A renewed focus on outcomes assessment complements a diverse range of options for specialized study.

Undergraduate Education

III. Education Within the Major

Introduction

The specialized study programs at UI, as administered by departments and colleges across campus, play critical roles in implementing many of the strategies laid out in The Iowa Promise, including the following examples:

**Strategy: Recruit and retain a student population that can succeed at a comprehensive research university, and nurture their success, by:**

. . . Guiding all students through their majors, and providing excellent academic advising

**Strategy: Promote excellent teaching, effective learning environments, and learning opportunities that leverage the University's strengths by:**

Introducing students to the process by which research, scholarship, and creative work are produced and enabling their participation in that process, which is the key “value added” of a comprehensive research university

Developing more . . . honors courses, and other small class venues where students can interact with tenured faculty

Strengthening the honors program and other opportunities for high-achieving students

**Strategy: Ensure that all students graduate with strong core skills, a broad liberal arts education, and concentrated study in one or more majors by:**
Promoting their facility for critical thinking, writing, and other communication skills, creative endeavor, and the use of information technology

Providing them with opportunities to develop leadership and teamwork skills and an understanding of business and other organizations

... Continuing efforts to internationalize the educational experience.

**Strategy: Help undergraduates prepare for life within and beyond college by:**

Instilling in them a respect for the life of the mind and a habit of lifelong learning

Communicating to them the value of community involvement and participation in democratic governance

... Providing curricular and cocurricular opportunities that will enable them to understand and succeed in a multicultural and global community

Departments and administrative units provide their declared majors with advising personalized to their particular academic interests and curricular needs. They organize student learning environments and opportunities, promote effective teaching, and serve as focal points for the allocation of resources and processes for evaluation and planning. They provide both a pedagogical and administrative means of fulfilling the University’s mission, improving the quality of its education, and responding to emerging challenges and opportunities.

**Scope**

The self-study steering committee asked the members of the subcommittee on Education within the Major to study programs, policies, and practices that define students’ experiences as they pursue the specialized learning available in the University’s major programs. The subcommittee was asked to consider issues such as how students select major programs, how advising is handled within departments and colleges, the definition and assessment of learning outcomes, and mechanisms for supporting effective learning.

The subcommittee inventoried the major programs offered at the University and compared key components of them, including enrollments, admission requirements, and curricular structures. They then examined the processes in place for reviewing, assessing, and improving these programs, particularly with regard to teaching, advising, and key resources that support student learning and progress.

**Research Process**

To analyze enrollment patterns in the University’s major programs, the subcommittee on Education within the Major relied on the “Undergraduate and Graduate Enrollment by Major Department” tables in the fall 2006 and fall 2007 Profiles of Students (pages 23 to 28).

The subcommittee gathered much of its data from the survey of departmental executive officers (DEO survey) and student satisfaction
survey described in the “Research Processes” section of the introduction to this special emphasis self-study, as well as from student interviews they conducted as a supplement to the student survey. They also collected some data from the Office of the Provost.

Summary of Findings

The University offers a wide range of major programs and other opportunities for specialized study. The number and diversity of these programs are a strength of the University, and students express satisfaction with the availability of programs and courses that interest them.

Faculty are responsible for the design and implementation of the curricula in the major programs, and the systems of assessment and review in place give them flexibility to introduce innovations and respond to developments in their disciplines.

An effort is under way to create formal outcomes assessment plans for every undergraduate major, which should help faculty identify areas for improvement within their curricula. This effort must become part of a larger effort to foster a culture of evidence-driven assessment in all parts of the University.

Description and Evaluation of Undergraduate Majors and Programs

Overview of Undergraduate Majors and Programs

Programs Offered

The University of Iowa's five undergraduate colleges offer 68 undergraduate majors and 13 certificate programs. An additional seven undergraduate major programs and three certificate programs are housed partially or wholly outside the traditional undergraduate college structure. (Note: In the listing that follows, majors and certificate programs offered jointly by two colleges are listed under only one of them. Also, several major programs offer more than one degree, such as a B.A. or a B.S. in anthropology. The total number of degree programs the University offers is, therefore, larger than the number identified here.)

The Tippie College of Business offers six undergraduate majors: accounting, economics, finance, management, management information systems, and marketing. In addition, it offers three certificate programs: an entrepreneurship certificate; a risk management and insurance certificate; and, jointly with the College of Liberal Arts and Sciences, an international business certificate. A student from any other UI undergraduate college may pursue a minor in business.

The College of Education, in cooperation with the College of Liberal Arts and Sciences, offers one undergraduate major: elementary education. Students earn certification in secondary education in conjunction with the College, but pursue majors within CLAS. The Department of Psychological and Quantitative Foundations in the College of Education offers a minor program in educational psychology, and the Department of Counseling, Rehabilitation, and Student Development offers a minor in human relations.

The College of Engineering offers six undergraduate majors: biomedical engineering, chemical engineering, civil engineering, electrical engineering, industrial engineering, and mechanical engineering. In partnership with the Tippie College of Business, the College offers a certificate program in technological entrepreneurship.
The College of Nursing offers one undergraduate major and admits two types of student cohorts: the traditional bachelor of science in nursing (B.S.N.), and the registered nurse-bachelor of science in nursing (R.N.-B.S.N.).

The College of Liberal Arts and Sciences (CLAS) offers 54 undergraduate majors (three of them, in addition to those already mentioned, in collaboration with other colleges) and nine certificate programs. Among the majors CLAS offers are several interdisciplinary programs, including African American studies, environmental sciences, informatics, interdepartmental studies, leisure studies, and women’s studies. Certificate programs offered by the College include: aging studies; American Indian and native studies; American Sign Language and deaf studies; global health studies; Latin American studies; medieval studies; philosophies and ethics of politics, law, and economics; sexuality studies; and a post-baccalaureate certificate in classics. Several of these are offered by the College’s Division of Interdisciplinary Programs. Students in CLAS may also choose among many minor programs.

The undergraduate major and certificate programs housed partially or wholly outside the undergraduate colleges are:

The international studies program is offered by CLAS and International Programs.

The Bachelor of Liberal Studies (B.L.S.) and Bachelor of Applied Studies (B.A.S.) programs are coordinated by the Center for Credit Programs in the Division of Continuing Education; the B.L.S. degree is awarded by CLAS and the B.A.S. degree by the University College.

The Carver College of Medicine offers three programs leading to a baccalaureate degree: the B.S. in clinical laboratory sciences, the B.S. in nuclear medicine technology, and the B.S. in radiation sciences. Students intending to apply to these programs enroll in the College of Liberal Arts and Sciences.

The College of Dentistry offers a B.S. in oral health science, which is a degree completion program for students who hold an Associate in Applied Science degree from an accredited dental hygiene program.

The University College offers additional certificates in museum studies and nonprofit management.

The College of Public Health offers a public health certificate program, which is primarily directed toward individuals employed in public health practice.

Declaring a Major

Upon admission to the University, entering students indicate their intended area of study by declaring:

A major in a program without selective admission standards

A pre-major or major interest in an undergraduate program with selective admission standards (see below)

A pre-professional designation such as pre-medicine, pre-physical therapy, pre-dentistry, pre-law, or pre-physician assistant program. These are post-baccalaureate programs for which academic advising is provided at the undergraduate level. (Note: Students with pre-professional designations must also select a major; students
cannot graduate under a pre-professional designation.)

An open major if they have not yet decided on a major area of study

With a few exceptions (for re-entering or transfer students), a student must declare a major or be admitted to a selective or limited access major or program by the time he or she has earned 72 semester hours of credit.

Enrollment Patterns

In fall 2007, 16,667 undergraduate students enrolled in major programs in the College of Liberal Arts and Sciences, 1,751 in the Tippie College of Business, 1,300 in the College of Engineering, 666 in the College of Nursing, and 350 in the College of Education.

Table II-13 summarizes the pattern of undergraduate major enrollments at The University of Iowa. Pages 23 to 28 of the fall 2007 Profile of Students give a complete breakdown of undergraduate and graduate declared majors by gender and ethnicity.

The range of student enrollments in majors is wide, and the distribution skewed. In fall 2007, the mean number of declared students in a major was 176, but the median was only 71. Among a few exceptionally large major programs, the three largest had more than 800 declared students each: psychology (n=1,130), English (n=844), and communication studies (n=840). In contrast, 14 majors had 20 or fewer declared students.

In 2006-07, 4,219 students earned undergraduate degrees, 559 with second majors and 9 with third majors. More than 1,200 students earned minor degrees.

Selective or Limited Admission Programs

As described in the “Entry and Transition” section of this self-study report, almost all first-year students at UI enroll in the College of Liberal Arts and Sciences (CLAS) or the College of Engineering. Except for the small number of students who receive direct or early admission to the Tippie College of Business or the College of Nursing, students must apply for admission to those colleges after establishing a record of academic success in CLAS. The same is true for students wishing to apply to one of the elementary or secondary Teacher Education Programs (TEPs) in the College of Education. There are also several selective or limited access major programs in CLAS to which students must apply for admission.

Tippie College of Business

Most students enter the Tippie College of Business the first semester of their junior year. Interested students enter The University of Iowa as pre-business majors in the College of Liberal Arts and Sciences. For guaranteed admission to the Tippie College, pre-business students must complete 60 semester credit hours and six prerequisite
courses including calculus, statistics, micro- and macroeconomics, financial accounting, and managerial accounting. They must achieve a 2.75 GPA in the prerequisites (as well as no grade lower than a C in any prerequisite course), in all UI courses overall, and in all college-level courses attempted (cumulative). An admitted student whose grade falls to 2.0 or lower will be placed on academic probation.

Effective fall 2007, the Tippie College offers an “accelerated admission” option for pre-business students who have earned at least 12 but fewer than 60 semester hours of UI credit. To apply for accelerated admission, students must complete three prerequisite courses with no grade lower than a C, and achieve 2.75 prerequisite, UI, and cumulative GPAs. One goal of this new option is to encourage students to participate in co-curricular activities that will enhance their academic degrees. Students who enter the Tippie College late in their undergraduate careers often have become involved in activities outside of the College and have little time available for involvement in College-related student organizations, events, and opportunities. In addition, the College plans to guide students to choose their coursework in CLAS so that it integrates with coursework in the Tippie College, which is only possible if advising in Business begins earlier.

**College of Education**

Undergraduate students wishing to earn elementary/secondary school teaching licensure must first enroll in the College of Liberal Arts and Sciences and begin work toward a Bachelor of Arts, Bachelor of Science, or Bachelor of Music degree (they must eventually complete the requirements for one of those degrees in order to earn licensure). Before they can enroll in required professional education courses, they must apply to one of the elementary or secondary Teacher Education Programs (TEPs) in the College of Education, which admit a limited number of students. To be considered for admission, students must have completed a minimum of 40 semester hours of coursework, with a UI and cumulative GPA of at least 2.70. Some subject areas may have additional admission requirements.

The application process includes submission of an application form, a writing sample, an Iowa criminal history check request form, and two letters of recommendation. Applicants must submit PRAXIS I test scores in mathematics, reading, and writing. Applicants must also complete a 10-hour volunteer experience in a classroom setting in order to be granted final admission review.

If at any time after admission a student’s GPA falls below 2.70, the College will place the student on probation for one semester. If at the end of the probationary semester the GPA remains below 2.70, the College will drop the student from the TEP.

**College of Nursing**

Admission to the Bachelor of Science degree program in the College of Nursing is also selective. Through 2007-08, the College has admitted an average of 75 students each fall and spring semester. Beginning in fall 2008 the College will admit 80 undergraduate students each fall. To be considered for admission, students must have completed prerequisite courses in rhetoric, animal biology, microbiology, human anatomy, psychology, human development and behavior, and general chemistry, with no grade lower than a C in any prerequisite course, and a minimum cumulative GPA no lower than 2.70.

Table II-14 summarizes the minimum requirements that must be met for admission to the Tippie College of Business and to be eligible to apply for admission to the Colleges of Nursing and Education.
Students must apply for admission to the following selective or limited admission major programs in the College of Liberal Arts and Sciences:

- Actuarial science
- Athletic training
- Communication studies
- Dance
- Health promotion (in the Department of Health and Sport Studies)
- Integrative physiology
- Journalism and mass communication
- Sport studies (in the Department of Health and Sport Studies)
- Leisure studies (therapeutic recreation emphasis)
- Music
- Social work

Requirements for admission to each of these programs can be found in the UI General Catalog.

Limited Enrollment Programs and the “Ripple Effect”

Undergraduate student major enrollment patterns reflect a combination of student interest, resource allocation, and external factors such as accrediting bodies. Student interest in any given major program increases and decreases over time; allocation of resources to programs and departments does not necessarily follow these patterns of student interest. To ensure that students can graduate in a timely manner, departments with consistently high student interest but limited resources have managed enrollments by requiring students to meet course, credit hour, and/or grade point standards to gain admission to the major. The average grade point average in areas which there is strong student interest is well above 3.0. For example, in fall 2006 the average GPA for students admitted to actuarial science was 3.55; for students admitted to the College...
of Nursing the average GPA was 3.56; for journalism and mass communication it was 3.29; and for students admitted to teacher education programs in the College of Education the average GPA was 3.13.

Other programs limit enrollments because of external factors. For example, to meet accreditation standards the School of Journalism and Mass Communication must limit the size of its writing courses (and, as a result, the number of majors it can accept). Undergraduate enrollment in the College of Education is in part limited by the number of student teaching opportunities available (and the number of such opportunities for which College staff are available to provide oversight). Undergraduate enrollment in the College of Nursing is limited in part by ability to provide clinical supervision that meets accreditation standards.

Roughly 35% to 37% of recent entering first-year cohorts (2005, 2006, and 2007) had declared interests in selective admission or limited enrollment programs. If entering first-year students with pre-professional declarations are included, the percentage rises to about 45% of each entering class. Selective admission programs therefore have a substantial impact on UI major enrollment patterns, time to declaration of major, and student satisfaction with some aspects of their University experience, such as the process of major selection.

When students are not admitted to selective programs it creates a “ripple effect” as they migrate to different programs of study. Students not admitted to certain selective admission programs have tended to migrate to related departments. For example, pre-business students who are denied admission to the Tippie College of Business tend to move to economics or communication studies; students who are not admitted to the School of Journalism and Mass Communication frequently move to communication studies or English; and students who are not admitted to pharmacy might declare a science major or opt for business. The impact on the departments that serve as frequent secondary choices is significant, especially when interest in certain selective admission programs peaks, or when those programs raise admission standards.

For some selective admission programs there is a less clear pathway to another UI major. Students who are denied admission to the College of Nursing, for example, must decide whether they want to pursue a different major at The University of Iowa or transfer to another institution to pursue nursing. Elementary education majors face a similar choice. Selective admission programs might increase the time to graduation for some students. Some programs require students to earn up to 60 semester hours before they may apply. Students who are denied admission “start over” with those credit hours already earned.

Addressing the “Ripple Effect”: The Interdepartmental Studies Initiative

In 2005, the College of Liberal Arts and Sciences (CLAS) explored options that would create viable, educationally and intellectually sound alternative pathways for students in programs with large numbers of “displaced” students (nursing, business and pharmacy) and ameliorate the “ripple effect” on secondary departments. By fall 2006, new options were made available to students within interdepartmental studies—an existing interdisciplinary major program. Traditionally, the interdepartmental studies major has targeted motivated students who wish to design their own program of study under the guidance and approval of a faculty committee. In 2005, CLAS created two new pre-approved tracks within the major: business studies and health sciences studies. Foundational coursework in each track builds on courses students have completed in their efforts to qualify for admission to major programs in nursing, pharmacy,
or business. In addition, the interdepartmental studies major draws on the strong emphasis on interdisciplinary research and study at The University of Iowa. The new tracks appear to be meeting CLAS objectives; in fall 2007 there were 425 declared interdepartmental studies majors, and the enrollment of at least one of the departments affected by student migration—communication studies—was down 10%, from 935 in fall 2006 to 840 in fall 2007. UI is monitoring the impact of the program on the University’s second to third year persistence and on four-, five-, and six-year graduation rates.

Curricular Structures

Departments structure the curricula for their majors(s) according to the logic and pedagogy appropriate to the discipline. It is possible, however, to identify a set of basic curricular structures used by the vast majority of undergraduate majors at UI: strictly sequential, sequential with flexibility, and non-sequential.

Majors designed to adhere to specific accreditation requirements—such as accounting in the Tippie College of Business, and the majors offered by the Colleges of Education, Engineering, and Nursing—offer rigorously articulated sequences of coursework that delineate a student’s passage through the major semester by semester.

Many majors in the Tippie College and in the College of Liberal Arts and Sciences structure their curricula sequentially, but provide varying degrees of latitude regarding when exactly a student must enroll in a particular course, or the range of courses that may fulfill specific requirements. This structure might involve a core sequence followed by a declared concentration or track, as in many technical majors and foreign language majors; a core sequence followed by open electives from discrete categories, as in some other foreign language majors and communication studies; or multiple sequential clusters, as in many of the natural sciences.

Many majors in the humanities and some in the social sciences are not structured sequentially, except that an introductory course or cluster of courses must be taken first. Then, students may fulfill requirements in a range of categories in any order. African-American studies, American studies, anthropology, art and art history, English, history, linguistics, philosophy, religious studies, and sociology all fall into this category. Many of these majors also require a capstone course, senior seminar, and/or final portfolio project.

Conclusions—Overview of Undergraduate Majors and Programs

The University of Iowa offers a wide variety of opportunities for specialized study in its major programs and through other formal academic options such as certificate and minor programs. Major programs differ to a great extent in size, admission requirements, and structure, though this report identifies some basic patterns among curricular structures that might help us approach future comparative analyses.

The University develops new academic programs in response to emerging student needs. Over the past ten years, in recognition of the growing need for study across traditional academic boundaries and in response to emerging internal and external priorities, the University has created interdisciplinary major programs, including international studies (2002), informatics (2007), performing arts entrepreneurship (2003), and environmental sciences (1997). New tracks in interdepartmental studies, described above, also promote interdisciplinary work and respond to the needs of students whose plans toward graduation might be interrupted by not being admitted into their desired major. Degree programs such as the Bachelor of Liberal Studies
(B.L.S.) and Bachelor of Applied Studies (B.A.S.) provide opportunities for non-traditional students to complete a college degree without interrupting their careers to attend classes full time on campus. These programs illustrate that The University of Iowa is responsive to student needs and environmental factors.

**Processes for Assessing and Improving Undergraduate Majors**

Processes of strategic planning and regular curriculum review, described later in this section, ensure that departments consider how, and how effectively, their major programs advance the University's mission and goals. Together, these processes should ensure that curricula respond to developments in the disciplines and to students' needs, without compromising academic standards or the overarching goals of the department, college, and University.

In addition, the University is now in the midst of an intensive effort to institute clearly-stated outcomes assessment plans across the undergraduate majors.

**Outcomes Assessment**

*Impetus for Development of Formal Outcomes Assessment Plans*

In June 2006, in response to discussions with staff of the Board of Regents, State of Iowa, national discussions on accountability, and internal discussions about improving undergraduate education, the Office of the Provost initiated the development of outcomes assessment plans in each of the University’s undergraduate majors, to be completed by May 2007.

These plans were expected to:

1. Be consistent with the norms and disciplinary practices of the departments
2. Represent the views of the department's faculty
3. Clearly define the intended learning outcomes of the department's major(s)
4. Describe a system for collecting both direct and indirect assessments of student learning
5. Guide periodic examinations of the effectiveness of the department’s major and plans for improvement based on those examinations
6. Be documented and published
7. Be revised from time to time

Ultimately, the provost will approve the outcomes assessment plans, on recommendation of a faculty group.

As of the writing of this report, a few plans are still being drafted but most have been received by the Office of the Provost. Below, we describe plans that either are already in place or are in the process of being developed and implemented.

*Mechanisms for Defining Goals and Assessing Outcomes*

*Emerging Common Features of Outcomes Assessment Plans*

A few “pioneer” departments, including Spanish and Portuguese, chemistry, finance,
and psychology, agreed to complete their plans early in the year and share them with the campus.

The plans the “pioneer” departments developed share some key features, including: learning outcomes that focus on knowledge and skills unique to the discipline, assessment strategies that incorporate testing within designated courses, and projects or portfolios that students prepare at the end of their studies in the major.

The Departments of Chemistry, Finance, Psychology, and Spanish and Portuguese begin their assessment plans by first outlining desired learning outcomes in terms of knowledge and skills students should acquire in order to succeed in the major and in broader professional, social, and cultural domains.

The Department of Finance in the Tippie College of Business conceives of its learning goals in terms of the application of principles, the use of technologies, the analysis of situations, and the communication of findings.

The Department of Chemistry seeks to impart a working knowledge of chemistry vocabulary, analytical models, and basic laboratory skills, and a content knowledge across the major disciplines and sub-disciplines of the field. The chemistry curriculum also aims to develop advanced research skills, independent and creative thought, and an understanding of the mechanisms of the profession.

The Department of Psychology wants majors to gain understanding of scientific methodologies for examining psychological questions, a content knowledge across the principle theories and perspectives in the field, the ability to apply such knowledge to a range of situations, and an appreciation for ethical standards and diversity goals within the discipline.

The Department of Spanish and Portuguese articulates its goals in terms of knowledge (linguistic, literary, historical, and cultural) and skills (conversation, writing, literary, linguistic, and cultural analysis).

All of these departments have developed similar plans for assessing learning outcomes, mostly using a combination of exams, projects, portfolios, and surveys.

The Department of Finance uses specific examination questions to evaluate students’ ability to apply principles to quantitative and conceptual problems. Faculty and practitioners assess student competence in tools and methods by evaluating write-ups and presentations. The department’s assessment plan spells out the standards for evaluation clearly, and the mechanisms for evaluation are well integrated into the program.

The Department of Chemistry will administer standardized exams to all juniors and seniors; require a final poster presentation, report, or paper from graduating seniors; and is creating a final “capstone course” that will be required of all majors near the completion of their studies.

The Department of Psychology, in addition to tracking graduating students’ plans through a survey, will construct standard examination questions to be embedded in the exams for core required courses at every level. Furthermore, the department will assess the curriculum as a whole for its introduction, extension, and refinement of the key learning outcomes, and will engage in regular reflection and adjustment based on examination results and faculty feedback.
The Department of Spanish and Portuguese, in addition to giving basic exams in oral and written competency in the language, is developing a portfolio system that will require students to collect coursework from different stages in their studies and compose reflective essays concerning individual courses, their coursework as a whole, and their experience with study abroad.

**Assessment and Accreditation Requirements**

Outside of the “pioneer” departments, existing mechanisms for defining educational goals and assessing outcomes vary across campus. In many colleges and departments (such as the Tippie College of Business and the Colleges of Education, Engineering, and Nursing), goals and outcomes are strongly influenced by national accreditation requirements in the field. This is also the case for some departments in the College of Liberal Arts and Sciences, such as the Schools of Music and Journalism and Mass Communication.

In the **College of Nursing**, for example, standards for both curriculum and outcomes are set by the American Association of Colleges of Nursing (AACN) and the National Council of State Boards of Nursing (NCSBN). A standardized exam administered at the conclusion of every course, a second predictive exam for the licensing examination, and the state licensing exam itself test the learning outcomes.

The **College of Education**, as another example, requires teacher education program graduates to demonstrate competence according to eleven University of Iowa teaching standards derived from the ten Interstate New Teacher Assessment and Support Consortium (INTASC) standards, and aligned with the eight standards used to evaluate teachers in the state of Iowa. Subsets of the required teacher education courses focus on each of the standards; in order to pass core courses in a given semester, students must document attainment of the courses’ “focal standards” and include that documentation in their electronic portfolios. The College also assesses teacher education program students in other ways at regular checkpoints. Each semester they must maintain a minimum UI and cumulative GPA of 2.70. They must earn satisfactory supervisor and cooperating teacher evaluations during all field experiences. In order to student teach, they must have met all prerequisites and also have program area recommendation (students who wish to teach outside of the immediate geographic area must meet additional requirements). Faculty monitor students’ professional dispositions regularly; even where academic performance is satisfactory, a student may be dismissed from the program for a pattern of poor evaluations in this area. Finally, in order to be recommended for licensure, students in the elementary TEP must meet or exceed the state-established criterion score on one of two Praxis II tests that assess content knowledge.

The **College of Engineering** is held to external standards regarding its objectives and outcomes by the Accreditation Board for Engineering and Technology (ABET). Chemical engineering, for example, is required to assess student achievement—in terms of scientific and technical knowledge, problem solving skills, and the ability to pursue professional and advanced studies in the field—on a continuous basis. Engineering departments, like their counterparts in Education and Nursing, assess student learning at both the micro and macro levels, through exams and quizzes in individual courses and a sequence of program-level assessment tools designed to gauge a program’s overall performance. Such assessment tools include interviews and surveys of students, employers, and alumni, and faculty retreats held at the end of every semester.
Common Strategies for Developing Assessment Parameters

Departments not subject to accreditation processes that dictate outcomes assessment parameters use several common strategies to develop their own. Many departments use more than one of these strategies.

Several departments require students to produce portfolios as they progress through the major. These portfolios typically contain several examples of a student’s writing and creative abilities, and serve a dual purpose in that they can also be shown to prospective graduate programs or employers. In some cases students decide what to include in the portfolio, and in others departments strictly define the contents. Sociology, French and Italian, history, journalism and mass communication, and classics are examples of departments that use portfolios.

Finance, marketing, communication studies, and psychology use embedded questions or testing of students in specific courses. These performance measures help these departments determine what percentage of students in a course show mastery of given concepts.

Some departments measure student success by tracking successful attainment of employment, acceptance into graduate school, and/or pass rates on professional exams. Departments such as accounting, speech pathology and audiology, psychology, physics and astronomy, actuarial science, radiology/nuclear medicine technology, and pathology/clinical laboratory sciences believe these indirect measures provide a reasonable indicator that their curricula have successfully prepared students to move on in the profession.

Some departments and programs survey graduating students and/or alumni to measure and track successful employment and advanced training within the field. Examples include Russian, accounting, physics and astronomy, geoscience, statistics, political science, psychology, and mathematics.

Faculty and/or departmental committees regularly review and assess outcomes for students in integrative physiology, radiation/radiation sciences, social work, civil and environmental engineering, and mechanical and industrial engineering.

Professional Exams

For a number of majors, employment in the field requires some professional certification or licensure. Table II-15 lists these programs and the certification/licensing exams associated with them.

To the extent that UI departments are able to track student performance data—particularly at a level more granular than a total score on the exam—these data constitute an important method of assessing learning outcomes.
<table>
<thead>
<tr>
<th>Undergraduate Program</th>
<th>Exam</th>
<th>Pass Rate Information Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Certified Public Accountant (CPA) Exam</td>
<td>The CPA exam has four parts: financial accounting and reporting, auditing, regulation, and business and economic conditions. In 2006 the national pass rate for the four parts of the exam ranged from 42.4% to 44.6%, while the UI pass rate (for BBA students) ranged from 60.0% to 63.8%.</td>
</tr>
<tr>
<td>Actuarial Science</td>
<td>Professional exams by Society of Actuaries and Casualty Actuarial Society</td>
<td>The Society of Actuaries exam has four parts, taken by varying numbers of students, not all of whom are students in the UI actuarial science program. Pass rates on the parts of the exam for which the most recent data are available, May 2007, range from 47.6% to 62.5%. For all parts, UI students passed at a higher rate (about 46.6% higher) than the national average.</td>
</tr>
<tr>
<td>Clinical Laboratory Sciences</td>
<td>Medical Technologist (MT) exam by American Society of Clinical Pathology and/or Clinical Laboratory Scientist (CLS) exam by National Credentialing Agency for Clinical Laboratory Personnel</td>
<td>UI students have had a 100% pass rate on both exams since 2003.</td>
</tr>
<tr>
<td>Engineering</td>
<td>National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering Exam</td>
<td>The Fundamentals of Engineering exam consists of 120 questions in a four-hour morning session and 60 questions in a four-hour afternoon session. For the afternoon session, exam takers choose one of seven modules: chemical, civil, electrical, environmental, industrial, mechanical, or other/general engineering. The exam is administered twice a year. In April 2007, UI pass rates ranged from 67% to 100% and national pass rates from 69% to 88%.</td>
</tr>
<tr>
<td>Health and Sports Studies: Health Promotion</td>
<td>Certified Health Education Specialist Exam and/or the American College of Sports Medicine Health and Fitness Instructor certification exam</td>
<td>A total of 76 UI students have taken the CHES exam since 1996. In five of the nine years, all of them passed the exam. The lowest pass rate in any year was 83.3%, and the average since 1996 is 93.7%. The national average is 78.5%.</td>
</tr>
<tr>
<td>Management Sciences/Management Information Systems</td>
<td>Microsoft Certified Systems Administrator (MCSA) / Microsoft Certified Systems Engineer (MCSE) and Cisco certification</td>
<td>The Departments of Management Sciences and Management Information Systems do not have information on UI pass rates for the MCSA or MCSE.</td>
</tr>
<tr>
<td>Nuclear Medicine Technology</td>
<td>Nuclear Medicine Technology Certification Board; American Registry of Radiologic Technology (ARRT)nuclear medicine-specific certification exam</td>
<td>UI students have had a 100% first-time pass rate on both exams since 1986.</td>
</tr>
<tr>
<td>Nursing</td>
<td>National Council Licensure Examination (NCLEX)</td>
<td>UI pass rates have exceeded state and national pass rates in 4 of the last 5 years. From 2003 to 2006 the UI pass rate ranged from 89.0% to 92.2%, while the national pass rate ranged from 85.3% to 87.9%.</td>
</tr>
<tr>
<td>Radiation Sciences/ Cardiovascular Interventional Imaging (CVIT), Computed Tomography (CT) Technology, Magnetic Resonance Imaging (MRI)</td>
<td>American Registry of Radiologic Technology (ARRT) advanced certification board exam</td>
<td>Taking the CT, CVI, and MRI professional exams is optional for students in these programs. The program is aware of five students who took the exam (one in CT and four in MRI) in 2007, all passed.</td>
</tr>
<tr>
<td>Undergraduate Program</td>
<td>Exam</td>
<td>Pass Rate Information Available</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Radiation Sciences/Diagnostic Medical Sonography</td>
<td>American Registry of Diagnostic Medical Sonography</td>
<td>The program teaches multiple specialty areas including abdominal sonography, OB/GYN sonography, and vascular technology and cardiac sonography. Students have the opportunity to complete specialty certifications in all of these separate areas. The average pass rate over the past five years is 93%.</td>
</tr>
<tr>
<td>Radiation Sciences/QM/PACS</td>
<td>American Registry of Radiologic Technology (ARRT) advanced certification board exam</td>
<td>Four out of five students who have taken the ARRT boards in the three years of the program’s existence have passed (80%). The national first-time candidate pass rate for advanced certification is 76.9%.</td>
</tr>
<tr>
<td>Radiation Sciences/Radiation Therapy</td>
<td>American Registry of Radiologic Technology (ARRT) advanced certification board exam</td>
<td>Pass rate was 100% in 2002, 2003, 2004, and 2006; 83% in 2005.</td>
</tr>
<tr>
<td>Radiation Sciences/Radiologic Technology</td>
<td>American Registry of Radiologic Technology (ARRT) primary certification board exam</td>
<td>The RT Program has a 100% passing rate over the past 10 years.</td>
</tr>
</tbody>
</table>

Many departments provide a broad education that prepares students for entry into any of a wide variety of graduate and professional degree programs. These departments do not generally collect data about student performance on the various exams they take to get into those programs. For example, students in political science, biochemistry, integrative physiology, philosophy, and psychology frequently take the Medical College Admission Test (MCAT), Law School Admission Test (LSAT), Dental Admission Test (DAT), Optometry Admission Test (OAT), or the Graduate Record Examination (GRE). Students in some programs (such as physics and astronomy and Spanish and Portuguese) take the Subject GRE. These test results are useful to the departments in assessing the extent to which they are preparing students for graduate and professional schools, but because only a select subset of students attempt the exam, the results are not useful for more general purposes.

Foreign language departments such as French, Spanish and Portuguese, and Asian languages and literature require students to pass proficiency exams (e.g., Paris Chamber of Commerce or American Council on the Teaching of Foreign Language exams).

In order to graduate from a teacher education program and be recommended for licensure to teach in the state of Iowa, elementary education students must meet or exceed the state-established criterion score on one of two Praxis II exams that assess content knowledge.

Currently, there is no central repository for data regarding the rates at which UI students pass these various exams (as compared to state or national pass rates). As departments begin to use these data in their formal outcomes assessment efforts, however, the data will become more widely available.

### 4c: Useful curricula

**Post-Graduation Activities**

Another potential indirect measure of how effectively students have achieved desired learning outcomes is the extent to which graduates attain employment or are accepted to pursue graduate study. The Pomerantz Career Center (described in the Environments and Resources for Learning section of this self-study) surveys recent graduates each year to find out if they are employed or pursuing further education. Table II-16 summarizes the survey results, by college, for the graduating class of 2005-06.
Table II-16:  
Post-Graduation Status, 2005-06

<table>
<thead>
<tr>
<th>College</th>
<th>Graduates</th>
<th>No.</th>
<th>% of Graduates</th>
<th>No.</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>722</td>
<td>459</td>
<td>64%</td>
<td>413</td>
<td>90%</td>
</tr>
<tr>
<td>Education</td>
<td>305</td>
<td>304</td>
<td>100%</td>
<td>293</td>
<td>96%</td>
</tr>
<tr>
<td>Engineering</td>
<td>217</td>
<td>191</td>
<td>88%</td>
<td>183</td>
<td>96%</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences</td>
<td>2,649</td>
<td>1,304</td>
<td>49%</td>
<td>1,127</td>
<td>86%</td>
</tr>
<tr>
<td>Nursing (BSN Only)</td>
<td>138</td>
<td>138</td>
<td>100%</td>
<td>138</td>
<td>100%</td>
</tr>
<tr>
<td>Overall</td>
<td>4,031</td>
<td>2,396</td>
<td>59%</td>
<td>2,154</td>
<td>90%</td>
</tr>
</tbody>
</table>

Response rates vary considerably by college; the College of Liberal Arts and Sciences (CLAS) had the lowest, at only 49%, whereas all Bachelor of Science in Nursing graduates responded.

Of those who responded, most reported that they were employed or pursuing further education—90% overall, with a range from 86% in CLAS to 100% for College of Nursing graduates.

The Pomerantz Career Center also reports detailed statistics at 6-month follow-up with Tippie College of Business graduates. Table II-17 gives placement outcomes for 320 undergraduate business students out of 499 who graduated in May 2006. Table II-18 shows the high, low, mean, and median income for those graduates who are employed (in $5,000 increments).

Table II-17:  
Post-Graduation Status, Tippie College of Business, May 2006 Graduates

<table>
<thead>
<tr>
<th>Graduating Respondents/Class Size</th>
<th>320/499 (64%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placed</td>
<td>90%</td>
</tr>
<tr>
<td>Permanently Employed</td>
<td>64%</td>
</tr>
<tr>
<td>Enrolled in Further Schooling</td>
<td>26%</td>
</tr>
<tr>
<td>Still Seeking</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
</tbody>
</table>
Table II-18: Post-Graduation Income, Tippie College of Business, May 2006 Graduates

<table>
<thead>
<tr>
<th>Major</th>
<th>High</th>
<th>Low</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>$52,500</td>
<td>$37,500</td>
<td>$44,500</td>
<td>$42,500</td>
</tr>
<tr>
<td>Economics</td>
<td>$62,500</td>
<td>$32,500</td>
<td>$47,500</td>
<td>$47,500</td>
</tr>
<tr>
<td>Finance</td>
<td>$62,500</td>
<td>$17,500</td>
<td>$43,925</td>
<td>$47,500</td>
</tr>
<tr>
<td>MIS</td>
<td>$52,500</td>
<td>$42,500</td>
<td>$47,500</td>
<td>$47,500</td>
</tr>
<tr>
<td>Management</td>
<td>$62,500</td>
<td>$17,500</td>
<td>$37,830</td>
<td>$37,500</td>
</tr>
<tr>
<td>Marketing</td>
<td>$62,500</td>
<td>$27,500</td>
<td>$38,125</td>
<td>$37,500</td>
</tr>
</tbody>
</table>

Curriculum Review Process

As described in the institutional section of this self-study, University policy calls for every department to be reviewed at least once every seven years. In these reviews, the relevant college and the Office of the Provost consider, among many other things, evidence concerning the effectiveness of the curriculum.

In addition, every college has in place policies according to which tenure track faculty develop and control curricular content, at the departmental and collegiate levels.

The College of Liberal Arts and Sciences (CLAS) provides an example of how the process applies at two levels:

**Departmental curriculum development:** Typically, a committee composed of tenured and tenure track faculty from a given department will develop the curriculum for that department’s major program(s). The committee periodically reviews the major requirements to ensure they remain current for the field and to ensure that students have access to the courses they need to complete their degree programs. Often, the committee handles faculty course assignments as well. CLAS has made the creation of new courses a fairly streamlined process, allowing faculty to develop new curricula with a minimum of impediments.

**College-wide curriculum development:** CLAS exercises a greater degree of control over General Education Program (GEP) courses, as described in the “Common Academic Experiences” section of this self-study. The Educational Policy Committee (EPC) sets overall content requirements, and the General Education Curriculum Committee (GECC) reviews all GEP courses on a rotating basis every five years. Both the EPC and GECC comprise tenured and tenure track faculty from a variety of disciplines.

The Tippie College of Business uses a similar system that requires different procedures depending on whether a change is department or college-wide. Departmental curricular changes are moved from the department to the Undergraduate Program Office, where the associate dean for the undergraduate program and the advising staff review the changes and provide suggestions. College-wide changes generally follow a process that involves review by both a faculty committee on undergraduate programs, and the Elected Faculty Council. Only after approval of both faculty bodies are College-wide curricular changes implemented.

The College of Nursing also uses a comparable system. A standing committee, the
Academic Council, is charged with addressing all curricular issues, and proposals go through a process of review by the College’s Faculty Organization, which comprises the College’s faculty as a whole. In addition to institutional considerations, the College of Nursing must adhere to curricular standards set by the American Association of Colleges of Nursing (AACN) and the National Council of State Boards of Nursing (NCSBN). Curriculum changes must be reported to AACN and the State Board of Nursing.

The College of Engineering also maintains a standing curriculum committee responsible for reviewing and evaluating all existing and any proposed curricula within the College; reviewing and evaluating all existing and any proposed courses taught within the College or required in any of its curricula; and making appropriate recommendations to the dean and the faculty. The dean or the dean’s representative serves as an ex officio, nonvoting member. The Engineering Faculty Council also appoints a nonvoting student member every year for a one-year term, in consultation with the dean’s office and the president of the Associated Students of Engineering.

In the College of Education, the K-12 teacher education programs are the only undergraduate programs. All teacher education candidates take a set of core courses; secondary education (grades 7-12) candidates also fulfill the requirements for a College of Liberal Arts and Sciences major in the content area in which they are preparing to teach, and elementary education majors must complete at least 24 semester hours in an area of specialization. As described above, each of the core courses in a given program area is aligned with one or more of the eleven UI teacher education standards, which are set by the Iowa Department of Education and the Iowa Board of Educational Examiners—and which are in turn aligned with the INTASC teaching standards and the state of Iowa teaching standards.

The College of Education’s programs are also in the process of ensuring that their curricula align with the standards of their respective content area professional organizations, such as the National Council of Teachers of Mathematics, the International Reading Association, or the National Council of Teachers of English. Curricula for the elementary education areas of specialization must meet Iowa Board of Educational Examiners criteria for endorsements to teach in those areas.

And, every five years, the teacher licensure program faculty and administrators complete an internal review, to ensure that the teacher education programs meet the conditions of the Iowa Administrative Code, Chapter 79, Standards for Practitioner and Administrator Preparation Programs. Following the internal review, a team led by the Iowa Department of Education and including representatives from peer institutions across the state conducts an external review. For The University of Iowa to continue recommending candidates for Iowa licensure, the College’s programs must receive satisfactory ratings in all areas.

Some departments and colleges use advisory boards composed of professionals in the field to assist in providing feedback about curriculum design and implementation. Twice a year, the Tippie College of Business gathers its Board of Visitors—made up of respected business leaders from around the country—and gathers such feedback. Most departments in the College of Engineering have a standing Professional Advisory Board that convenes once or twice every academic year, as do the School of Journalism and Mass Communication and the Department of Physics and Astronomy. These boards regularly make recommendations for curriculum review and reform.
Creation of a New Major, Minor, or Certificate Program

The creation of a new major, minor, or certificate program involves a deliberative process in all colleges. Again, the College of Liberal Arts and Sciences provides an illustrative example.

Proposals for new programs must demonstrate conformity to the general design of the College’s existing programs (with special provisions for interdisciplinary programs); specify the required and elective courses and the frequency with which the department expects to offer them; assess the impact of the new program on University resources, including an estimate of all costs associated with implementing the program; and address any issues of possible duplication across the Regents institutions. For new interdisciplinary programs, each participating unit must specify the courses it will offer and on what schedule.

A proposal for a new undergraduate major, minor, or certificate program must first be approved by the appropriate collegiate bodies. Then, for all colleges, the proposal must be approved by the Office of the Provost. Major programs must also be approved by the Board of Regents, State of Iowa. In reviewing proposals for new programs, the Board of Regents considers the quality of the proposed offering; the need or demand for it in Iowa; potential duplication across the Regent universities; costs, reallocations, and long-term resource needs for the program; and alignment with the University’s and the Board’s mission and strategic plans. The process generally takes six months or longer. It provides for a thoughtful review and allows faculty to develop innovative programs without compromising strong academic standards.

New undergraduate degree programs recently approved by the Board of Regents include an interdisciplinary program in informatics (approved in June 2007), to be administered by the Department of Computer Science, in which students will study computing along with a “cognate area” such as art, biological sciences, economics, music, or one of many others; the Bachelor of Applied Studies, for place- or work-bound students, described elsewhere in this report; and the new interdisciplinary major in performing arts entrepreneurship, approved in March 2003, an innovative program that lets students pursue professional studies in the arts while simultaneously developing the skills to create market-based opportunities in the arts.

Planning for the Future

Almost all respondents to the DEO survey conducted for this self-study indicated that their departments have basic mechanisms in place for planning for the future of their undergraduate programs. Departments regularly review and, when appropriate, revise their undergraduate curricula in response to changes in students’ needs and in the relevant fields of study and practice. Most departments are also planning for the implementation of formal outcomes assessment plans, as detailed above.

Some departments are considering plans to expand and/or diversify their undergraduate majors. The Department of Chemical and Biochemical Engineering, for example, is considering increased participation in the General Education Program. The Department of Physics and Astronomy is exploring creating a learning community in conjunction with the College of Liberal Arts and Sciences. The Departments of Computer Science, Cinema and Comparative Literature, and Mathematics are considering other mechanisms to more actively recruit students to their majors. The Department of Dance, on the other hand, is seeking to implement more selective admissions, as the Department of Health and Sports Studies did this fall. The
Department of Communication Studies is likewise exploring ways to reduce the number of majors in order to match the number of students to the available resources and enhance the overall quality of the undergraduate experience for their students.

Several departments are considering revisions to their curricula, in order to provide more structure for their majors. The Department of English plans to institute a formal “gateway course” for the major, while the Departments of Economics and Mathematics are creating new tracks for their majors. The Russian program is exploring distance courses that would be coordinated with the University of Northern Iowa and Iowa State University. The Department of Radiology hopes to expand its online courses, and eventually create an online degree program. The Department of Physics and Astronomy is exploring increased collaboration with the College of Education to help train high school instructors. The Departments of Anthropology, French and Italian, and Social Work also plan to increase their emphasis on educational and career opportunities for students in their fields.

In the past few years the Center for Teaching has supported the development of service learning courses—that is, courses that integrate academic study with engagement in the community. Several programs, including International Programs and the Departments of Health and Sport Studies and Spanish and Portuguese, are actively working to incorporate more service learning into their curricula. The Department of Marketing plans to increase the number of field studies courses, which have students work on business problems in cooperation with partnering companies.

Conclusions—Processes for Assessing and Improving Undergraduate Majors

While most departments have some form of outcomes assessment in place—some tied to accreditation standards or professional exams, some less clearly defined—the University’s current effort to define formal outcomes assessment plans in each of the undergraduate major programs is a very important step toward gathering better data about how well we perform our mission and how well we serve our students. These data will, in turn, assist us in improving our programs and students’ learning.

The curriculum review processes in place in every college ensure that faculty can introduce innovations and update courses and programs as needed while keeping programs consistent with the missions of the department, college, and University. Most respondents to the DEO survey indicated that their departments also are planning for future developments in their majors.

Processes for Improving Instruction within the Majors and Across the University

The University has a variety of processes in place to ensure the quality of instruction in undergraduate courses, from teaching evaluations, to formal recognition of excellent teaching, to professional development opportunities for instructors.

Qualifications of Instructors

As described in the institutional section of this self-study, various indicators such as research productivity, faculty salaries, and membership in national academies help to illustrate the overall quality of the faculty at The University of Iowa. According to fall 2007 data from the Office of the Provost, 96.7% of UI tenured and tenure track faculty have a terminal degree.

The University’s most recent biennial report to the Board of Regents on faculty activities
(August 2007) indicates that in fall 2006 tenured and tenure track faculty taught 51% of undergraduate credit hours in total, including General Education Program, elective, and major program hours. The rest are taught by visiting and adjunct professors and lecturers (27%) and graduate student instructors (22%). Respondents to the DEO survey conducted for this self-study indicated that a median of 80% of classes in their major programs are taught by full time tenured and tenure track faculty members. According to data provided by the Office of the Provost, the median number of majors per faculty member in a department is 11.2; the 25th percentile is 3.2, and the 75th percentile is 21.3 (n=60).

Professional Development of Instructors

UI has implemented a number of University-wide initiatives to improve teaching. These include:

The Council on Teaching advises the University administration on teaching issues, including curriculum development and funding, policies and procedures, and experimental and non-traditional educational programs. It administers a number of teaching awards.

Instructional Improvement Awards, up to $5,000 each, awarded by the Council on Teaching, “support instructional initiatives that will make exceptional and specific contributions to learning.” The Council makes about eight or nine of these awards each year.

Faculty may apply periodically for Career Development Awards, which provide a semester of paid leave (or half time for a full year) during which faculty pursue research or creative projects. Each award is expected to result in at least one “product,” which might take the form of a published work, an exhibit, a performance, a grant application, or new or revised course materials. This competitive program is designed to encourage innovation in teaching as well as other scholarly work.

In 1996, the Council on Teaching established the Center for Teaching, with the mission to “promote and support efforts to enhance instruction at The University of Iowa.” The center has established four overlapping goals:

Support and promote the development of teaching skills

Strengthen the culture of teaching

Serve as a symbol of the University’s commitment to teaching

Influence policy discussions in ways that support the development of an excellent teaching and learning environment

Teaching evaluations and review are part of the review process (annual for probationary faculty, every five years for tenured faculty) for all faculty members.

Some departments offer training programs, formal mentoring programs, or both for teaching assistants and/or faculty. The nature of these programs varies greatly, from single sessions at the beginning of the academic year to regular meetings in year-long programs. Some of the best programs set forth specific learning objectives around teaching and learning in higher education and include observation of and feedback about classroom teaching by the TAs and new faculty members. As mentioned in
the institutional section of this self-study, a Mentoring Task Force completed its work in November 2007, and the Office of the Provost is following up on the task force’s recommendations, including the development of a centralized web site to provide information and support for mentors and mentees.

In 2006-07 the College of Education began offering a seminar in college teaching to address the needs of TAs who seek intensive training in the pedagogy of higher education. Taught by the director of the College’s Office of Graduate Teaching Excellence—a clinical associate professor of educational psychology and measurement—the course attracts students from across campus. In fall 2007, 18 students from 10 departments in 4 colleges enrolled in the course.

**Evaluation of Teaching Effectiveness**

_Probationary Faculty Review Process_

Probationary faculty undergo annual reviews, which have two interrelated purposes—one developmental, the other evaluative. The reviews provide faculty with substantial feedback regarding their progress toward meeting departmental and collegiate expectations for reappointment, tenure, and/or promotion, with the goal of increasing the faculty member’s chances of future success. The evaluative function of the reviews helps administrators make decisions about issues such as reappointment and extension of the tenure clock. Annual reviews touch on teaching, research, and service.

The Office of the Provost provides guidelines that identify best practices for conducting probationary reviews. The guidelines call for a comprehensive process that addresses all aspects of the faculty member’s performance (teaching, research, and service) from a range of viewpoints. When considering teaching, the review should “Include both student and peer evaluations, as well as a review or critique of course materials. Include information provided by senior faculty who actually have visited each of the faculty member’s classes or observed the faculty member in clinical teaching. Discuss the ‘mix’ of courses taught. Address graduate student research supervision if applicable.”

_Promotion and Tenure Process_

According to the University’s Procedures for Tenure and Promotion Decision Making, the dossier of a candidate for promotion and/or tenure must include a summary of accomplishments and future plans concerning teaching, a list of courses taught and students supervised, copies of course materials, and student teaching evaluations.

Every college’s written procedures governing promotion decision making must specify a method of peer evaluation of teaching, including peer observation of teaching if practicable. The report on peer evaluation of teaching must include (a) comparative analysis of the quality of the candidate’s teaching in the context of the candidate’s department or unit; (b) a summary analysis of the student teaching evaluation data contained in the candidate’s dossier, including departmental average comparison data where possible; (c) a description, where appropriate, of the balance between the candidate’s undergraduate and graduate teaching; (d) a description and assessment of the candidate’s academic advising responsibilities; and (e) a consideration of any special circumstances concerning the faculty member’s teaching performance.

_Assessing the Classroom Environment_

The Assessing the Classroom Environment (ACE) system uses scannable answer sheets

| 2b: Appropriate resources |
| 3b: Effective teaching |
| 3d: Support for learning and teaching |
to collect student opinions about courses and instructors, and provides a standard set of summary results. Instructors create customized forms by choosing from a bank of approximately 200 evaluative statements appropriate to their courses. The ACE system also allows instructor-generated items that require either a scaled response or open-ended comments. ACE results include the number and percentage of students agreeing or disagreeing with each evaluative statement, an item mean, median, and variability measures.

Every semester, each undergraduate class collects information from students about the effectiveness of the instruction in the class. Many instructors choose to use the ACE system, but in some departments, the faculty have chosen another approach, such as narrative responses to specific prompts. In whatever form student input comes, it plays a part in decisions including annual salary determinations, tenure and promotion decisions, and post-tenure reviews.

Developing Initiatives

The Council on Teaching is drawing up two surveys—one for faculty, and one for departmental executive officers—to gather more information about current teaching evaluation practices and to collect copies of instruments currently in use. The council is also reviewing the literature to learn more about best practices elsewhere. The goal is to make materials available to departments that want to implement more effective teaching evaluation. The council has discussed the possibility of working with the Center for Teaching to develop and offer a workshop on evaluating teaching and training peer evaluators.

Recognition of Effective Teaching

The University offers several campus-wide awards that recognize faculty and staff for their achievements in teaching. Faculty, staff, and/or students nominate instructors for these awards.

Outstanding Teaching Assistant Awards

The Council on Teaching awards Outstanding Teaching Assistant Awards each year, in the amount of $1,000 each (25 per year prior to 2007-08, now increased to 30 per year). To ensure fair comparison, the council accepts nominations in two categories—TAs who have “complete” responsibility for a course, and those who have “partial” responsibility. The criteria differ for the two categories, but focus on how the nominee’s teaching enhances student learning.

President & Provost Award for Teaching Excellence

The President and Provost Award for Teaching Excellence is awarded to up to three tenure track or clinical track faculty members who have demonstrated a sustained record of teaching excellence and commitment to student learning. Each person so recognized receives a $3,000 honorarium. Beginning in 2007-08, the council will make an award to a non-tenure track faculty member as well.

President's Award for Technology Innovation

The President's Award for Technology Innovation, administered by the Academic Technologies Advisory Council, recognizes the year’s most creative uses of technology for the benefit of our learning community. The recipient receives $3,000. In selecting
the winning innovation, the council considers the breadth of its impact on the learning community, with highest value placed on projects that enhance interactions between students and instructors, among students and their peers, or across the institution, or that create ties between course-based learning and workplace applications.

*Collegiate Teaching Award*

**Collegiate Teaching Awards** go each year to faculty who demonstrate unusually significant and meritorious achievement in teaching. Considerations include how the nominee's teaching and informal contacts enhance student learning, an analysis of teaching materials and class activities, scholarly works or creative achievements, and student evaluations of the nominee’s teaching ability. Award winners receive $2,000.

**Conclusions—Processes for Improving Instruction within the Majors and Across the University**

The University has affirmed its commitment to quality teaching by ensuring that teaching is addressed in faculty reviews and in promotion and tenure processes, implementing a variety of initiatives to help instructors improve, and offering prestigious awards to recognize excellence in teaching. Initiatives such as new mentoring resources from the Office of the Provost and the Council on Teaching’s study of best practices in teaching evaluation promise to provide additional support for instructors and evaluators.

**Student Perceptions of Major Programs**

The student satisfaction survey, described in the “Research Processes” section of this self-study, included several questions regarding student perceptions of specified aspects of their major programs. All questions were rated on a 5 category Likert scale where 1 = “not satisfied” and 5 = very satisfied.” Points 2 through 4 were not defined. Because not all respondents selected a response for every survey question, response percentages do not total 100% in all cases.

**Availability of Major Programs**

The first question asked students about their satisfaction with the availability of major programs at The University of Iowa. Table II-19 gives the response distribution by college and also summarizes responses given by students who reported their majors as “open,” students who reported having just one major, and students who reported having two or more majors.
Overall, more than 80% of students in every college selected four or five on the satisfaction scale with regard to the availability of majors. The same is true of students with single and multiple majors. Only 61% of Open Majors responded to the question with a four or five, however, which might reflect some students’ frustration related to selective or limited access programs (as described above). In other words, certain responses might reflect students’ disappointment that desired major programs are not “available” to them because they have not been admitted to those programs.

### Availability of Courses

The survey asked if students were satisfied with the availability of courses within the major. Table II-20 gives the response distribution by college and also summarizes responses given by students who reported having just one major and students who reported having two or more majors.

<table>
<thead>
<tr>
<th>College</th>
<th>Count</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>136</td>
<td>0%</td>
<td>1%</td>
<td>11%</td>
<td>42%</td>
<td>47%</td>
</tr>
<tr>
<td>Education</td>
<td>36</td>
<td>3%</td>
<td>6%</td>
<td>6%</td>
<td>44%</td>
<td>39%</td>
</tr>
<tr>
<td>Engineering</td>
<td>118</td>
<td>1%</td>
<td>2%</td>
<td>8%</td>
<td>41%</td>
<td>47%</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences</td>
<td>539</td>
<td>1%</td>
<td>3%</td>
<td>13%</td>
<td>44%</td>
<td>38%</td>
</tr>
<tr>
<td>Nursing</td>
<td>28</td>
<td>0%</td>
<td>0%</td>
<td>11%</td>
<td>43%</td>
<td>46%</td>
</tr>
<tr>
<td>Open Major</td>
<td>34</td>
<td>0%</td>
<td>9%</td>
<td>15%</td>
<td>32%</td>
<td>29%</td>
</tr>
<tr>
<td>Single Major</td>
<td>668</td>
<td>1%</td>
<td>3%</td>
<td>12%</td>
<td>43%</td>
<td>41%</td>
</tr>
<tr>
<td>Two or More Majors</td>
<td>176</td>
<td>0%</td>
<td>2%</td>
<td>11%</td>
<td>43%</td>
<td>42%</td>
</tr>
</tbody>
</table>

**Table II-19: Student Satisfaction with Availability of Major Program**

<table>
<thead>
<tr>
<th>How satisfied are you with the availability of majors at The University of Iowa? (1=not satisfied, 5=very satisfied)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response Distribution</strong></td>
</tr>
<tr>
<td>College</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Business</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Engineering</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences</td>
</tr>
<tr>
<td>Nursing</td>
</tr>
<tr>
<td>Open Major</td>
</tr>
<tr>
<td>Single Major</td>
</tr>
<tr>
<td>Two or More Majors</td>
</tr>
</tbody>
</table>
Students in the Tippie College of Business and the College of Engineering expressed considerably more satisfaction with their ability to get into courses for their major than those in the Colleges of Liberal Arts and Sciences, Education, and Nursing. Overall, more than 60% of students with single majors and with multiple majors selected four or five on the satisfaction scale.

Interaction with Faculty

The survey also asked how satisfied students were with the level of interaction with faculty within their major. Table II-21 gives the response distribution by college and also summarizes responses given by students who reported having just one major and students who reported having two or more majors.

Table II-21: Student Satisfaction with Interaction with Faculty

<table>
<thead>
<tr>
<th>College</th>
<th>Count</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>136</td>
<td>3%</td>
<td>12%</td>
<td>30%</td>
<td>29%</td>
<td>25%</td>
</tr>
<tr>
<td>Education</td>
<td>36</td>
<td>3%</td>
<td>3%</td>
<td>19%</td>
<td>36%</td>
<td>36%</td>
</tr>
<tr>
<td>Engineering</td>
<td>118</td>
<td>3%</td>
<td>10%</td>
<td>27%</td>
<td>39%</td>
<td>20%</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences</td>
<td>539</td>
<td>7%</td>
<td>13%</td>
<td>27%</td>
<td>31%</td>
<td>21%</td>
</tr>
<tr>
<td>Nursing</td>
<td>28</td>
<td>0%</td>
<td>7%</td>
<td>14%</td>
<td>21%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Table II-20: Student Satisfaction with Availability of Courses

<table>
<thead>
<tr>
<th>College</th>
<th>Count</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>136</td>
<td>4%</td>
<td>7%</td>
<td>16%</td>
<td>39%</td>
<td>33%</td>
</tr>
<tr>
<td>Education</td>
<td>36</td>
<td>6%</td>
<td>22%</td>
<td>17%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>Engineering</td>
<td>118</td>
<td>3%</td>
<td>4%</td>
<td>10%</td>
<td>36%</td>
<td>47%</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences</td>
<td>539</td>
<td>8%</td>
<td>13%</td>
<td>19%</td>
<td>33%</td>
<td>27%</td>
</tr>
<tr>
<td>Nursing</td>
<td>28</td>
<td>14%</td>
<td>11%</td>
<td>18%</td>
<td>14%</td>
<td>43%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Breakouts</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Major</td>
<td>668</td>
<td>7%</td>
<td>10%</td>
<td>17%</td>
<td>33%</td>
<td>32%</td>
</tr>
<tr>
<td>Two or More Majors</td>
<td>176</td>
<td>6%</td>
<td>14%</td>
<td>19%</td>
<td>35%</td>
<td>27%</td>
</tr>
</tbody>
</table>
How satisfied are you with the level of interaction you have with faculty in your major? (1=not satisfied, 5=very satisfied)

<table>
<thead>
<tr>
<th>Other Breakouts</th>
<th>Count</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Major</td>
<td>668</td>
<td>6%</td>
<td>12%</td>
<td>28%</td>
<td>31%</td>
<td>23%</td>
</tr>
<tr>
<td>Two or More Majors</td>
<td>176</td>
<td>3%</td>
<td>11%</td>
<td>24%</td>
<td>34%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Overall, more students reported being satisfied with the level of interaction with faculty (54% of single majors and 61% of double majors selected four or five on the satisfaction scale) than reported low or no satisfaction (18% of single majors and 14% of double majors selected one or two). The Colleges of Education and Nursing stand out, in that significantly more students reported satisfaction with the level of interaction with faculty in those colleges (72% in Education and 78% in Nursing selected four or five on the satisfaction scale) than in any of the other three colleges (52% to 59%).

Conclusions—Student Perceptions of Major Programs

The survey results suggest that overall, as one might expect at a comprehensive research university, University of Iowa students are pleased with the wide range of major programs available to them. Once they declare a major, they are generally satisfied with the availability of courses and with the level of faculty interaction within the program.

Summary and Conclusions—Education within the Major

Signs of Success

The great diversity of disciplines, pedagogies, and professional aims across the University’s colleges and departments is a tremendous asset and strength of a comprehensive university. The system of majors as it exists here delegates specialized educational decisions to those most qualified to make them—the faculty, who create and maintain specialized curricula and provide leadership for their academic programs.

Given the wide variety of opportunities for specialized study, it is not surprising that, overall, students express satisfaction with the availability of major programs. Students also express general satisfaction with advising and with the level of faculty interaction within the major, both important factors in supporting effective learning.

Effective formal processes are in place for ensuring regular curriculum review. Faculty govern curriculum decisions, as they should, and programs have the flexibility to change in response to the environment without jeopardizing the mission of the academic units that house them. The formal outcomes assessment plans under development in each of the undergraduate majors will add to departments’ ability to monitor and improve their effectiveness. The plans will serve an accountability function, but more important, if well designed, they will help faculty fine-tune their curricula and improve student learning.
Moving Forward

The effort to implement formal outcomes assessment plans in the undergraduate major programs must be part of a larger effort to foster a culture of evidence-driven assessment in all parts of the University. In addition to studying the outcomes of individual programs, for example, we need to collect more data that will allow us to consider, from a University-wide perspective, how policies and practices within major programs (such as admission requirements, curricular design and review, teacher training and recognition, etc.) correlate with enrollment patterns, progress to degree, and post-graduation outcomes. Although many of these variables are tied to the contingencies and requirements of different disciplines, departments, and colleges, faculty and administrators at every level should have information necessary to understand some of the quantifiable implications of curricular and admissions decisions. Such a review would allow the University to make a comparative analysis of the effectiveness of various components of concentrated study, and measure the performance of specialized education overall against the goals set out in the University’s strategic plan.