget, with oversight from the Institutional Assessment Steering Committee, helps departments, degree-granting fields, and centers conduct periodic reviews of their academic programs to identify strengths and weaknesses and ensure effective use of resources. Additionally, many departments and degree programs are accredited by external organizations. Also, as noted above, Cornell

¹⁰ <http://www.research.cornell.edu/VPR/pubsmain.html>

¹¹ http://www.irp.cornell.edu/F_Research.htm

¹² http://www.irp.cornell.edu/FP_Current_Pubs.htm

¹³ (<http://research.library.cornell.edu/>

¹⁴ http://www.irp.cornell.edu/F_Libraries.htm

administers regular surveys to current and past undergraduates to elicit self-evaluations of student learning and satisfaction with educational offerings and resources.

Cornell assesses the quality of teaching primarily through the colleges, which measure productivity and conduct tenure reviews and other performance reviews. The provost has directed the colleges to conduct annual reviews for each faculty member using measurable indicators. For more on the assessment of teaching quality, see “Human Resources” (above) and Chapter 6, “Faculty.”

Assessment of student learning is described extensively in the previous chapter.

Cornell has now succeeded in a long-desired goal, namely integration of undergraduate records from application to graduation. The next challenges are to gather data on graduate and professional students and to link the totality of the educational experience at Cornell to the life success of our graduates.

9.2.5 Public Service

Cornell Cooperative Extension (CCE) is the primary organization fulfilling Cornell’s state-level land grant mission. Assessment of CCE activities for purposes of program improvement is generally done at the county office level, and annual reports are made public.¹⁵ The College of Agriculture and Life Sciences and the College of Human Ecology share administration of CCE programs in partnership with 55 county associations.

Tracking and documentation of Cornell’s public engagement activities are managed locally within the colleges and major administrative units. CCE programs document activities in logs collected at the program level and submitted to CCE administration annually via a web-based tool. Logs contain information about individual contacts and organized functions such as educational tours, conferences, or meetings; responsibilities of faculty/staff; the location and date of work; and audience information, including number of attendees and basic demographics like ethnicity,

¹⁵ <http://cce.cornell.edu>

gender and age. These records are used locally for audience analysis and program evaluation, and at the state level to meet Cornell, state, and federal accountability requirements.

One aspect of assessment of these programs is determining their effectiveness from the community perspective. Within CALS and HE, structured Program Councils and Project Work Teams (PWTs) are responsible for assessing community perceptions of engagement programs. These assessments are integral to the impact reporting process linked to the federal Hatch and Smith-Lever Act CRIS (Current Research Information System) procedures. Cornell's Program Council and PWT process is recognized as a national model for, among other achievements, collecting and acting on community perceptions of engagement program relevance and effectiveness. In addition, all four state-assisted colleges have formal advisory councils representing external stakeholders that advise the dean and senior staff about community and industry needs and the effectiveness of college engagement programs.

All of these assessment mechanisms inform college priorities, funding allocation, and resource distribution.

Other Cornell units that help to facilitate public service activities, such as the Cornell Public Service Center, Cornell Law School Office of Public Service, Weill Cornell Community Clinic, and Cornell Career Services, have internal evaluation programs.

Public service work may also be assessed through data gathered in response to grant funding. For example, the Cornell International Institute for Food, Agriculture, and Development has projects in Africa, Asia, and Latin America. Inasmuch as funding agencies vary (USAID, World Bank, etc.), each project has mandated monitoring and evaluation to identify ways to improve project design and performance or to document outcomes and impacts within selected communities. For most USAID projects, data include attendance at training programs, number of new products released or commercialized, gender of participants, and impacts on project goals (food security, poverty reduction, economic growth).

In September 2009, the School of Industrial and Labor Relations (ILR) launched an online data collection and program evaluation tool for use

across ILR Extension. Working with Cornell's Survey Research Institute (SRI) the tool disaggregates elements of program quality assessment across all training efforts, making data collection and compilation more cost effective and efficient. SRI designed a "report generator" so programs can generate reports on individual programs, instructors, and across certificate series.

9.2.6 Student Life

The Division of Student and Academic Services (SAS) produces an annual report summarizing its programming and service activities.¹⁶ SAS takes full advantage of many of IRP's regular survey activities, as these tend to target student attitudes toward and assessments of student-oriented campus programming, including academics, extracurricular programs, athletics, housing, and health services.

As the Student and Academic Services has moved towards a culture of assessment, it has worked closely with IRP to develop learning outcomes and plan for assessing them institution-wide. In 2010, an SAS Assessment Working Group completed a pilot project that took stock of the state of data collection and data integrity across the division as well as examined a single learning outcome from a variety of angles.¹⁷ SAS expects to continue to make progress in data collection, reporting, and assessment.

9.2.7 Facilities

Cornell's Division of Facilities Services assesses facilities-related issues through ongoing data collection, audits, and system inspections; outcome data are evaluated against national and peer-group benchmarks. Through a process named Facilities Physical Needs Management System, every building on campus is assessed annually and a database is kept to record its condition against several facilities evaluation factors. This information is utilized in our capital planning process and enables us to prioritize any singular need against the entire needs of the university. Added to this is a prioritization process that is based on a likelihood score and an impact

¹⁶ <http://sas.cornell.edu/>

¹⁷ https://middlestates-dpb-stg.hosting.cornell.edu/get_file.cfm?doc=289.

score. Evaluating our needs in a holistic manner enables us to focus our limited resources where they are most critically needed.

9.2.8 Institutional Reputation and Quality

IRP annually produces a detailed report on the undergraduate and graduate rankings published in the *US News & World Report* “America’s Best Colleges” publication. This report monitors trends in Cornell rankings and analyzes them in terms of underlying data, and is sent to the president, provost, vice provosts and vice presidents, and college deans. Using a different approach, the Division of University Communications monitors a variety of indicators of Cornell’s reputation, including rankings and press coverage.

When the results of the National Research Council *Data-Based Assessment of Research-Doctorate Programs* were finally released in fall 2010, IRP worked together with KPI developers to develop a public, on-line tool to facilitate analysis of those data.¹⁸ While it is difficult to use those somewhat fine-grained data at the institution level, it is clear that many of Cornell’s 62 ranked fields used the tool extensively to explore their data.

In recognition of the fact that many ranking systems exist for the institution as a whole or for individual colleges or programs, the provost facilitated a 90 minute forum on rankings for the full Board of Trustees in January 2011. The event is expected to be followed up with a longer “round table” discussion in March of this year.

9.3 Planned Assessment Activities

The 2010 Strategic Plan¹⁹ includes a discussion of a general approach to assessment at the university level to ascertain if Cornell is meeting its specific institutional objectives and, thus, fulfilling its mission and vision

¹⁸ This analysis tool was developed by the office of Institutional Research & Planning in collaboration with Cornell’s Key Performance Indicators (KPI) project:
<http://testsvr1.kpi.cornell.edu/views/NationalResearchCouncilReports2/StatsbyFieldPOST>

¹⁹ Cornell University at its Sesquicentennial: A Strategic Plan, 2010–2015, May 2010,
<http://www.cornell.edu/reimagining/docs/051110-strategic-plan-final.pdf>.

(see Standard 1, Chapter 3). Some core metrics that are potentially useful for assessing progress toward Cornell's immediate strategic priorities are included. The general approach taken is to focus on university-wide metrics and qualitative indicators, organize these around goals and priorities, use multiple indicators for each goal where available, and use existing sources of data and information so as to minimize the amount of staff time or additional staff needed to implement these metrics. This approach to assessment is in accord with the Strategic Plan's treatment of Cornell "as a single unit or entity."

The Strategic Plan recognizes that it is "exceedingly difficult to develop fully adequate measures of progress toward greater excellence in a research university." No particular metrics or qualitative indicators will be sufficient, but various sets of them are likely to be useful, and this choice may evolve over time. The 13 core metrics included in the 2010 Strategic Plan are listed below.

1. *Faculty and staff compensation*: Compare salaries and fringe benefits to peer institutions (faculty) or appropriate markets (staff).
2. *Amount and nature of faculty hiring and retention*: Number of hires/year; rank distribution of hires; tracking of changes in faculty size; yearly assessment of faculty exits.
3. *Age distribution of the faculty*: Percent of faculty aged 55 and above; 60 and above (university-wide and by unit).
4. *Diversity of faculty, students, and staff*: Percent women and underrepresented minorities. For faculty, comparison to specific goals of 20% or pipeline percent (whichever is higher). Set comparable goals for students and staff.
5. *Number of top-ranked departments and programs*: Select appropriate NRC criteria; discipline-specific rankings; regular program reviews.
6. *Sponsored research*: Total expenditures; expenditures per faculty member.
7. *Student learning outcomes and health*: College assessments of learning outcomes based on core competencies . . . ; data from Gannett [health center] on student mental and physical health.

8. *Student access*: Cost of Cornell education by family income quintile.
9. *Student surveys (undergraduate, graduate, and professional)*: Satisfaction with teaching; satisfaction with research opportunities and training; perceptions of international and public engagement opportunities; ease of taking courses across boundaries and administrative/bureaucratic barriers; perceptions of living-learning environment at Cornell.
10. *Library rankings*: Compare to research university libraries, using appropriate measures from the ARL (Association of Research Libraries).
11. *Faculty and staff surveys*: Conduct surveys on a regular schedule.
12. *Ithaca-Weill interactions*: Joint research grants; collaborative teaching programs; and cross-usage of core facilities.
13. *Stature of university as a whole*: Institutional reputation based on appropriate high-quality rankings of research universities (e.g., based on NRC data and criteria); use of select metrics from above list (e.g., faculty quality, student quality; external research funding; library rankings including collections).

Much of the information to be used to support assessment of “core metrics” is already being collected, as described above, and much of it is publicly available—not just to campus constituencies but also to wider audiences as well, including alumni, students, and prospective students. In the 2010 Strategic Plan, these “core metrics” are accompanied by a detailed list of indicators for university-wide excellence, faculty excellence, and excellence in education.²⁰ The approach to assessment that is outlined in the 2010 Strategic Plan and the review of the “core metrics” given above provide evidence that Cornell engages in institutional assessment that is useful, cost-efficient, reasonably accurate, planned, organized, systematic, and sustained.

The “overarching aspiration” in the Strategic Plan is that Cornell should, by its sesquicentennial in 2015, “be widely recognized as a top-ten research university in the world.” The plan is silent, however, on how it will be determined whether Cornell has achieved this aspiration.

²⁰ See Appendix D of the Strategic Plan: <http://www.cornell.edu/strategicplan/docs/060410-strategic-plan-final.pdf>.

9.4 Recommendations

Cornell is actively engaged in all aspects of institutional self-assessment and, with the 2010 Strategic Plan, has a guide to the assessment activities that are of the highest priority. This will help us know which data collection activities to continue and which are no longer necessary. Moreover, we are now thoroughly engaged in the assessment of student learning throughout the university. We recommend

- that Cornell fully implement the roadmap for institutional assessment, including student learning outcomes, that is contained in the Strategic Plan.

Despite the scope and variety of information currently being collected, some issues continue to inhibit full utilization of these data. We recommend

- that Cornell address identified problems of communication, transparency, and management of data as part of ongoing administrative reorganization.

With regard to areas in which useful data are lacking, we recommend

- that the university develop a way to assess how undergraduate, graduate, and professional students' experiences at Cornell link to the development of their future careers;
- that graduate and professional student data be collected and analyzed centrally, similar to the treatment of undergraduate student data.

10. Conclusion

It has been a transformative decade for Cornell University. Significant investments in the life sciences, social sciences, and medical research combined with the longstanding commitment to the arts and humanities have positioned Cornell to continue to be widely recognized as one of the premier research universities in the world. The implementation of programs and facilities to foster a vibrant living-learning environment for the large undergraduate population has also fundamentally and profoundly enhanced Cornell's ability to instill a culture of inquiry into the very fabric of undergraduate campus life. Major new facilities have advanced or will soon advance the life and physical sciences. A recently approved medical research building at Weill Cornell Medical College in New York City represents one of the largest investments in research infrastructure in the history of Cornell and will set the stage for significant advances in medicine that will improve human health.

Throughout this decade of investment in infrastructure, however, Cornell has kept its eye on its underlying founding principle of "Any Person ... Any Study." During the peak of the recent financial crisis, instead of retracting from its financial aid commitments, Cornell twice enhanced these policies, ensuring that access to a Cornell education will not erode over the next decade. In part, these commitments to financial aid were made possible by the anticipated cost savings from a reexamination of the entire administrative structure at Cornell. With the help of outside consultants, Cornell is on its way to major structural changes that will preserve the budget for its primary mission—student education, research,

and outreach. During a recent speech at the University of Texas,¹ President Obama singled out Cornell for taking decisive action to contain costs—and keep the university affordable for students from all backgrounds. The self-study process has reaffirmed the importance of preserving need-blind admission and need-based financial aid as defining elements of Cornell University.

Many of the transformative initiatives undertaken during the last decade reflect the “one university” approach to strategic investments and planning. They cross over the boundaries of the various decentralized academic and administrative units. The investments in faculty salaries, the living-learning environment, the life and physical sciences, the social sciences, financial aid for undergraduates, the campus master plan, and many other initiatives demonstrate the capacity of Cornell to act as a single entity. Facilitating all of these central activities are the governance structures that serve the entire university. Trustees and central administration represent a very significant aspect of unity. Other central governance structures such as the University Assembly, Student Assembly, Employee Assembly, and Faculty Senate all provide forums and avenues for input into central decision making.

However, the university continues to greatly value the innovation in education, research and outreach that stems from the decentralized decision making of the units of Cornell. This healthy tension between decentralized decision making and the value of acting as “one university” is the overarching theme of this self-study. Fortunately, the overlap in the timing of (1) the Middle States review, (2) the charge by President David Skorton to develop a new strategic plan for the university, and (3) the “Reimagining Cornell” initiative provided a unique opportunity to explore further the challenges and opportunities of delivering the broad academic programming that defines Cornell and at the same time realizing the synergies from acting as a unified single university. The outcome of this exploration is a compelling “overarching aspiration” and an ambitious, integrated strategic plan by which to reach this aspiration in the near future. This self-study and its follow-up reports will continue to

¹ August 9, 2010. A transcript is available at <http://uwire.com/2010/08/09/president-obama-speaks-at-u-texas/>.

inform university strategic planning—and the implementation of the strategic plan—over the next decade.

Taken together, the self-study and new strategic plan identify the key goals and implementation strategies for balancing the decentralized delivery of programs with the synergies that arise from coordinated activity. As articulated previously, the university should create and maintain academic leadership across all of the broad areas but do so selectively and strategically within each. Cornell also aims to build greater *connectivity* among the diverse colleges, schools, and programs around these basic academic areas by developing new integrations, boundary-crossing structures, and productive collaborations. Greater connectivity implies that it will be easy for students and faculty to cross college and program boundaries in pursuit of their academic goals. The idea is to make academic boundaries at Cornell as permeable and seamless as possible.

The key to successful implementation of the strategic plan is continuing to recruit and retain the highest-quality faculty—people who will not only maintain and improve the quality and quantity of research but who will extend this research to influence outcomes in New York State, the nation, and the world. As noted in Chapter 6, the current faculty are among the most accomplished in the world. Whatever criteria one uses to measure success (academic honors, citations, external grants, etc.), Cornell faculty shine. However, the age distribution of the faculty indicates that many will retire in the not too distant future. Ideally, the outstanding senior faculty will help recruit and mentor the next generation of faculty. Cornell recognizes that waiting until these faculty retire to hire their replacements can be disruptive to successful transition and recruitment. Consequently, the university is adopting an aggressive approach to pre-filling these faculty lines both to take advantage of the ability to attract top talent in the current state of the academic job market and, more importantly, to have senior faculty help recruit this new talent. The capital campaign has been adjusted specifically to address raising funds for supporting both the new faculty and the soon-to-retire faculty during several years of overlap.

As Cornell hires the next generation of faculty there is again the healthy tension between decentralized hiring decisions and how these decisions

affect the core. While hiring is frequently managed within a department, disciplines are often divided among several colleges; there are more sociologists *outside* the Department of Sociology than *within* it, and to varying degrees a similar situation holds true for economists, statisticians, psychologists, and biologists. Because these disciplines are spread across units, special attention needs to be focused on how to unite these into a cohesive whole. All colleges will benefit from productive collaborations that preserve the strength of the colleges but at the same time coordinate actions in the disciplines. Many of the academic task forces present ideas for how best to ensure this collaboration. Over the next five years we must expect more explicit collaboration between the colleges when hiring faculty, so that the sum of all hiring in a particular discipline serves to enhance the quality and reputation of all colleges on campus.

The significant hiring that will occur over the next decade presents a great opportunity to further diversify the faculty. Cornell is in the final year of the NSF-funded CU-ADVANCE initiative, and the university is committed to maintaining some of the primary infrastructure and programs that have been successful—even as external financial support for these initiatives ends.

These new faculty will be the educators of the next generation of the very talented students that we expect to attract and retain at Cornell University. The analysis of the undergraduate admissions, financial aid, and student support systems undertaken in this self-study demonstrates great strength in most aspects of the process. The undergraduate applicant pool has risen dramatically over the last decade with underrepresented minorities sharing in this increase. Through decentralized selection each college is able to admit high-quality students who are well matched to the programs in which they are admitted. In 2008 the university began allowing students to apply to both a primary and an alternative college. The analysis in this report demonstrates that less than 2% of entering freshmen are admitted into their alternative choice, raising questions about whether this is a worthwhile option to continue.

Professional school and graduate school admission processes are necessarily more locally focused, and the self-study analysis reveals generally improving quality of students in the large number of graduate

fields sponsored at Cornell and highly selective admissions into the professional schools. These processes operate efficiently, although we have recommended consolidation of some very small graduate fields.

Once admitted and matriculated, first-year undergraduates reside together on North Campus. During that year, and in subsequent years for students living in the West Campus house system, faculty-in-residence and faculty fellows help integrate the academic and living environments. Students' residential assignments are not clustered according to their colleges, in the interests of a common living environment that transcends academic boundaries. While West Campus is generally viewed as a success, most students do not live on campus, and Cornell must continue to seek ways to monitor and enhance the quality of the student experience outside the classroom.

An ongoing concern is that not all students are equally able to succeed at Cornell. The analysis in our report shows that graduation rates are very high for all racial and ethnic groups, but there are statistically significant differences in the graduation rates across some, particularly when gender is also considered. Cornell has numerous campus-wide programs that address the challenges known generally as the achievement gap. As the university examines how we can best design and implement programs to eliminate some of these differences, it is clear that these efforts should focus not simply on six-year graduation rates but on a broader definition of academic success. Equally important is whether underrepresented minorities are appropriately represented in the very top of the student body.

Faculty advising is another important element for student success. The analysis in the self-study also raises questions about the quality of faculty advising for both majority and underrepresented minority groups. Perhaps the best important way to improve advising is to expand institutional mechanisms to involve undergraduates in research with faculty. This involvement has the potential to turn faculty advising into a true mentoring relationship and may be particularly effective for underrepresented minority students. The university is committed to better measuring the extent to which undergraduates are engaged in research and to developing processes that will facilitate such engagement. In

addition, under the guidance of the vice provost for undergraduate education and others, new programs designed to improve academic advising will be initiated and evaluated.

Cornell is home to many undergraduate transfer students from both four-year institutions and community colleges. The university works closely with many community colleges to create transfer articulation agreements outlining transparent pathways from these colleges to Cornell. Transfer students are currently guaranteed on-campus housing in their first year of attending Cornell, which limits the number of students that can be admitted. The role of on-campus housing as an essential element to the success of transfer students has not been examined in detail, and we conclude that the university should at least further investigate the policy that guarantees on-campus housing for first-year transfer students.

Mental health challenges and excessive student stress can be major obstacles to student success. The recent spate of student suicides on campus has led to a significant university-wide effort to identify factors in student stress. It is important to note that the recent suicides followed years in which Cornell experienced no student suicides at all; from a statistical point of view, Cornell experiences these tragedies at generally the same rate per student as other universities. In fact, Cornell has been widely recognized as a leader in its approaches to supporting student mental health. The self-study and the new strategic plan recognize the importance of investments that support student health, and this concern is a prominent element in the strategic plan.

While students find at Cornell a common living-learning environment and a common athletic and physical education experience, the academic programs and educational offerings are very much determined by the decentralized colleges. This decentralized approach can help facilitate Cornell's primary aspiration to be "a model university for the interweaving of liberal education and fundamental knowledge with practical education and impact on societal and world problems." The liberal education and practical education are reflected in the different learning goals of the particular colleges. While the learning goals of colleges differ, there is considerable overlap, though these shared goals have not been explicitly articulated. We conclude that these shared goals

can be used to develop a broad coherence for undergraduate education and serve as the basis for a common intellectual experience within the first two years. These experiences will be directed at core overlapping competencies and include living-learning programs and formal coursework.

Maintaining a high-quality and continually evolving educational experience for students requires systematic assessment of student learning, which in turn influences both the content and pedagogical aspects of the academic coursework. The self-study process has been instrumental in helping Cornell advance a systematic approach to assessing student learning outcomes. Cornell recognizes that more systematic and widespread assessment practices will be an additional asset in improving its educational offerings.

The decentralized aspect of education at Cornell has led to an assessment process implemented at the local level but facilitated by a centrally supported Core Assessment Committee. The committee aims to oversee the assessment process across the campus, provide advice and support, and serve as a central resource for communication and coordination throughout Cornell. The Core Assessment Committee has set up leadership structures to develop and oversee assessment processes in each college/school, created timelines, compiled university learning goals, and discussed college/school learning outcomes and their placement in literature and on the web as well as methods of assessing them. Under the committee's direction, each undergraduate college/school and professional school has established a leadership structure to oversee the development and maintenance of assessment. Our progress in bringing assessment to all departments and programs is on track, and at the time of our campus visit we expect most units will have made substantial progress on their plans.

In summary, the theme of this self-study is the advantages and challenges of implementing Cornell's broad-based mission through a relatively large number of colleges that operate with a significant degree of autonomy. Cornell's motto of "Any Person ... Any Study" is a meaningful articulation of the excellence we strive for—to be excellent in a large number of diverse areas. It is no accident that Cornell University has more fields ranked in the recent National Research Council analysis than any

other private university. It is no accident that just a month before submission of our self-study, Cornell has been recognized for its community engagement by the Carnegie Foundation for the Advancement of Teaching, whose classifications of colleges and universities are considered the country's gold standard. Cornell is the only Ivy League institution to be so classified and again demonstrates the scope of the excellence it strives for. It is no accident that Cornell's yearly offering of courses is such a complete and diverse collection of intellectual journeys and one of the most impressive sets of offerings in any university in the world.

The self-study process and the development of the Cornell strategic plan, however, have highlighted the ever-increasing need to act as one university to maintain and improve our research prominence and to enhance the undergraduate experience. A number of mechanisms will help guide this improvement. The Board of Trustees is focused on this issue, and every chapter in our self-study reflects significant effort and thought about how to maximize the value of acting as one university within a decentralized structure. Cornell is focused on the future with a recognition that the "Any Person ... Any Study" philosophy defines Cornell's strength and identity. We also accept that while our goal is to become recognized as a top ten research university in the world, there are limits to Cornell's breadth and scope; increasingly, it will need to establish administrative efficiencies and academic collaboration across units to achieve its ambitious mission. Each of the chapters in this self-study has explored these issues and helped Cornell develop a path to implement its strategic plan.