

## **Standard Four: The Academic Program**

In 2004, Bowdoin's faculty articulated a new vision of liberal education and redefined its general education requirements to reflect that vision. The culmination of a six-year process, this curricular reform represents an important and ongoing reengagement of the faculty with oversight of the College curriculum as a whole. These broad changes in general education have been accompanied by significant strengthening and reformulation of major and minor programs through expansion of faculty size and departmental or program self-studies and reviews. Faculty members have invested as well in rethinking their pedagogies in light of new resources and innovative approaches to teaching (e.g., new technologies, service-based learning, half-credit courses, and team-taught interdisciplinary courses). These developments reflect Bowdoin's commitment to continuous reflection, assessment, innovation, and change. In 2006, Bowdoin's academic program has become broader, deeper, more flexible, and better articulated.

The challenges for the next decade include development of a model of academic advising that integrates and supports the newly articulated goals of a liberal education, implementation and evolution of the new general education requirements, an examination of major requirements and programs in light of the new general education requirements, continued work on pedagogy and on supporting teaching at the highest standards in a variety of contexts, and supporting student excellence. As we move forward in these areas, we will deepen our engagement with assessment of student learning and the academic program as appropriate to a liberal arts setting. Bowdoin has already begun to expand its assessment specifically in ways that help faculty members become more reflective and effective teachers through internal grant funding, collaboration with other colleges, and linkage of institutional research capabilities to departmental self-studies,

### **Faculty Oversight of the Academic Program**

At Bowdoin, the faculty oversees the academic program and the award of credit through elected and appointed committees, most notably the Curriculum and Educational Policy Committee (CEP); the Recording Committee, and the Off-Campus Study Committee. The CEP, chaired by the Dean for Academic Affairs, reviews all proposals for new courses, changes in majors or minors, or proposals for new majors or minors. Since 1996–97, CEP has also advised the Dean and President on the reauthorization or reallocation of vacant faculty positions and on the allocation of new faculty positions. Beginning in 2004–05, two limited term committees—Curriculum Implementation and First-Year Seminar—have taken responsibility for the implementation of the new general education requirements (see below). The faculty as a whole must approve courses as well as new major or minor programs.

The Recording Committee, chaired by a faculty member, is responsible with the Registrar for the award and transfer of credit, recording of credit on the official transcript, award of degrees, course registration and scheduling, grades, and petitions from students for exceptions to academic policy. The Dean of Student Affairs serves on this committee

along with the Registrar. The Registrar provides a bridge between Recording and CEP, and the two committees have, on occasion, collaborated on issues of joint concern.

The Off-Campus Study Committee monitors programs to which the College sends students for a semester or year of off-campus study in order to ensure that they meet the College's academic standards and are suitable for transfer of credit.

In 2006, the sense of collective responsibility for the curriculum among Bowdoin faculty members is stronger than in 1996, built in part by the enterprise of articulating shared goals for a liberal education and redesigning distribution requirements. CEP has also in a variety of ways encouraged departments and programs to strengthen their own, more local, senses of shared responsibility for their curricula. For example, the challenges of self-assessment and priority-setting that have accompanied the submission of proposals for new positions in 2004–06 have encouraged departments to work together on their own curricula in relation to those of other departments and the College as a whole. A new level of cross-departmental conversation about curricula has been created in the working groups organized thus far around four of the five new distribution areas. The experience of implementing these requirements, however, has provided reminders that some departments see competition between the demands for major programs and for general education.

### **Rethinking General Education**

In the spring of 2004 Bowdoin's faculty approved, after lengthy discussion and debate, a statement about the goals of liberal education (Standard 1) and a new set of distribution requirements to help achieve those goals (TR4.1). The faculty's statement on liberal education emphasizes fundamental intellectual capabilities that a liberal education should enhance—for example, analytic thinking and analysis, problem-solving, writing, oral communication, quantitative skill, information literacy—as well as selected substantive areas of inquiry that students should sample in their first two years of college.

The new requirements and statement on liberal education grew out of six years of debate and planning by the faculty—particularly its Curriculum and Educational Policy Committee—informed by departmental discussion, summer working groups, and broad discussions in open meetings of the faculty. These efforts were launched by CEP in 1997 when it began a major review of the curriculum leading to a 1999 report that emphasized issues and goals in four areas: general education, the major and senior year, internationalizing the curriculum, and interdisciplinary study (TR4.2).

Taking full effect in Fall 2006 for entering students in the Class of 2010, the new requirements define the educational goals that Bowdoin has for its students. Students will have to complete one course in each of the following areas by the end of the fourth semester: First-Year Seminar; Mathematical, Computational, or Statistical Reasoning; Inquiry in the Natural Sciences; Exploring Social Differences; International Perspectives; and the Visual and Performing Arts. By graduation, students must also have taken at least one course in each of the three major divisions of the College: natural sciences and

mathematics, humanities (in addition to the required course on the arts), and social and behavioral sciences.

The new requirements replace a distribution system that was in place since 1983 and that required students to complete two courses each in the natural sciences/mathematics, social/behavioral sciences, arts/humanities, and “non-Eurocentric Studies” by graduation. Virtually all courses in the curriculum counted for one or more of these requirements, and students could double count courses that met more than one. Because the new requirements pose such a sharp contrast to this old system, experienced faculty advisors must shift perspective significantly (see Advising below in Standard 4).

The prospect of these new requirements along with ongoing efforts to strengthen existing majors and to deal with course enrollment pressures have helped shape the recommendations of the Curriculum and Educational Policy Committee about allocating new faculty positions anticipated as a result of the capital campaign. To date eight of the twelve anticipated new positions have been allocated through a three-year College-wide process of submission, posting, revision, and reposting of proposals for new positions by departments, programs, and *ad hoc* groups of faculty. Outside this process, two additional positions, one in developmental biology and one in economics (finance), have been created in response to special circumstances and fund-raising opportunities.

### **Strengthening the Curriculum**

Over the last decade, growth of nearly 20% in faculty size and opportunities to replace departing faculty have meant the recruitment and hiring of 87 tenure-track faculty members (Standard 5). In undertaking the substantial expansion that added 25.5 faculty positions, the College has been reluctant to add new programs that would demand significant new resources and divert faculty resources from established programs that were too thin. At the same time, Bowdoin has remained committed to regular reviews of academic departments and programs that focus on and improve the ways that we employ the resources we have (see Major Programs below). The College also recognizes the crucial relationship between space and program, and has taken major steps to strengthen facilities for the sciences and the arts in the last decade and identified longer-term space improvements for the social sciences and humanities.

New tenure-track positions have gone to existing departments and programs of the College rather than to establishing new ones. Several departments still feel great pressure in keeping up with student demand for their courses, particularly in the social sciences. In addition, we expect the new curricular requirements to increase demand for courses in areas such as the visual and performing arts. The challenge the College faces in continuing to grow the faculty is to respond appropriately to sometimes competing pressures to meet student enrollment demands and to fill holes in the curriculum.

*Increasing curricular flexibility and innovation:* Faculty have long expressed interest in having opportunities and incentives for interdisciplinary and team-teaching both inside and outside established programs. The barriers have included the strong sense of

obligation to home departments or programs and their resistance to “losing” courses, the high “cost” of team teaching to the institution, and uncertainty about how team teaching would be credited to teaching load. Over the past six years, the College has made limited progress in supporting initiatives by faculty to offer interdisciplinary and team-taught courses. The CEP developed a policy to address these issues and offers an annual opportunity for faculty to apply for limited support for adjunct course replacements if they co-teach an interdisciplinary course (TR4.3). These modest steps help but do not fully meet the aspirations of faculty for interdisciplinary engagement.

A CEP decision to permit half-credit courses has offered additional freedom for exploration and innovation. These courses have provided opportunities for faculty to pilot courses, for visiting faculty to teach “short courses,” for a course to be extended into the next semester for interested students, and for groups of faculty to share the offering of a course (e.g., eleven faculty contributing to a group of courses on Examining Poverty).

*Interdisciplinary studies:* In the last decade, the major programs in Africana Studies, Asian Studies, Environmental Studies, Latin American Studies (added in 2001), Neuroscience, and Gender and Women's Studies have been strengthened by appointments in the programs or in departmental positions that support the program. The College has made several appointments exclusively in programs, rather than relying entirely on joint appointments with departments. In Gender and Women's Studies and Asian Studies, this has been especially important. These appointments and new leadership have enriched curricular offerings, led to changes in the major programs, and strengthened collegial relationships that extend these programs widely in the College. The immediate challenge is to find a new director for the Africana Studies program, which has an interim director for 2006–07.

The development of interdisciplinary programs and cross-disciplinary connections among the faculty has been very important to faculty members and has been facilitated by summer working group initiatives. A major capital campaign goal is to enhance support for cross-disciplinary activity year-round through an Institute for Coastal Studies and a rotating Interdisciplinary Institute as noted in Standard 5.

*Internationalizing the curriculum:* The 1999 CEP report asked for a more coherent institutional focus on educating students for “a social world whose international aspects will be [prominent].” The new faculty statement on liberal education reflects this view, as do the new distribution requirements, which include a course on International Perspectives. Strengthening such programs as Asian Studies and Latin American Studies through faculty appointments and curricular initiatives has also reflected this continuing effort to internationalize the curriculum. As stated above, a Latin American Studies major was approved in 2001, and the Asian Studies major was revised in 2006 to permit students to develop disciplinary as well as regional concentrations in their major programs. Off-Campus Study (reviewed below) is another important aspect of the College's commitment to internationalizing education. The increased proportion of international faculty at Bowdoin (now 10%; see Standard 5) also supports this goal.

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*Highlighting the arts:* Since 1996, the College has made it a priority to enhance facilities and programs for the arts in order to highlight their centrality in the life of the College and their role in the academic program. The opening in 2000 of a renovated Pickard Theater and newly constructed Wish Theater provided excellent space for theater and dance programs, which have grown accordingly. In 2005 CEP recommended allocating an additional tenure-track position to the Department of Theater and Dance to deepen teaching in that program, and to support the Visual and Performing Arts component of the College's new general education requirements.

The renovation of the Walker Art Building and conversion of Curtis Pool into a recital hall with new practice rooms and rehearsal space will both be complete in the spring of 2007. The visual arts and art history programs have added between them 2.75 faculty positions since 1995-96. They have also outgrown their space in the Visual Arts Center. Teaching studios are spread out over five buildings, and the art library in the Visual Arts Center cannot house all of the current materials used for teaching. Development of new space for visual arts is part of the long-range plan for the campus. The music department added a faculty position in ethnomusicology in 2001. One of the goals of the Admissions Office is the recruitment of more students with particular interests in the arts (Standard 6).

*Strengthening the sciences:* Over the past decade the College has constructed or renovated the Druckenmiller-Cleaveland science complex (for biology, chemistry, and geology), Searles Hall (computer science, mathematics, and physics), and Kanbar Hall (neuroscience), and built a marine lab and a dock at the Coastal Studies Center. It has added faculty positions in biology (plant physiology), biology/environmental studies, biology/neuroscience, and psychology/neuroscience, organic chemistry, computer science, and chemistry/environmental studies to strengthen curricula. New positions have also been allocated in geology and in oceanography.

Major grants from the Howard Hughes Medical Institute and the Research Corporation have provided funding for a significantly enhanced program of summer research fellowships, and these have been supplemented regularly by Rusack Coastal Studies Fellowships and by more than 20 other funds that support student research. (Most of these fund research with faculty in the sciences, but several are for such other purposes as Latin American studies, travel or study in Asia, or research in history.) Many faculty have been successful in securing external funding, increasing opportunities for student engagement in research. This infusion of resources has substantially strengthened the science programs at Bowdoin, and we see evidence of that in the numbers of students participating in summer research and a stream of faculty-student co-authored papers.

Parenthetically, overall science enrollments have declined by about 25% over the last ten years, following a rapid rise (79%) in the 1990s that reflected both an expanded student body and growth in interest in the sciences. The rise and decline have been most pronounced in the life sciences. These patterns raise questions about how we introduce students to science (as well as about the interests of admitted students). Discussion of entry-level courses in the sciences is underway (especially in biology and physics), and

that discussion should encompass thinking about the nature of science literacy and how science teaching accomplishes that goal.

*Building the social sciences and humanities:* Of the 25.5 new faculty positions, six are in the social sciences and fourteen in the humanities. The social sciences draw particularly high enrollments, and both divisions have large numbers of majors. Short-term planning is underway to relocate sociology and anthropology to a larger space, and long-range plans include new space for several social science and humanities departments.

### **Bowdoin College Museums and the Academic Program**

*Museum of Art:* The Museum of Art constitutes an invaluable resource at the College that supports teaching in many disciplines. The \$20 million renovation and expansion of the landmark Walker Art Building will provide state-of-the-art facilities that make the permanent collection more accessible and that will permit expansion of the exhibition program. Particularly well known among the museum's 14,000 objects are its holdings of Ancient Art, Italian Renaissance paintings, Old Master prints and drawings, and American art. Each year more than 1,200 students from nearly 60 courses come to the museum in groups to see and analyze 1,000 or more objects from the museum's collection that are not currently on display. The renovation includes an enlarged and well-equipped teaching classroom that will provide an ideal environment for this object-based learning. Upon completion of the project in 2007, the Museum of Art will be prepared to both host and originate touring exhibitions that can support broad intellectual and scholarly involvement of faculty and students through publications and symposia.

*Peary-MacMillan Arctic Museum:* The Arctic Studies tradition at Bowdoin, with its emphasis on faculty, staff, and student joint fieldwork connecting the natural and social sciences, dates back 150 years. This tradition, as well as outreach involving local and Native northern students, is reflected in the resources and programs of the Peary-MacMillan Arctic Museum and Arctic Studies Center. Arctic Studies houses *Arctic Anthropology*, an international social science journal. The museum is used in courses; involves over 30 students a year in curatorial, exhibition, conservation, research, and outreach activities; and actively engages interns in creative projects with its collections. The museum is well along in planning for a series of events and publications related to the centenary of the Peary trek to the North Pole in 2008–09. It also will begin a year-long self-study for reaccreditation by the American Association of Museums in September 2006. The most prominent issue that the museum faces relates to the cramped spaces that it occupies in Hubbard Hall. Preliminary planning for relocation of the museum has been completed, and the College is now developing fund-raising strategies outside of the capital campaign to fund this major project.

### **Major Programs**

Major programs are important and generally strong at Bowdoin. In the 1996 Self-Study, the College highlighted the importance of establishing common expectations for the major and of strengthening some major programs. The CEP focus on these questions was

displaced by a decision to give priority to rethinking general education. Returning to a comprehensive review of major programs thus remains on the agenda, although there is no current sense that Bowdoin's major programs are generally problematic. Meanwhile, the College has continued to reexamine major programs on a department-by-department basis through the intensive review of individual departmental programs.

Over the last ten years, Bowdoin has completed twenty-one departmental/program reviews, and many of these reviews have led to significant rethinking of majors (e.g. Asian Studies, computer science, history). To make these reviews more rigorous and to connect them to College-wide efforts to promote meaningful assessment, the Dean's Office has clarified and elaborated the expectations for departmental self-studies (TR4.4). This elaboration includes, for example, requests for "assessments" of effectiveness in meeting goals for majors and for minors, examination of relationships between the department's or program's curriculum and the curricula of other departments or programs, and discussion of teaching strategies within the department. For roughly six years, the Deans have followed up the external review process through meetings with departments or programs to ensure that issues raised in the review are being addressed.

*Independent study, honors, and summer research:* Bowdoin values student engagement in faculty research or in independent research or artistic work with faculty guidance. Independent study and summer research opportunities provide the major vehicles for this activity. In the graduating class of 2005, 65% of the students had taken one or more independent studies with faculty members – a total of 575 independent study courses. At Bowdoin, independent study courses are the primary vehicles for students to do honors projects, something that 25% of Bowdoin seniors accomplished in the class of 2005, up from 16% in the class of 2001. The Dean's Office will explore the relationship between numbers of independent studies and upper-level classes enrolling five or fewer students.

Over the past decade the College has increased resources in support of student research through grants and additions to endowed funds. Records of student participation in summer research indicate an increase in numbers from 50 in 2001 to about 100 in 2006. The capital campaign includes a goal for endowment funding of 20 additional summer research fellowships. To encourage summer research, the College began in 2000 to provide housing at no cost to summer research students. A working group of faculty has been asked to study alternative models for summer research programs that might do more to draw together and recognize students engaged in summer research. They will make preliminary recommendations in Fall 2006 to the Dean for Academic Affairs.

Independent studies, honors projects, and particularly summer research opportunities are unevenly distributed across disciplines, raising questions about access and equity for students. Independent studies constituted 6.6% of the enrollments in the sciences in 2004, but only 3.9% and 3.6% respectively in the social sciences and the humanities. Of the 2005 summer fellowships, 80% were awarded to students in the natural sciences, both because some funds are designated for these fields and because there is a stronger tradition of summer research in these disciplines. As the faculty reexamines major programs in the years ahead, the nature of independent study, honors, capstone courses,

and summer experiences will be a central issue. The College will build endowment for summer student fellowships (a capital campaign goal), and expand their availability to students in the humanities, arts and social sciences, as well as to the natural sciences.

Self-designed majors have provided several students a year with the chance to design their own educations by creating combinations of courses to achieve thematic, cross-disciplinary goals. Faculty on the Recording Committee, however, have raised the question about how to treat proposals that follow a repeated pattern rather than breaking new ground. Appropriate concerns arise as to whether approval of such proposals has the effect of creating “back door” majors that have not been approved officially by the faculty. This issue is a priority agenda item for the Recording Committee in 2006.

### **Off-Campus Study**

One aspect of the College’s commitment to internationalizing its education is its support for off-campus study, especially study abroad. To that end, Bowdoin financial aid is portable for all approved off-campus study, although capped at the level of Bowdoin’s own cost of attendance. In 1996, the College conducted a careful review of off-campus study (TR4.5), which highlighted questions about program quality and experience, integration of off-campus study experiences for returning students, and disruption both of majors and campus life caused by having a high percentage of the junior class away. The faculty continues to try to reconcile the practice of off-campus study with College goals for an integrated and coherent undergraduate major and for high standards for the academic program. Despite considerable progress in reviewing off-campus study programs, many issues raised in the 1996 self-study remain today.

At Bowdoin, 50 to 60% of students study away (typically as juniors) and that percentage has remained relatively constant for the last ten years. A significant decline, however, in the number studying away for a full year (34% of study away in 1995–96; 15% in 2005–06) has reduced the participation rate as measured by student FTE. The decline in full-year off-campus study reflects national trends downward and internal practices that discourage students from enrolling in two separate one-semester programs.

The 1996 review of off-campus study helped to redesign some internal procedures and to shape the goals of a collaborative experiment with Colby and Bates to establish off-campus study programs in Cape Town, London, and Quito, funded with major grants from the Mellon Foundation. The three colleges, after close consultation with Mellon, decided to close the programs, which ran from 1999 to 2005, because of their financial cost, uneven enrollments, and the unanticipated burdens placed on on-campus academic programs by having faculty teach abroad (TR4.6).

Full-time professional staffing of the Off-Campus Study Office, beginning in 1995, provides leadership in evaluating program quality as well as a steady enhancement of information for students through advising and printed and online information. In 1995–96 the College returned to the principle of an “approved list” of program options. The office maintains a list (updated annually) of about 100 such options. Bowdoin, Bates,

and Colby now coordinate and share on-site visits and evaluations by the Director of Off-Campus Study and faculty members.

Although progress has been made since the 1996 study, two areas remain of particular concern: the ideological question of the role of off-campus study in relation to general education versus the majors, and the logistical housing issues created by an imbalance of students away in the fall and spring semesters. The Off-Campus Study Committee is considering ways to bolster communication between OCS and academic departments to promote more consistent advising of students and reviewing programs and universities on the list of program options by region or subject area, in order to better identify gaps or weaknesses. The Director of Off-Campus Study will also be working with Student Affairs and with Student Records to reexamine the procedures for application and approval of off-campus study in order to improve oversight regarding the timing of student course choices abroad.

### **Student Engagement with the Curriculum**

*Class size and student engagement:* Since the 1996 reaccreditation, Bowdoin has made significant progress in reducing the number of classes with large enrollments. Bowdoin has College-wide guidelines for course size, and the CEP reviews carefully any proposal to stray from those guidelines. In the spring of 2003, the faculty approved a reduction in enrollment limits for 200-level courses from 50 to 35, and for 100- (or below-) level courses from 75 to 50. This proposal was made in response to student and faculty concern about large classes, supported by IR evidence that students in the largest courses report spending the least time on class preparation.

New course enrollment limits that took effect in Fall 2003 and the growth of the faculty have, over the last ten years, reduced both the proportion of courses over 40 (down from around 14% to about 7%) as well as their absolute numbers (from 74 to 46). At the same time, the percentage of courses enrolling more than 30 students (a target of the NEASC report in 1996) has remained steady at 22% despite a significant decline in both the number and proportion of very large courses (TR4.7). Average class size at Bowdoin is down from 22.4 in 1995–96 to 19.8 in 2005–06.

Course enrollment limits come at some cost of student opportunities to enroll in preferred courses. Twenty-two percent of course requests were rejected because of course enrollment limits in Fall 2005 compared to 14% in Fall 2002 under the previous limits. However, the percentage of students getting into their top four choices remained at roughly 50% and the percentage in four classes at the end of Phase I registration remained at 65% to 68%. The number of classes full at the end of Phase I registration doubled from 37 to about 70, an increase from 15% to 20% of the available courses.

The Dean's Office continues to monitor courses with enrollments of five or fewer students and will work with departments to reduce their frequency starting in 2006. Although there are clear rationales for some of these courses (small advanced language courses, for example), their number exacerbates the pressures on high-enrollment

courses. The number of such courses hovers around 62, roughly 10% of the courses offered in a year. Management of small classes remains difficult even with a College policy that states that “courses with a preregistration of fewer than five students should normally be cancelled by the department and replaced with a course likely to attract a higher enrollment....” Adding new courses is difficult at the end of registration.

*Differential enrollment patterns:* Substantial growth in faculty size has not reduced the sharp disparities among departments in student majors and students taught per FTE faculty member. In 2004–05, the latter ranged from 46 students per FTE faculty member to 114 students per FTE. In general, the social sciences have the largest concentration of students—averaging 111 students per FTE compared to the arts and humanities at 82 and the natural sciences and mathematics at 63. These differential patterns of enrollment create pressures on course accessibility, class size, and major advising.

### **Changing Pedagogies**

Student engagement in learning depends heavily on the pedagogies employed by faculty in their classes. As a result, faculty members work continuously at refinements or innovations in their teaching with the goal of enhancing student learning. Faculty self-assessments of teaching during reappointment, tenure, and promotion review and in annual professional activities reports provide evidence of these changes. An active Committee on Teaching supported by the Associate Dean for Curriculum and Faculty Development plays a crucial role in supporting discussions of teaching across disciplines.

*Writing pedagogy:* An initiative on the teaching of writing was renewed in 2005–06 to encourage the rethinking of writing pedagogy. This initiative drew support from three studies of the teaching of writing at Bowdoin: a 2002 survey of faculty practices in teaching writing, in which half of the respondents indicated that they were not confident in their preparation for teaching writing; and two studies (one in 2001 and one in 2003) which inquired about student experiences in first-year seminars (e.g., numbers of papers required, total pages written, opportunity to submit revisions) and perceptions of them (e.g., aspects of writing emphasized in class, perception of improvement in writing over the course of the semester). (TR4.8) In late Spring 2002, a group of thirty faculty met to discuss the first two of these studies, prompting initiatives to require first-year seminars and to monitor the teaching of writing in them, and suggesting faculty receptiveness to a larger initiative on writing.

The writing review completed in 2005 suggests that faculty can improve both the quality and efficiency of such teaching. The challenge of the writing initiative thus is to begin a campus-wide discussion of the teaching of writing with the expected result that many faculty members will become more self-confident, skilled, efficient, and effective in the teaching of writing. In the longer run, such changes should have a positive impact on student learning. In addition, we hope to begin to find ways across disciplines to assess student writing and to gauge growth in a student’s writing abilities over four years at the College.

*Service learning:* Over the past six years, a group of faculty, laboratory instructors, and academic support staff have worked together with the support both of Campus Compact and our Community Service Resource Center to introduce service-learning components into Bowdoin courses. We believe that within specific constraints and when done well, service learning can increase student engagement in learning a discipline. To date thirty-six different courses have employed service learning, including courses in computer science, environmental studies, geology, history, Romance languages, and sociology. Summer working groups have engaged a total of nineteen faculty and fourteen academic staff in learning about this pedagogy. The challenge going forward is to provide enlarged support for the complex logistical arrangements and organizational relationships that are required for effective service learning. The capital campaign plan includes endowment of a Center for the Common Good that would enlarge the resources available to provide faculty leadership and administrative support for service learning as well as to enhance support for student service activity.

*Technology and pedagogy:* Some of the most significant pressures for rethinking aspects of teaching over the last decade have come from dramatic changes in the ways that information is shared, the kinds of information available, and the capacity to present easily audio, visual, and computational representations of ideas and information in the classroom. Students often come to class with different expectations and experiences about communication and more awareness of the Web as an information resource than of the Library. These changes create new possibilities for teaching, new challenges to faculty to employ appropriate technologies selectively and effectively, and pressures on the College to provide appropriate technologies in every conceivable teaching space.

The College has refitted thirty-five classrooms to make the uses of technology in them more sophisticated as well as standard, simple, and reliable. In the last two years, Bowdoin has adopted a course management system (Blackboard CourseInfo) for faculty to post course materials and to create opportunities for electronic interactions with and among students, and Information Technology has provided substantial training and support for its use. The increasing use of GIS as a teaching and research tool across disciplines has prompted additional IT support requirements, development opportunities, and demonstrations by faculty. IT supports and creates a wide variety of applications for faculty and student use. Additional support and training is available through the National Institute for Technology and Liberal Education (Standards 7 and 8).

### **Advising**

The 1996 Self-Study reported evidence of limited and perfunctory meetings between advisors and students—both for pre-majors and majors—and raised questions about the efficacy of the advising system then in place. Although the College has made some significant changes to support advising, and working groups have reflected deeply about the advising process, student (and our own) satisfaction with advising remains lower than we would like. We continue to explore approaches used on other campuses, in part through our collaborative Teagle-funded research (see Assessment below).

The change in distribution requirements and adoption of a statement on liberal education have prompted faculty-wide discussions of advising in Spring 2006. Student Affairs and Academic Affairs plan to support that discussion over the next several years and will encourage the faculty to build on a Spring 2003 report on advising by the CEP and on the examination of issues and options by a summer working group in 2003.

Over the past decade, the pre-major academic advising system has been strengthened. New academic advisors now participate in a formal training program offered jointly by Student Affairs and Academic Affairs. Incoming students who may need special support are identified by Admissions, and information about them is shared with the First-Year Deans; this information shapes the assignment of faculty advisors. Advisee files now contain, among other documents, the Pre-Major Academic Advising Questionnaire, which students complete over the summer. This document encourages students to begin to articulate their educational goals, and gives their advisors a clearer sense of these goals.

In 2006 the design of first-year orientation was revised in order to highlight more clearly the academic program and to enlarge time for student-faculty interaction about liberal education and course choices. The new format will be assessed and revised in response to faculty and student comment. The offices of Academic Affairs and Student Affairs are collaborating in preparing more written information to support advisors and students both about the advising process and about substantive matters related to the academic program. In addition, planning is underway to train students (e.g., RAs) to be better peer advisors and to be attentive to the College's educational goals.

As the College plans the introduction of an online registration system, it remains committed to face-to-face advising for entering and continuing students. The College also remains committed to equal or random access to courses, something that the current batch processing of student course requests permits.

### **Supporting Student Success**

As an active participant with peer institutions in discussions sponsored by the Consortium for High Achievement and Success (CHAS), Bowdoin has recognized the challenges of providing a climate of support for all members of much more diverse student bodies to achieve academic excellence. Our responsibility is to understand the issues that students face and to provide support systems that make it possible for them to excel at the College. Bowdoin approaches academic support in a variety of ways.

1. The College has in the last decade established the Baldwin Learning and Teaching Center and the Quantitative Skills Program to complement the Writing Project and to supplement the primary work of faculty in support of student success. The addition of a consultant on English as a Second Language in 2003 added an important new resource that we are still learning how to utilize. The College has also contracted with a consultant for three years to support experimentation with the teaching of oral communication skills in First-Year Seminars. These distinctive programs provide writing

assistants in courses, drop-in sessions for writers, academic mentors, tutors (particularly in science and quantitative courses), study group leaders, and one-on-one assistance in assessing learning strengths and weaknesses (TR4.9).

In 2004 the Writing Project, Quantitative Skills, and the Baldwin Center (each staffed by one director with a shared coordinator) moved into a shared space in the Center for Learning and Teaching in Kanbar Hall. This new space has provided a vibrant and accessible location for students, but the coalescence of the several programs remains a work in progress. The College asked consultants to campus in Spring 2006 to assist us in thinking through the approaches taken in these programs, their relationships with one another and with the teaching faculty, and their heavy reliance on students to provide direct support to other students. These reviews remind us that the work of each of these centers needs a wider understanding among faculty and students and that further enhancements in coordination are possible.

2. A series of ongoing curricular innovations provide support for students with varied backgrounds. For example, English 60 regularly offers expository writing instruction (as does History 60, when taught) that goes beyond the support provided in first-year seminars. Chemistry 101 was designed to provide an earlier entry point into the discipline than is offered by Chemistry 109. The biology and physics departments have embarked on reexaminations of entry-level teaching, reflecting similar concerns.

3. President Mills created the position of Dean for Academic Advancement in 2005, primarily to help the College assess issues in this area and to assist us in learning about what other institutions are doing in response to the same challenges. This Dean works closely with the Deans of Academic and Student Affairs to assess data and to develop strategies to support academic excellence for all students (see below).

4. The College has undertaken significant data collection and analysis using an adapted version of the Equity Scorecard in order to understand the character and extent of issues at Bowdoin as they relate to underrepresented student groups. A working group will in 2006-07 review existing data with the goal of sharpening the definition of the issues, imagining further institutional strategies for resolving them, and creating a baseline of data against which to measure the effectiveness of interventions.

5. The College is developing new interventions and refining existing ones. The Bowdoin Science Experience orientation program, partially funded by the Howard Hughes Medical Institute, in August 2006 brought to campus eighteen admitted students from underrepresented groups who have expressed an interest in the sciences. In addition, for six years the College has provided Chamberlain Leadership Scholarships, which offer no-loan financial support to students with strong leadership potential, academic strength, and significant financial need. These scholars have an opportunity to attend a five-week summer session at Phillips Exeter Academy as preparation for entering Bowdoin. Planning is underway to assess the impact of both the Exeter and the Hughes programs.

## Assessment of the Academic Program

Monitoring the effectiveness of the College's academic program is the responsibility of the faculty, through the Curriculum and Educational Policy Committee, chaired by the Dean for Academic Affairs. CEP has guided the changes made in the academic program over the past decade. From the new curriculum, to off-campus study, to class size, and student engagement, discussions at committee meetings were informed by descriptive and evaluative information, including transcript analyses that showed how students were fulfilling the old general education requirements, student survey responses that explained how in-class behaviors changed when class size changed, and student survey responses that detailed students' perceptions of learning that occurred while studying away.

The Office of Institutional Research (IR) provides data on enrollments, faculty FTE, class size, and course demand to both academic departments and the Dean's Office. This data supports course planning and allocation of resources. Topics under discussion within CEP and other committees frequently become the basis for a special study or student survey by IR. The faculty is committed to an evaluation of the new curriculum in 2010–2011 and the Curriculum Implementation Committee will develop the standards for that evaluation in 2006–07. At the same time, CEP will turn its attention to evaluation of the role of the major and minor in our curriculum.

Bowdoin continues to be attentive to the significant contributions that thoughtful assessments of the academic program offer for improvements in teaching and student learning. The College also recognizes the challenges of drawing faculty into supplementing course-level assessment of student learning, which the College relies upon most heavily. We also share many of the same assessment challenges as other liberal arts colleges, and have worked actively to build connections with other similar institutions to share ideas about assessment and to establish sources of comparative data that can help us reexamine some of our educational practices.

Current practices of assessment include course-based assessment, evaluation of programs and departments, College-wide evaluation, and collaborative efforts with peer institutions.

*Course-based assessment:* Bowdoin faculty members devote considerable energy and attention to assessing student learning in their courses. Course-based assessment requires that instructors achieve a considerable degree of clarity about the learning goals for individual courses. Supporting faculty in rethinking how they do this assessment will be a priority subject for faculty development initiatives in the Office of the Dean for Academic Affairs in the next several years. The writing initiative described earlier includes a summer working group of faculty that will seek to identify methods and common standards for assessing the quality of student writing.

The Physics Department is the only one on campus that utilizes a standard instrument to assess student learning in the discipline. The instrument, called the *Force Concept Inventory*, has been accepted in the field as a valid measure of conceptual learning in

physics. The faculty in physics have used the data to gauge student learning in their problem- and discussion-based introductory course and have found evidence of substantial improvement. The department has used these data for more than ten years as an important reference point for assessing pedagogical changes.

More broadly, grading provides a marker of course-based assessment of students. What grades mean, which grading system is used, and concerns about grade inflation have all been the subject of faculty debate and action for many years. In 2002 the faculty took action to permit greater differentiation of student performance by adding plus and minus to the letter grade system. Variability in grade distributions across departments, along with incremental increases in average grades, raise questions about the nature of assessment standards and the degree to which they are commonly shared. Faculty development regarding assessment must take account of grading patterns and what they may reflect about the nature of course-based assessment.

*Program-based assessment and evaluation:* At the program level, evaluation is mainly carried out in academic departments and programs using a process of self-study and outside review as noted earlier. This review process has been an important point for engaging faculty with collecting and analyzing data internally to assist in understanding the nature and impact of the academic program on students. With the support of a grant from the Davis Educational Foundation, Institutional Research has encouraged departments to engage in assessment and evaluation at the time of reviews. The departments of Sociology and Anthropology, Romance Languages, Geology, and Visual Arts have thus far made use of such data in their self-studies.

Other examples of outside reviews premised on self-study and visiting experts are the review of the Library in 2005 and the review of the teaching of writing at the College in 2005. In addition, the Library has undertaken internal assessment efforts over the last few years, beginning with the creation of a Statement on Information Literacy (Standard 7). The most ambitious project was the creation of an information literacy “test” administered on-line to students in first-year seminars during February 2006. Low response rates have forced a reformulation of methodology for 2006–07.

The College regularly collects evaluative data for the Baldwin Center, Quantitative Skills Program, and Writing Project and tracks student use of these academic support programs carefully. The programs themselves collect regular feedback from students who receive services, as well as from those who participate as mentors and tutors. It also collects feedback from faculty. In Spring 2005, IR conducted a College-wide student survey that asked in part about receiving assistance for academic difficulties and the perceived helpfulness and reputation of the Baldwin Center, Quantitative Skills Program, and Writing Project among students.

Students taking service learning courses complete a brief questionnaire at the end of the semester to evaluate the usefulness and perceived importance of the experience. In 2005–06, IR completed a content analysis of the comments from these questionnaires for

the last several years. That analysis prompted a Spring 2006 survey of students who had completed two or more service learning courses.

*College-wide assessment and evaluation:* Assessment efforts at the College level have centered on documenting what faculty members do in their teaching, understanding how students engage and experience the curriculum, and examining students' perceptions of their own learning. (For example, see Writing Pedagogies above.) Although these efforts have not provided direct measures of student learning, they have provided the College with important insights about educational practices and student experiences of them that have informed policies and helped to prompt or guide new initiatives. Summer working groups used student writing as a starting point to examine faculty expectations of student writing, standards for writing across the curriculum, and the teaching and assessing of writing within particular disciplines and courses. This year the College is piloting eight "writing intentional" courses designed to teach writing more deliberately in mid-level courses in all academic divisions. From this starting point, the College intends to continue a focus on writing for some years with two large goals in mind: first, infusing the deliberate teaching of writing through the curriculum; and second, establishing common standards and assessment practices for student writing.

To establish a baseline for understanding the learning outcomes of the College's new distribution requirements, IR designed a survey touching on many of the learning goals of the new requirements and administered it to graduating seniors in Spring 2004 and Spring 2005. This effort to assess student perceptions of learning is grounded in the clearly articulated goals for liberal education that now provide a set of standards to guide assessment initiatives in the coming years. The College also participates in the annual CIRP survey administered to entering first-year students every fall; seniors are routinely surveyed prior to commencement; and generally there is a student survey administered in the spring that focuses on a special topic.

*Collaborative work on assessment:* Bowdoin has participated in discussions of assessment among liberal arts colleges in the northeast. Along with Wellesley, Bowdoin co-hosted a meeting of deans and institutional research directors in Summer 2003. Out of this meeting and discussions at NEASC annual assessment conferences came a collaborative proposal to the Teagle Foundation. Currently, Bowdoin is participating in a Teagle Foundation grant, along with Bates, Colby, Smith, Trinity, and Wellesley. That research focuses on a study of first-year student development in the face of different systems for advising and requirements at the six colleges. The baseline of data, collected from records of student course choices and through comparable surveys and in-depth interviews with students on each campus, will provide a basis for an enlarged project that will follow a cohort of students at each campus through four years.

The College is also one of fourteen participants in a project on organizational learning funded by the Spencer Foundation and led by Richard Light at Harvard. This project engages each of the participating institutions in developing two innovations, assessing them carefully over four years, and engaging with colleagues from the other schools in regular discussions of what we are learning about innovation and change. Bowdoin's two

initiatives involve faculty development regarding the teaching of writing and the impact of the two “bridge” programs that the College sponsors (see Supporting Student Success above).

*Resources for Assessment:* Three years ago Bowdoin received a grant from the Davis Educational Foundation to support development of assessment activities built upon the notion of “reflective teaching.” That grant provided for the employment over four years of an additional full-time professional staff person in IR to augment existing assessment activities, to conduct pilot assessments of student learning in at least two major programs at the College, and to engage increasing numbers of faculty in the practice of reflective teaching. It will be important for the College to continue to conduct ongoing assessment.

### **Award of Credit and Academic Integrity**

Responsibility for ensuring the integrity of the Bowdoin degree resides primarily with the faculty through the Curriculum and Educational Policy, Recording, and Off-Campus Study Committees. The Office of Student Records and Off-Campus Study Office share this responsibility. The College’s policies on matters of academic credit and its graduation requirements are clearly stated in the *Bowdoin College Catalogue*, available in both print and electronic media. The Registrar and Off-Campus Study director review these statements each year and update them when policies or requirements change. Within the past ten years, the Recording Committee has vastly improved the way it handles student petitions. Faculty and students now realize that asking for an exception to an academic policy (e.g. dropping a course after the deadline) is a serious matter and requires an exceptional medical or personal circumstance.

Bowdoin currently offers courses in traditional time periods and modalities and does not offer, nor does it accept for transfer credit, learning experiences that are primarily distance learning, online, correspondence, or experiential. Students receiving a degree from Bowdoin must successfully complete sixteen credits, or one half of the minimum thirty-two required, at the College.

In 2003 the Office of Student Records, working with the College’s Information Technology department, created *Bearings*, an online student information system to which both students and their advisors have full access, and which includes a degree progress component. In a student’s senior year, the Office of Student Records conducts a degree certification, checking to be sure that each of the College’s graduation requirements have been met before the student is cleared to receive a degree. No student has ever been unable to complete the degree within the normal four years because of unavailability of courses. The implementation of the new curriculum has required a revamping of the degree progress system on *Bearings* and its centrally administered degree certification system. We are working on a new student records system to replace *Bearings*.

For students entering the College in 1999, a new standard for Latin Honors at graduation took effect, limiting Latin Honors to the top 20% of the graduating class. Most

departments offer one level of honors, but a substantial minority still differentiates highest honors, high honors, and honors.

### **Institutional Effectiveness**

The faculty has established a clear and ambitious vision of liberal education and agreed upon a new set of general education requirements for students that will take full effect in 2006 beginning with students in the Class of 2010. The curriculum has been opened to more experimentation and collaboration among faculty. Faculty decisions have significantly reduced the number of large classes. Expansion of the faculty along with an improved system of review of major programs has strengthened the academic program and has led to rethinking and redesign of departmental curricula and requirements. Unlike the College of 1996, which was sometimes described as having a “sink or swim” environment, the Bowdoin of 2006 has put in place a variety of supports to help talented students of varied backgrounds achieve academically. Through faculty leadership and with the support of IT and the Library, faculty members are more engaged than ever in refining and adapting their approaches to teaching. Faculty members are increasingly involved in thinking about broader assessment strategies, and the College is engaged in several major collaborative projects on assessment.

Monitoring the effectiveness of the College’s academic program is the responsibility of the faculty, more specifically the responsibility of the Curriculum and Educational Policy Committee, chaired by the Dean for Academic Affairs. Changes made in the academic program over the past decade have been guided by CEP and have been well informed by data and information provided by the College’s Office of Institutional Research. From the new curriculum, to off-campus study, to class size, and student engagement, discussions at committee meetings were informed by much descriptive and evaluative information, including transcript analyses that showed how students were fulfilling the old general education requirements, student survey responses that explained how in-class behaviors changed when class size changed, and student survey responses that detailed students’ perceptions of learning that occurred while studying in a foreign country. Though it is never discussed at Bowdoin, it is indeed the case that Bowdoin is quite far along on the “culture of evidence” continuum.

The Office of Institutional Research regularly reports data on such things as enrollments, faculty FTE, class size, and course demand for academic departments as well as for the Dean. These data are used by departments for a variety of purposes, including course planning and position proposals. The Director of Institutional Research attends CEP meetings and responds to all of that committee’s requests for data and information. Topics under discussion within CEP or within other committees often become the basis for a special study or student survey. The faculty have already made plans for an evaluation of the new curriculum in 2010–11, an indication that the faculty are concerned with the effectiveness of the College’s new curriculum.

With these accomplishments come continuing and new challenges. The most significant challenges facing the College in the short and long term relate to assessment, advising, student success, independent student work, off-campus study, and space.

Continued work on assessment is vitally important as a basis for ongoing review and improvement in the academic program. Current projects underway on writing, on the first-year student experience (Teagle), and on bridge programs, along with expanded engagement of departments in assessment as part of self-studies, promise to move the College toward this objective.

We recognize that advising of students in their first two years is uneven and that the College must do more to provide support for students in choosing courses and developing a thoughtful perspective on designing their own educations. A new collaborative initiative on advising is underway, growing out of faculty meeting discussions of the problems with pre-major advising and of the implementation of new requirements for entering students. The faculty are prepared to rethink the structure of advising and first-year orientation, with the support of the Academic Affairs and Student Affairs offices.

As the College has created supports for student success in the curriculum (English 60, for example) and through resources such as the Baldwin Center, Quantitative Skills Program, and Writing Project, faculty members have sustained a commitment to helping students outside of class. Recent reviews of these centers and data that are still being compiled suggest that faculty remain uncertain about the nature and sources of support on campus and have varying views of their own roles in assisting students. A challenge and priority for 2006–07 is to draw together varied conversations on this issue and identify leadership and process for informing and engaging faculty on this issue.

Close connections between students and faculty are central to the College's tradition, to its conception of liberal education, and to student experiences at Bowdoin. Expansion of summer student research and continued opportunities for independent study with faculty are central to achieving those close connections. The capital campaign is expected to deliver new endowment support to expand support for student fellowships in all disciplines. At the same time, it will be important to examine the differential patterns across disciplines in the use and availability of independent research experiences and to encourage broad conversation about the goals of and approaches to such independent work. The Dean for Academic Affairs and CEP will lead examination of these issues in the years ahead, aided by the report in 2006–07 of a faculty group on summer research.

At some point, the faculty will need to engage in discussion of the variation in goals for off-campus study across departments and on the part of individual faculty members. Formulating the right questions for such discussion will fall to the Dean, President, and Off-Campus Study Committee.

Space issues will increase in the next decade, as the College adds faculty lines. Although the long-term campus plan includes construction of academic space on the site of the current hockey arena, this will not be available in the near term. Meanwhile, most

buildings that house departments have no room for expansion. Interim solutions are likely to require location of faculty away from their home departments. The Dean's Office and departments will have to develop creative ways to establish collegial support in these sites. Additional space issues on the short-term planning agenda are teaching space in the visual arts and, as noted earlier, relocation of the Arctic Museum.