

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

### **Overview**

Brandeis is a liberal arts university, committed equally to the education of its students and the advancement of knowledge. It offers students the advantages of a research university, with a broad curriculum and a faculty of distinguished scholars, scientists, and creative artists; and it does so in the context of a small institution in which teaching and mentoring remain central. Brandeis is a university, moreover, that is ever mindful of the uses to which knowledge is put and of the obligation, as educators, to prepare students (in the words of the mission statement) “for full participation in a changing society, capable of promoting their own welfare, yet remaining deeply concerned about the welfare of others.” In this spirit, Brandeis is working to integrate professional studies into the liberal arts, while expanding opportunities for experiential learning. In response to a rapidly changing modern world, the University is diversifying and globalizing its curriculum, modifying existing courses and creating new courses and programs.

### **Description**

The College of Arts and Sciences is at the center of the University, enrolling approximately 3,200 undergraduates. The Graduate School of Arts and Sciences enrolls another 750 students in 29 master’s and 19 doctoral programs. There are also three professional schools. The Heller School for Social Policy and Management enrolls about 400 students in three master’s and one doctoral program. The International Business School (IBS) also offers three master’s and one doctoral program, enrolling approximately 350 students. And the Rabb School for Continuing Studies offers both master’s degrees and graduate certificates in four programs for part-time adult learners.<sup>26</sup> Thirty-one centers and institutes further enrich the intellectual life of the University, providing educational opportunities for students and contributing to human knowledge and understanding.<sup>27</sup>

While Brandeis’s commitment to the liberal arts is firm, the University is not wedded to an unchanging interpretation of a liberal education. The College of Arts and Sciences offers majors in the traditional disciplines of the liberal arts, but in many interdisciplinary programs, as well. Sixteen such programs have been added and many others substantially revised over the past ten years.<sup>28</sup> The University also provides opportunities for undergraduates to explore the professions of law, medicine, business, education, and journalism in the spirit of liberal inquiry. Academic credit is not granted for “life experience,” but Brandeis does offer credit-bearing courses that combine an internship with an academic component, an expanding element of the undergraduate experience.

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<sup>26</sup> See Appendix 4A for list of University graduate programs and degrees.

<sup>27</sup> See Appendix 2D for list of centers.

<sup>28</sup> See Appendix 4B for changes in A&S programs from 1995-2005.

At the graduate level, Brandeis offers doctoral programs in selected academic disciplines and, through the Heller School, in social policy and management. The doctoral program in international economics and finance is offered by IBS in collaboration with the Department of Economics. The University's master's programs encompass academic disciplines of the liberal arts, as well as professional studies. It is in this latter area where growth has occurred recently and is likely to continue. Two new master's programs have been introduced in the Heller School, while in the Graduate School of Arts and Sciences, professional programs drawing upon academic disciplines have been developed in such areas as Coexistence and Conflict, Genetic Counseling, and Cultural Production. The establishment and growth of IBS over the past 12 years has also contributed significantly to the expansion of master's education.

Questions of academic policy are discussed and decided through a strong system of collegial governance, as set out in the *Faculty Handbook*. The governance structure is explained in detail in Standard Three.

Academic priorities have been established and carefully aligned with current and projected resources. Since 2003 Brandeis has been engaged in an Integrated Planning Process (see Standard Two), in order to chart the future of academic programs, enrollments, financial resources, and physical resources. There are regular planning mechanisms to ensure that resources are allocated strategically: annual staffing and planning reports from each department and graduate school, and meetings with the departments and schools to assess needs for staffing and other resources. In establishing new programs, the faculty seek, wherever possible, to build on existing strengths and to establish synergies. For example, the new M.A. program in Coexistence and Conflict builds on Brandeis's strength in international development and conflict resolution, and draws on courses in Anthropology, Politics, Psychology, Sociology, and other departments. The program is administratively linked to the International Center for Ethics, Justice, and Public Life and forms a natural complement to the M.A. program in Sustainable International Development at the Heller School.

The Brandeis website—overhauled in 2004-05 and currently being further improved—has become a central source of information on academic programs and other matters. In 2005, Brandeis merged the University Libraries and the Information Technology Services into Libraries and Technologies Services (LTS). A long-range plan for the renovation of academic spaces includes state-of-the-art technology standards, ensuring uniformity in hardware and facilitating instructors' use of information technology. As of 2005, 80 percent of classrooms had up-to-date technology.

The University has made only limited use of technology for distance learning, but the Rabb School does offer two degrees online. Before being offered online, distance courses are offered first on campus and assessed. Brandeis does not operate any satellite campuses or offer any off-campus degree programs, although the Rabb School does offer some classes at a local company.

## **Appraisal**

The founders of Brandeis gave it a distinct identity and enabled it to rapidly achieve distinction in American higher education. Now in its sixth decade, Brandeis remains committed to that identity and to sustaining its place among America's first-tier institutions. This requires continually assessing how to demonstrate and express institutional identity in changing circumstances, while simultaneously remaining energetic in the pursuit of academic excellence. It also requires close attention to the competing claims made on finite resources and the hard decisions those claims entail.

One constant and welcome challenge is to compete effectively with peer institutions for first-rate faculty and students. Ten years ago, the re-accreditation review cited concerns about faculty and staff salaries. Since then, the University instituted a three-year program to raise faculty salaries in Arts and Sciences to the AAU median by rank and discipline. The University has also made its graduate stipends and financial aid awards more competitive and more securely funded.<sup>29</sup>

In an effort to ensure consistent oversight of academic programs, Brandeis modified its faculty governance structure. A revised *Faculty Handbook* was approved in 2001, establishing new oversight bodies, e.g., the Professional Schools Council. With an increase in interdepartmental programs, faculty from these programs are now included on search committees for new faculty, where appropriate. The University is also developing new strategies, to supplement existing ones, for assessing student learning, and is instituting structures and personnel to pursue this initiative systemically. IBS and the Rabb School have made significant progress in clarifying learning outcomes and assessment measures. The recent recruitment of an assistant provost with specific responsibility for assessment makes possible a University-wide assessment initiative.

Brandeis's academic facilities are undergoing renovation and expansion. The *Integrated Plan* provides a list of capital projects in support of research and teaching, and also identifies needed renovations. A second building for IBS was recently completed, and a second one for the Heller School is scheduled to open in fall 2006. Work has also begun on a \$154 million comprehensive rebuilding and renovation program for the science complex, and work on the first phase of a new \$10 million fine arts building is scheduled to begin in spring 2007. Brandeis also continues to invest each year in a program of classroom renovations, with modern seating and better lighting, along with state-of-the-art instructional technology.<sup>30</sup>

As interdisciplinary programs have grown in number and popularity, the University has reallocated resources accordingly; but some of these programs require increased staffing and funding. Similarly, more staff support is being provided for experiential learning. A three-year grant from the Davis Educational Foundation provides critical resources for a systematic analysis of

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<sup>29</sup> See Appendix 4C for stipend progress.

<sup>30</sup> See Appendix for 4D for classroom renovation data.

the variety of experiential learning opportunities now available for students and a projection of future efforts to strengthen this aspect of undergraduate education.

With few exceptions, departments at Brandeis in the Arts and Sciences are smaller than their counterparts at other universities with which Brandeis competes, and, in many cases, smaller than their counterparts at top liberal arts colleges. As a result, Brandeis finds itself stretched, both financially and in terms of human resources, by its commitments to: (1) compete at world-class levels in scholarship and creative work; (2) provide undergraduates with a liberal arts experience characterized by intense interaction with faculty; (3) provide faculty with the opportunity to engage one another across departmental lines in deep and sustained interdisciplinary research and teaching; and (4) to do all of these things while remaining one of the smallest major research universities in the nation.

In 2004-05 the Dean of Arts and Sciences issued a report, *Strategic Planning Analysis and Proposals*, a major thrust of which was that, given its size and multiple commitments, Brandeis would better achieve its goals by concentrating resources on a slightly smaller set of programs. Proposals were made to phase out or scale back specific programs in all four schools within Arts and Sciences. These reductions would have freed resources to reinforce newer interdepartmental programs and other areas of strong student interest. This bold plan ignited strong (and diverse) faculty reaction and debate. The Provost assembled a special faculty committee to review the Dean's plan. This committee ultimately rejected most of the proposed reductions. The intense analysis that the Dean's plan received did lead to additional resources being committed in the University's *Integrated Plan* for strategic investments in curricular initiatives and capital projects. Nonetheless, the essential tension remains—Brandeis is committed to a breadth of programs, an ambition for world-class scholarship and creative work, an intensity of undergraduate involvement, and a complexity of interdisciplinary interaction that are extremely difficult to sustain on a small scale. This dilemma is not new—it is the fundamental challenge that inherent in the University's mission.

### **Projection**

Brandeis will remain a research university with the liberal arts at its core, two professional schools of modest size, and a graduate continuing education program in a few selected areas. Within that fundamental academic structure, however, some changes are underway or on the horizon.

At the undergraduate level, two significant developments should be noted. Brandeis is committed to diversifying and globalizing its curriculum, in order to better prepare students for the world in which they will live. This includes an ongoing review of the curriculum and the hiring of new faculty, together with administrative structures to ensure continuing attention to this goal. The University is creating new courses and new programs of study, while adding new content to existing courses and programs. Efforts are also underway to connect theory with practice, helping students to bring together academic

learning and life outside the classroom. This is reflected in the major initiative in experiential learning and in the development of interdisciplinary majors and minors in applied areas, such as Business, Journalism, and Health: Science, Society, and Policy. IBS and the Heller School offer crucial support for these areas of study, providing courses for undergraduates taught by faculty of the two professional schools. These developments are discussed more fully in the section below on undergraduate education.

At the graduate level, Brandeis has seen substantial growth in master's education in each of its graduate schools. This has offered new opportunities for collaboration among programs, e.g., between Economics and IBS, between Jewish Professional Leadership in GSAS and the Heller School's M.B.A. program, between the Heller M.B.A. and the IBS M.B.A. Further collaborations, including some new interdisciplinary programs, especially in the social sciences, will be developed in the coming years. The growth of master's education also poses certain challenges in providing the necessary services and support for graduate students, especially international students, who need specialized support structures. Some functions, such as career services, will likely remain decentralized, as students can best be served by their particular schools and programs. In other areas, such as ESL instruction and graduate student housing, centralization may be more efficient.

From its inception, Brandeis has recruited and welcomed international students, and, with the emergence and growth of the International Business School, as well as the development of two programs in the Heller School that attract international students predominantly, their numbers have greatly increased in recent years. Research and policy centers with an international orientation, such as the Crown Center for Middle East Studies and the International Center for Ethics, Justice, and Public Life, are also reinforcing Brandeis as an institution with an international orientation. These are welcome developments, but they place demands on the University to serve its international students effectively, and point to the need to connect and integrate various international efforts.

Assessment of student learning is embedded in the work that faculty members do as educators. The University is now establishing a systematic program of assessment to ensure that the general education program, the majors, and the various graduate programs are accomplishing what they are intended to accomplish. This means working from two directions at once—from the departments and programs to develop pilot projects in assessment adapted to particular fields, and from the administration to develop the necessary structures and procedures to guide assessment and to build the use of assessment into evaluation and decision-making.

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## *Undergraduate Degree Programs: General Education and the Major*

### **Overview**

The College of Arts and Sciences is the sole undergraduate college at Brandeis. It is composed of four Schools: Creative Arts, Humanities, Social Sciences, and Sciences. Its undergraduate program of study includes general education requirements and a major, plus options for minors and free electives. Taken together, these requirements and opportunities cultivate intellectual depth and breadth in students and develop their analytical, verbal, and quantitative abilities, while also enabling them to pursue their particular interests. As a rare hybrid of a liberal arts college and research university, Brandeis gives its undergraduates the chance to work closely with eminent scientists, scholars and creative artists—every tenured member of the faculty in Arts and Sciences teaches undergraduates. Students eagerly seize on these opportunities, typically opting to combine a major with a minor or second major. New majors and minors have helped to diversify the curriculum, enlarging opportunities for gaining an international perspective and for exploring the professional and practical uses of knowledge.<sup>31</sup> The expanding opportunities for various kinds of experiential learning, such as undergraduate research, creative and studio work, and internships, also help to strengthen the connection between the classroom and the larger world.

### **Description**

The cornerstone of the undergraduate curriculum is the University Seminar in Humanistic Inquiry (USEM), which each first-year student takes. These are small classes (18 students or fewer) which engage students in close reading and critical thinking on particular themes, e.g., “Place, Memory, and Identity,” “Art and the Bible,” “Law and the Search for Authority,” “Hand and Brain,” “Tales of Travel.” Each first-year student must also take a University Writing Seminar (UWS) or, alternatively, a USEM that includes an additional writing component (USEM+W). An additional writing-intensive course—or two such courses for those who opt for the USEM+W—completes the writing requirement. (Starting in 2007-08, the USEM+W option will be eliminated—see below, in the Projection section).

The general education program includes four further requirements that can be satisfied by any course carrying the requisite designation. All students must take a quantitative reasoning course, and a non-Western or comparative studies course. A foreign language requirement is met by successful completion of a third semester course or by achieving a designated score on an AP, SAT II, or language placement exam. Each student must also complete one course in each of the four schools within the College of Arts and Sciences.

The presence of these four schools is a longstanding distinguishing feature of Brandeis. It bespeaks a commitment to regular collaboration across related disciplines. And it also signals an acknowledgement of the essential contributions of the various disciplines, including the creative arts, which are not subsumed under the humanities or set apart in professional schools. Exposure to the creative arts, the humanities, the sciences, and the social sciences is part of the undergraduate experience for every student.

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<sup>31</sup> See Appendix 4E for list of majors and minors.

Through the program of general education, Brandeis expects each student to gain an understanding of the methods and concerns of a range of disciplines; to be able to grasp numerical data, assess the uses of such data, and interpret the representation of data in graphs, charts, and tables; to be able to express ideas lucidly and to construct cogent arguments, orally and in writing; to enlarge their social and moral perspectives; and to bring critical thinking to bear on institutions, practices, and values. The goal is for all undergraduates to have these analytical and verbal skills and to be grounded in humanistic inquiry, including the assessment of texts and historical perspectives. The *University Bulletin* sets out the nature and purpose of each general education requirement.

Students can choose from among 41 majors and 46 minors.<sup>32</sup> Most students, 70 percent in the class of 2005, choose to combine a major with a minor or a second (or even third) major. The requirements for each major and minor are determined by the individual department or program, and approved by the School Council and the Undergraduate Curriculum Committee. Students can also construct an independent interdisciplinary major, with the support of at least two departments. In many departments, undergraduates have the opportunity to interact with graduate students in upper-level courses. And in each major, honors work is available for students who have the requisite GPA at the end of their junior year. Descriptions of each major are set forth in the *University Bulletin* and are available on the Brandeis website. Departments and programs also make available handouts with relevant information for prospective and current majors.

Eleven of the available majors and about half of the minors are in interdepartmental programs, many of which have been established in the last few years. Since 2000, the University has added majors in Hebrew Language and Literature; Italian Studies; Biological Physics; Creative Writing; East Asian Studies; Health: Science, Society, and Policy; International and Global Studies; and Women's and Gender Studies. Over the same period, Brandeis added minors in Religious Studies; Hebrew Language and Literature; Internet Studies; Social Justice and Social Policy; English, American, and Anglophone Literature; Business; Education Studies; Health: Science, Society, and Policy; and International and Global Studies. The creation of these programs reflects Brandeis's tradition of interdisciplinary collaboration, as well as the breadth of the faculty's scholarly interests.

Reading courses, internships, fieldwork, and senior theses are essential elements of the curriculum, and provide rich opportunities for students to have individualized interaction with faculty members. Many students—43 percent and 45 percent in the last two graduating classes—take advantage of these opportunities.

All students are introduced to the informational resources provided by the library and the Internet through their first-year writing instruction course.

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<sup>32</sup> See Appendix 4F.

Informational literacy is further developed through library intensive courses and through the use of WebCT in courses in each major.<sup>33</sup>

The undergraduate experience is further enriched by opportunities to study abroad. Over 250 programs have been approved for study abroad, and a new system of portable financial aid (which enables student to apply their aid to study abroad) makes this opportunity available to all students without regard to ability to pay. In the year before this system was introduced, 22 percent of the junior class studied abroad. In the two years since then, the percentage has risen to 28 and then 35 percent. The last two years have also witnessed the development of an interdepartmental major and minor in International and Global Studies, and there are numerous departments and programs focusing on area studies, including East Asian Studies, Islamic and Middle Eastern Studies, Latin American and Latino Studies, African and Afro-American Studies, Russian and East European Studies, Classical Studies, Italian Studies, and European Cultural Studies.

In the same spirit, Brandeis is committed to diversifying its curricular offerings and the specific content of courses. The Provost has established a Steering Committee on Campus Diversity Issues, which includes a Curriculum Review Subcommittee. The subcommittee is charged with analyzing the undergraduate curriculum and suggesting new courses to diversify it, where necessary. The subcommittee has also developed a set of web-based materials that faculty members can use to broaden and diversify course content. These can be accessed through the diversity section of the Provost's Office website ([www.brandeis.edu/departments/provost/diversity](http://www.brandeis.edu/departments/provost/diversity)).

In January 2005, the University launched Learning by Doing: Deepening Liberal Arts Education through Experiential Learning, a two-and-a-half-year project funded by the Davis Educational Foundation. The project seeks to expand opportunities for rigorous experiential learning and to establish the necessary infrastructure to sustain this work. A faculty committee oversees this effort, with the support of professional staff. The project includes the development of a website, written guides, faculty workshops, and other means for faculty development.

### **Appraisal**

The general education requirements at Brandeis are designed to provide the essentials of a liberal education, while at the same time encouraging students to take responsibility for their education and to explore and experiment across the wide range of the curriculum. A system of faculty oversight helps to ensure that the requirements are serving their purposes and to identify needed changes. Each general education requirement has its own oversight committee, and the Undergraduate Curriculum Committee and the School Councils exercise general oversight.

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<sup>33</sup> See Standard 7.

One area that the faculty identified as falling short is the writing requirement. Faculty members have repeatedly observed deficiencies in student writing, and a new, tenured director of the Writing Program conducted a comprehensive review of the existing program. As noted below, a proposal to strengthen and restructure the writing requirement has been adopted by the faculty and will be implemented in 2007-08.

A recent analysis of the curriculum, coupled with targeted questionnaires supported by a Hewlett Foundation grant, revealed a need to expand students' exposure to diverse histories and cultures. The elements of this dimension of a liberal education already exist at Brandeis through the undergraduate curriculum, supplemented by two professional schools and various research centers with strong interests in international studies; however, these elements have not yet been sufficiently integrated into an overall approach.

The high percentage of students completing a minor or a second major is a strong sign that the program of majors and minors is succeeding in drawing students into the systematic, sustained study of particular areas of knowledge. Over the past five years, 96 percent of graduating seniors have confirmed that the major has made their knowledge of the subject stronger, including 73 percent who said "much stronger." As part of the self-study process, the faculty committee for this standard examined all of the majors to determine the extent to which (1) students develop knowledge or skills through sequential coursework; (2) there are clear learning objectives; (3) students achieve mastery of knowledge, information resources, and methods and theories pertinent to the major; and (4) students develop an understanding of complex structures of knowledge germane to the area and interrelated areas.<sup>34</sup> As a result of this analysis, the committee determined that greater specificity and detail in the articulation of learning objectives are needed in many majors.

Collaboration across disciplines is a historic strength at Brandeis. This is reflected in the existence of certain departments, such as African and Afro-American Studies, that bring together disciplines, as well as a number of strong interdepartmental programs, plus many of the 31 centers and institutes in which the faculty participate. International and Global Studies, for example, draws upon faculty and courses from each of the social sciences, except psychology, as well as philosophy, literature, and biology. Neuroscience encompasses biology, chemistry, physics, and psychology. Health: Science, Society, and Policy brings together sociology, anthropology, psychology, biology and the Heller School. In addition, departments regularly cross-list courses from other departments and programs to enlarge and broaden their offerings.

The relation of the liberal arts to professional and practical studies has become an important element of curricular discussion and analysis. The experiential learning initiative, supported by the Davis Educational Foundation, is a strategic opportunity to examine this issue. The faculty is deeply engaged in exploring how the liberal arts can enter into and inform activities outside the classroom.

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<sup>34</sup> See Appendix 4G for data on the majors.

## **Projection**

Brandeis has a number of items on its agenda for undergraduate education. Most immediate is a revision of the writing requirement. Under a proposal approved this past spring, all freshmen will enroll in a University Writing Seminar, focused on analysis, evidence, and argumentation, and on how to give expression to them in lucid, cogent prose. Students will also have to complete two additional writing-intensive courses, or one writing-intensive and one oral-intensive course. The University plans to offer workshops and other initiatives to develop the capacity of faculty members to attend to and improve students' writing and speaking abilities. An assessment plan is also an integral part of the new writing requirement.

Brandeis's curriculum has been moving in the direction of greater globalization, and the University intends to encourage that development through course offerings, study abroad opportunities, and the work of centers and institutes. The increasing proportion of international students also offers opportunities for globalization of the undergraduate experience outside the formal curriculum. The faculty has clearly demonstrated its interest in an international curriculum. The University will continue to support this through authorized faculty searches and the creation of new faculty positions. Along with this effort, the Provost is considering new structures to better integrate the elements of global study already available at Brandeis.

The reconstruction and renovation of the science complex will greatly enhance the teaching and laboratory space for undergraduates. The opportunities that undergraduate science majors have to learn from and work with renowned scientists are a particular strength of Brandeis, and the new facilities and planned renovations are welcome and timely.

Over the last two decades, all 24 interdisciplinary majors and minors have undergone regular review (usually at three- to seven-year intervals); however, the University has not regularly reviewed disciplinary majors and minors. Brandeis plans to develop a schedule and protocol for such reviews, including both self-study and some form of external evaluation. The individual School Councils and the Undergraduate Curriculum Committee will continue to review significant changes to majors and minors.

Although the objectives of every major are set forth in the *University Bulletin*, they are not as clear and specific as they should be. The faculty is working to change this. The University also plans to make assessment more systematic, and to make fuller use of the results.

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## *Graduate Degree Programs*

### **Overview**

Graduate education and research at Brandeis occur in the Graduate School of Arts and Sciences (GSAS), the Heller School for Social Policy and Management, the International Business School (IBS), and the Rabb School of Continuing Studies, through its Division of Graduate Professional Studies (GPS). IBS and GPS are the most recent additions to Brandeis, established in 1994 and 1997 respectively. Although Brandeis continues to define itself as a liberal arts university, it recognizes that professional studies have a legitimate place within such an institution. Both the Heller School and IBS support undergraduate programs within the College of Arts and Science, and both offer degree programs in collaboration with the Graduate School of Arts and Sciences, together with their own separate graduate programs. GSAS has also developed some professional programs at the master's level that draw on the academic disciplines. In keeping with Brandeis's concern with the uses to which knowledge is put, the graduate professional programs work to train individuals, who are not only technically proficient, but also socially engaged and ethically sensitive.

### *The Graduate School of Arts and Sciences*

#### **Description**

The Graduate School of Arts and Sciences offers doctoral programs in the sciences<sup>35</sup> and social sciences<sup>36</sup>, and in selected disciplines in the humanities and creative arts.<sup>37</sup> Many of these programs also offer terminal master's degrees—the largest programs are in Anthropology, Computer Science, Music, Near Eastern and Judaic Studies, Psychology, and the Life Sciences. The Women's and Gender Studies Program offers joint master's programs with Anthropology, English and American Literature, Near Eastern and Judaic Studies, and Sociology. GSAS also offers an M.F.A. in Acting and in Design, and a few specialized professional master's programs, including Coexistence and Conflict, Genetic Counseling, Education, Jewish Professional Leadership, and Teaching of Hebrew. Brandeis also offers post-baccalaureate certificate programs in Computer Science, Studio Art, and Premedical Studies that prepare students for advanced graduate work or professional studies.

The doctoral programs in GSAS generally enroll fewer than ten new students each year. Outside the sciences, the figure is usually four or fewer, the exception being English and American Literature. The master's programs generally enroll five or fewer new students each year, except Genetic Counseling, which typically enrolls about ten, and Theatre Arts, which enrolls a cohort of ten students every third year. Overall, the Graduate School of Arts and Sciences enrolls about 200 new students each year.

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<sup>35</sup> Chemistry, Computer Science, Mathematics, and Physics, and in various Life Sciences: Biochemistry, Biophysics and Structural Biology; Molecular/Cell Biology, and Neuroscience.

<sup>36</sup> Politics, Psychology, Sociology, Anthropology, American History, and Comparative History. A Ph.D. in International Economics and Finance is offered through IBS.

<sup>37</sup> English and American Literature, Near Eastern and Judaic Studies, Music Composition and Theory, and Music History.

The University has been actively developing new master's programs in GSAS to increase the critical mass of graduate students, bring in revenue, and broaden the contributions to graduate education. In 2005-2006 and 2006-2007, Brandeis is introducing an M.A.T. in Elementary Education (with an additional program in secondary education in the planning stage), an M.A. in Cultural Production, and a terminal M.A. in English. Each of these programs is designed to build on existing strengths. And each offers its students not merely a professional credential, but an intellectual depth and rigor that will serve them well in their professional endeavors.

The individual programs set their own degree requirements, subject to approval by the Council of the Graduate School of Arts and Sciences. Graduate programs include graduate seminars, as well as combined undergraduate/graduate courses, with higher expectations and standards set for the graduate students. The minimum passing grade for graduate credit in any course is B-. The small size of the graduate programs enables faculty to work closely with graduate students—the mentoring relationship is an integral part of graduate education. All doctoral programs in GSAS require teaching experience (the amount varying among programs) as part of the qualification for the degree; doctoral students satisfy this requirement by serving as teaching fellows in courses taught by Brandeis faculty and, in some cases, through teaching their own sections of composition and calculus. A few advanced graduate students each year are chosen competitively to offer an undergraduate course in their area of specialization. All doctoral programs require students to pass a qualifying exam and to write and defend a dissertation; some master's programs also include a qualifying exam and a thesis.

With the retirement of the Associate Dean for Graduate Education, the position has been reconceived. What had been essentially an administrative role, focusing on student services, has now become a position of academic leadership. A senior member of the faculty has been appointed to the position, and the Dean of Arts and Sciences has put forward a proposal to elevate the position to Dean of the Graduate School of Arts and Sciences. The proposal will be reviewed and acted on by the faculty in the fall.

### **Appraisal**

Over the past decade, Brandeis has worked to strengthen doctoral education, and recently, for the first time in many years, a senior member of the Brandeis faculty has been appointed to the position of Associate Dean of Arts and Sciences for Graduate Education. Difficult decisions were made to close or restructure some doctoral programs, in order to better concentrate available resources and strengthen the remaining programs. Graduate stipends, especially in the humanities and social sciences, have been increased—not as much as the University would wish, but enough to place them in the same range as Brandeis's competitors. The University has also moved from a four-year to a five-year funding commitment, and Brandeis provides basic health insurance to all funded students. These steps, as expected, have raised the overall quality of admitted doctoral candidates. In the sciences and in psychology, the average quantitative GRE scores for accepted and matriculated students have risen, as

have average GRE verbal scores in the doctoral programs outside the sciences. Brandeis has also worked systematically in all departments to review the status of A.B.D. students, in order to ensure appropriate progress and reduce the average time to degree.

In the sciences, average quantitative GRE scores of matriculating doctoral students exceed 700, with occasional exceptions in a given program in a particular year. Average verbal scores are lower, but consistently exceed 500 and often approach or exceed 600. (It should be noted that many graduate students in the sciences do not speak English as their first language.) In the other disciplines, average verbal GRE scores are generally in the 600s, while average quantitative scores vary among programs, and from year to year, from the mid-500s to the lower 700s. Non-native speakers of English must submit a TOEFL score. A minimum score of 600 on the paper-based test or 250 on the computer-based test is required. Overall fewer than 20 percent of doctoral program applicants are admitted each year, though the percentage varies among programs.

Several of the Ph.D. programs (Biochemistry, Biology, Mathematics, and Physics) are supported, in part, by highly competitive, federally funded external training grants. The University has also received Integrative Graduate Education and Research Training (IGERT) grants in Neuroscience and Biophysics/Quantitative Biology. Other Ph.D. students in the sciences are supported after their initial years by the research grants of the faculty. In the other Schools within GSAS, doctoral support comes almost entirely from the University. Making individual stipends large enough to be competitive means that many of the doctoral programs outside of the sciences are barely able to enroll enough students to constitute the critical mass needed for a successful program.

Brandeis supports graduate students in other ways too. Graduate students can receive funds to deliver papers at conferences or to conduct research for their dissertations. The Graduate School has sponsored conferences that enrich the academic experience of graduate students. And workshops are held to assist graduate students with their professional needs as aspiring academics, e.g., workshops on applying for fellowships, writing a resume, and interviewing for a position.

Over the past five years and with few exceptions, doctoral students in the physical and biological sciences go on to post-doctoral positions or to faculty appointments.<sup>38</sup> Many in Mathematics and Computer Science do so as well, though a few take positions in business. In the other disciplines, doctoral students generally have been successful in landing a teaching position at the college or university level or, occasionally, at the high school level (or in a few cases receive a post-doctoral fellowship).<sup>39</sup> The M.F.A. in Acting and Design, also

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<sup>38</sup> See Appendix 4H.

<sup>39</sup> Over the last five years, all but one doctoral student in Anthropology, English and American Literature, and Psychology, and two-thirds or more in the other programs found teaching

a terminal degree program, has a substantial roster of writers, actors, directors, producers and designers among its alumni.

The University is participating in the National Research Council's third study of doctoral programs in the U.S. The study requests that we gather substantial amounts of data on doctoral applicants, matriculated students (including outcomes), faculty, program activities, and institutional contributions to the programs. This exercise offers an opportunity to assess our doctoral programs, and will eventually lead to a benchmarking of them against similar programs nationwide. The Vice President for Research is serving as the institutional coordinator, with the assistance of the academic research and reporting officer and with the cooperation, of course, of the doctoral programs and various administrative offices.

Master's education is of increasing importance in the Graduate School of Arts and Sciences. In the academic disciplines, a terminal master's degree is an appealing option for some students; and various professional programs have emerged through a combination of faculty initiative and student interest. This shifting balance between doctoral and master's education is in keeping with the growth of master's education in the University's other graduate schools, and points to the possibility of further collaboration between Arts and Sciences and the professional schools, e.g., a possible master's program in Global Studies, that GSAS and the Heller School are exploring.

Admission to the master's programs is somewhat less selective than admission to the doctoral programs. The overall acceptance rate has ranged from 31 to 49 percent in the past few years. In the master's programs in the sciences, the average quantitative GRE score of admitted students is in the upper 600s or the 700s, while the average verbal GRE score is generally in the 500s. In the other programs, the average GRE scores (verbal and quantitative) of admitted students are generally in the upper 500s or the 600s. Students in these programs are generally not planning to pursue academic careers, and test scores thus do not carry the same weight in setting standards of admission. Master's students must be able to keep up in graduate courses, of course; but for such students, the aim is not to become accomplished scholars, but to bring scholarship to bear on their professional pursuits.

Graduates of the professional master's programs in GSAS generally go on to jobs in their fields.<sup>40</sup> In the program in Jewish Professional Leadership, a few graduates in the past few years have pursued further study, while nearly all other graduates have found jobs in the field. In the Genetic Counseling program, 80 percent of the 93 graduates to date are currently employed in the field. Of the eight graduates from the master's program in Education, six are

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positions or post-docs. In Near Eastern and Judaic Studies (where not all students seek faculty appointments), slightly more than half found teaching positions.

<sup>40</sup> See Appendix 4I.

teaching, and a seventh is pursuing further graduate study.<sup>41</sup> The master's programs in the academic disciplines have generally not compiled placement data for their graduates, a deficiency the University plans to correct.

### **Projection**

Looking ahead, three basic tasks confront the Graduate School of Arts and Sciences. At the doctoral level, with small programs in selected fields, Brandeis must work to ensure that whatever it does, it does well. At the master's level, the University must continue to be imaginative and enterprising in developing new programs that bring together academic disciplines and professional studies. And with the general growth of graduate education at Brandeis—largely at the master's level—the University must attend to the “quality of life” of graduate students (e.g., housing, social opportunities, and support services). This issue cuts across all four graduate schools, although each school also has its particular needs.<sup>42</sup>

To be successful at the doctoral level, Brandeis must attract strong students and faculty, which requires competitive salaries and stipends, together with the requisite academic facilities and resources. While Brandeis cannot reasonably expect to bring its stipends to the top of the competition, it must ensure that they stay within range, so that financial considerations do not simply trump academic ones, as prospective students weigh offers of admission. The University is currently reviewing its graduate stipends and making plans to maintain, and perhaps improve, their competitive level.

As the boundaries between disciplines become increasingly permeable, Brandeis is working to bring an interdisciplinary dimension to doctoral education. With the help of a seed grant from the Howard Hughes Medical Institute, the University now offers courses in quantitative biology to students in various programs in the sciences. This will enable students to earn degree certification as part of their graduate studies, e.g., a Ph.D. in Chemistry with a specialization in Quantitative Biology. Brandeis is currently developing a proposal for an IGERT-supported interdisciplinary doctoral program in the social sciences, focused on democracy and cultural pluralism. Initiatives this year include: an interdisciplinary electronic newsletter, listing seminars, lectures, and workshops in GSAS, IBS, and Heller of significant interdisciplinary interest); a regular interdisciplinary seminar, with presentations of research and field work by faculty and graduate students; and an effort to promote interdisciplinary study, by encouraging programs to build an interdisciplinary component into their requirements.

At the master's level, Brandeis is, to some extent, venturing into new territory. That a graduate school of arts and sciences can and should offer professional programs is a relatively new proposition, but it flows naturally from Brandeis's historic commitment to putting knowledge to good use. It also reflects changing social and economic realities: the scarcity of academic jobs, alongside the

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<sup>41</sup> At the undergraduate level, 43 students have completed the program in Education leading to licensure, with all but three either teaching or in graduate school.

<sup>42</sup> See the overview section of this Standard and Standard 6 for a discussion of this issue.

increasing demand for highly trained workers in other professions. The simultaneous growth of master's education at both the Heller School and IBS provides new opportunities for joint programs. The graduate program in Jewish Professional Leadership, for example, will be working closely with the M.B.A. program at the Heller School. Going forward, Brandeis hopes to develop professional science management programs at the master's level. The University's size and traditions encourage collaboration across departmental and school lines, and point to the possibility of new programs in selected niches.

### *The Heller School for Social Policy and Management*

#### **Description**

The Heller School for Social Policy and Management was established in 1959 as The Florence Heller Graduate School for Advanced Studies in Social Welfare. Through its degree programs and research institutes, it endeavors to educate the next generation of social policy analysts and managers and to inform social policy and practice, thereby making a real difference in the world for the benefit of the most vulnerable. Although it has certain affinities with schools of public policy, public health, and social work, it does not fall neatly into any of these categories.

The Heller School offers three master's programs. The M.A. in Sustainable International Development (SID) is a two-year program, the second year of which is devoted to a professional internship or advanced study under a senior researcher at Brandeis. The M.S. in International Health Policy and Management (IHPM) is a one-year program that includes intensive workshops and seminars between semesters, and offers tracks in policy and management. The M.B.A. is a two-year program, offering four policy concentrations: social policy and management; health policy and services; policy and services for children, youth and families; and sustainable development.

The Heller School also offers a Ph.D. in Social Policy, with three concentrations: health and behavioral health; children, youth, and families; and assets and inequalities.<sup>43</sup> Doctoral study culminates in a dissertation, either in traditional monograph format or in the form of three publishable papers on related topics.<sup>44</sup> The Heller School also supports two undergraduate programs in the College of Arts and Sciences, a major in Health: Science, Society, and Policy, and a minor in Social Justice and Social Policy.

The Heller School has seen a significant shift over time in the balance of enrollments from doctoral to master's education. The School began with a doctoral program, and in 1977 added a Master's of Management in Human Services, which became the M.B.A. program. The SID program was added about a decade ago, and the IHPM program is two years old. This past year, there

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<sup>43</sup> Students in the Ph.D. program can earn an M.A. in Social Policy along the way.

<sup>44</sup> In addition, there are joint programs with other parts of the University: joint Ph.D. programs with Women's and Gender Studies, Sociology, and Politics, and an M.A./M.B.A. in conjunction with the Hornstein Program in Jewish Professional Leadership.

were 125 entering master's students and 21 entering doctoral students. The two master's programs with an international focus have also altered the composition of the student body. This past year, all 14 entering students in the M.S. program and 60 of the 86 students entering the M.A. program were from outside the United States.

The Heller School also includes a number of research and policy centers, grouped within a few institutes: the Schneider Institutes (including the Institute for Health Policy and the newly established Institute for Behavioral Health); the Institute for Assets and Social Policy; and the Institute for Child, Youth, and Family Policy. The institutes sponsor concentrations for the graduate programs in the Heller School, along with research programs that provide important opportunities for students to participate in research and policy studies.

The full-time members of the faculty generally hold doctorates or other terminal degrees in their fields. In the last five years, 72 Heller faculty and research staff members have received nearly \$60 million in external awards. Most research projects involve collaborative teams of faculty and research staff, and many of the senior researchers participate in the educational programs of the School and hold a faculty title. The full-time faculty is complemented by adjunct faculty, who teach primarily in the master's programs and who hold or previously held senior positions in human service organizations, public advocacy groups, NGOs, public agencies, and international organizations.

### **Appraisal**

Since its founding in 1959, the Heller School has evolved in response to a changing social and political environment. With increasing globalization, international studies have become a significant part of the Heller offerings, although domestic social policy remains the focus of the doctoral program and most of the research activities. Heller is also responding to the growing demand for effective leadership and management of organizations devoted to social justice.

The SID and IHPM programs attract students from all over the world, and in particular from developing nations. Successful applicants generally bring five to ten years of professional experience in relevant fields. Many applicants rely on fellowships from governments, foundations or international organizations to make graduate study possible, thus adding a further dimension to the review of their qualifications. The American students include many who have served in the Peace Corps or AmeriCorps, or have worked abroad in some capacity. A growing percentage of American students come from depressed areas of the country and plan to return home following their studies.

Foreign graduates of the SID program are readily hired by agencies and organizations in their home countries, which are eager for nationals with advanced training, as well as professional experience. Graduates of the program can be found in all parts of the globe, e.g., Sustainable Tourism Manager with the Rainforest Alliance in Costa Rica; Economist/Programs Officer at the Asian Development Bank in the Philippines; Co-chief Economic Officer at the Uganda

Microfinance Union. The demand for American graduates is not as intense, but internships sometimes turn into permanent jobs, and, in general, field experience, coupled with a master's degree, can lead to appealing opportunities, e.g., Program Associate for Sustainable Development at the Women's Economic Development Organization, Director of Planning and Evaluation for Heifer International, and Program Officer at the United Nations Development Program. The IHMP program has graduated only two classes, and so has not yet accumulated a substantial placement record.

The Heller M.B.A. program has developed a distinctive curriculum focused on organizations with a social mission, but enrollments have been uneven over the years. (About 15 additional students per year take courses as part of a cooperative M.D./M.B.A. program with the Tufts University School of Medicine and Northeastern University.) The development of new master's programs has, however, brought new students into the management courses; and recent curriculum reforms have made the program more rigorous and focused. Applications this year increased significantly. Planning is underway to integrate the Heller M.B.A. with the M.B.A. offered by the International Business School, thereby enabling Heller students to take more advanced business courses.

The doctoral program generally enrolls students who have significant experience in research and human services—16 years of experience, on average, in the most recent entering class—and who often have already earned a master's degree. These students are fully funded for two years; and in the health and behavioral health concentrations, federal training grants provide three years of funding for selected students. Additional funding to cover the development and writing of dissertations would be beneficial, particularly for students with family obligations. Doctoral students participate in research projects with Heller faculty, and typically go on to careers in teaching and research in academic or other settings. A recent count showed over 140 graduates of the doctoral program employed by academic institutions. Heller graduates are also employed at public and private research organizations such as the Research Triangle Institute, Mathematica Policy Research Inc., and the Government Accountability Office, as well as by organizations using research to promote social change, such as American Rights at Work and Jobs for the Future. Doctoral graduates also hold leadership positions in health and human service agencies and organizations, e.g., Massachusetts General Hospital, the Cambridge Health Alliance, and the Inter-American Development Bank.

### **Projection**

As noted above, the Heller School is working, in collaboration with IBS, to reconstitute its M.B.A. program. As currently conceived, the two Schools will continue to operate distinct M.B.A. programs: one at Heller for students interested in managing an organization pursuing a social mission, including public, non-profit, and even some for-profit organizations; and one at IBS for students pursuing careers in international business and finance. As part of this re-structuring, the Heller M.B.A. curriculum will be reviewed and in the future offered jointly with IBS; a joint Heller-IBS committee will govern this program. The Heller M.B.A. curriculum will also be enlarged and deepened through the

IBS offerings. The goal is to ensure that Heller M.B.A. students acquire core management competencies, while also becoming well versed in the distinctive features of organizations with a social mission and their specific social policy concerns.

The Heller School is also developing plans for a new, two-year master's program focusing on public policy. The program would provide a terminal master's degree, although some of the graduates might also continue with doctoral study at the Heller School or elsewhere. Such a program would also be attractive to Brandeis undergraduates interested in earning a combined B.A./M.A. degree, plans for which are now under discussion. The new master's program would build on existing policy and statistics courses, helping to raise course enrollments and thereby improve the school's finances.

The doctoral program remains strong, but its very strengths present challenges. Doctoral faculty members are active researchers, and this means balancing the competing demands on their time. Doctoral students bring a diversity of interests, but this can make it difficult to provide adequate individualized advising to them. Doctoral courses are generally small seminars, but such seminars are increasingly expensive to offer. It is hoped that expanding enrollments at the master's level will help to support and sustain the strong tradition of doctoral education at the Heller School.

The School is eagerly anticipating the opening in fall 2006 of the Irving Schneider building, which will nearly double the School's space and better accommodate an up-to-date teaching and research environment.

### *The International Business School*

#### **Description**

The International Business School (IBS) was established in 1994 as the Graduate School of International Economics and Finance. As its original and current names suggest, it is distinguished from other business schools by its international orientation, as reflected in its curriculum, the composition of its student body, and the research interests and professional experience of its faculty.

IBS offers four degree programs. The M.A. in International Economics and Finance and the M.B.A. program are both two-year, full-time programs with concentrations in international business, international finance, and international economic policy.<sup>45</sup> The M.S.F. program in finance enrolls mostly part-time students, who can choose between concentrations in business finance or international investments. The Ph.D. in International Economics and Finance is offered in collaboration with the Department of Economics and offers concentrations in international trade, international finance, international business, and development/transition economics, from which students select

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<sup>45</sup> IBS offers Brandeis and Wellesley undergraduates early entry into the M.A. program, enabling them to complete the program in a single post-baccalaureate year.

two. Doctoral study culminates in a dissertation and defense. Doctoral students may also choose to earn an M.S. in International Economics and Finance along the way. IBS also provides a business minor for undergraduates in the College of Arts and Sciences.

In keeping with the international focus of IBS, both the M.A. and M.B.A. programs require students, either prior to matriculation or during their studies at IBS, to gain international experience by living, working or studying abroad. Both programs also require students to have mastery of a language other than English. IBS has established exchange relationships with 20 universities around the world, enabling students to spend a semester at one of these institutions. IBS currently enrolls students from nearly 60 nations. Indeed, in all but the M.S.F. program, two-thirds or more of the students are from abroad.

The IBS faculty brings together scholars and practitioners. The “core” faculty is composed of full-time faculty and some part-time faculty who have additional administrative or other responsibilities. The core faculty members do 83 percent of the School’s teaching. “Supporting” faculty, i.e., part-time faculty members, who have only teaching responsibilities, handle the remainder of the teaching.

IBS places great importance on ensuring that its curriculum is relevant and fresh, and that its student body is closely connected to the world of business and current affairs. The School organizes regular CEO, Entrepreneur, Corporate Responsibility, and Real Estate Forums, offering students a number of opportunities each week to connect directly with leaders in these fields. Individual faculty members also frequently invite speakers from industry to participate in their classes. Guests have included Massachusetts Senator John Kerry, former U.S. Secretary of State George Shultz, President Vacláv Klaus of the Czech Republic, and the CEOs of companies such as Coca-Cola, Timberland and Bank of America. Many of the speakers are hosted through the School’s Rosenberg Institute of Global Finance and the Asper Center for Global Entrepreneurship.

### **Appraisal**

The International Business School exists, indeed thrives, because it has identified a need and met it effectively. In 2004, IBS was ranked second by the Economist Intelligence Unit in its index of internationalism, based on a survey of students and recent graduates of schools with a focus on international business and the global economy.

Over the previous four years the applicant pool increased by 40 percent and growth continues. Last year, applications increased by 32 percent from 397 to 523, and first-year enrollments increased by 15 percent from 175 to 201.<sup>46</sup> The overall enrollment target of 350 students (304 FTEs) by 2008, set by the 2001 strategic plan, has already been achieved. The business program in the College of Arts and Science is also thriving, with about 80 students electing this minor annually.

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<sup>46</sup> The doctoral program admits students every other year and is not included in this comparison.

This past year, the average GPA of entering students in the master's programs was 3.4, the average GMAT score was 615, and the average GRE scores were 752 quantitative and 529 verbal. It should be noted that the high proportion of international students, tends to lower the average on verbal tests, but TOEFL requirements ensure that international students have sufficient fluency in English to function in a demanding program. The doctoral program is even more selective, admitting fewer than ten percent of its applicants.

Seventy-six percent of the core faculty hold a doctorate, as do 38 percent of the supporting faculty. Three members of the faculty are ABD. The remainder of the faculty has, on average, ten or more years experience in senior positions related to their teaching responsibilities. Some members of the faculty have both doctoral degrees and extensive professional experience.

The growth of the faculty has not quite kept pace with the increase in students. Since the 2001 strategic plan, the IBS faculty has increased from 14 FTE to 20 FTE, two short of the target; and this includes six new adjunct faculty members, which tilts the balance a bit too far in that direction. It is essential to have some adjunct faculty to teach subjects that cannot be taught as well by academically trained professors (e.g., corporate governance, portfolio management). However, in some cases, adjunct faculty members were hired because budgetary constraints did not permit the hiring of full-time faculty. Active recruitment of additional faculty is now underway.

Career services have received special attention in the last few years, with the quadrupling of the staff from one to four full-time members and the appointment of an assistant dean, with considerable experience in the private sector, to lead the office. In recent years, 50 percent of graduates have taken positions in investment banking, asset management, or other forms of banking and insurance, 18 percent in the public sector, 15 percent in consulting, and 17 percent in corporate and other positions. As one would expect, given its international focus, IBS graduates are scattered throughout the globe, with 18 percent of recent graduates working in Europe, nine percent in Asia, four percent in both Latin America and Africa, two percent in the Middle East, and the remainder in North America.

IBS nearly doubled the size of its facilities with the completion in fall 2003 of the Lemberg Academic Center. This new building is joined by a corridor, at each level, with the Sachar International Center, which is gradually being refurbished. Taken together, the two buildings, which house both IBS and the Department of Economics, have been designed to accommodate the targeted enrollment, and to have sufficient office space for the planned growth of the faculty and staff. The opening of the Lemberg Academic Center, with its various common spaces—including a café and lounge, along with a lecture hall and meeting places—has contributed significantly to the sense of community within IBS.

## **Projection**

IBS is in the midst of the seven-year strategic plan it adopted in 2001. Over the past year, it systematically reviewed its progress under that plan and set out further objectives in light of what has already been accomplished. No fundamental change of direction is contemplated, as the rapid development of IBS has vindicated its defining mission and overall strategy. But success offers new opportunities, as well as new challenges.

Having already achieved its enrollment targets, IBS can be increasingly selective in admissions, while also slightly increasing the projected enrollment from 350 to 375 (304 FTEs to 323 FTEs). A shift in the balance of enrollments is also projected—as the M.B.A. program grows, there will be a compensating and planned decrease in M.A. enrollments. This past year has seen a significant increase in enrollments in the predominantly part-time M.S.F. program.

As noted, the growth of the faculty has not kept pace with the increase in students. With the budgetary constraints on hiring now lifted, IBS plans to add six full-time faculty members by 2008, increasing the total faculty to 26 FTEs, of whom six FTEs will be adjuncts. At the same time, IBS plans to create “fields of excellence” in a number of specialties. The areas chosen will be characterized by rapid changes in professional practice, the likelihood of sustained growth, strong student interest and connections to existing strengths at IBS.

IBS has achieved sufficient maturity as a School to seek accreditation by the Association for the Advancement of Collegiate Schools of Business. This provides a welcome opportunity to assess IBS in relation to other leading business schools and will contribute significantly to IBS’s standing and reputation.

IBS’s founding dean, Dr. Peter Petri, has stepped down, and a new dean will be named sometime in the 2006-2007 academic year. Professor F. Trenery Dolbear, Jr. a senior member of the IBS faculty and the Economics Department, is serving as Acting Dean.

### *The Rabb School of Continuing Studies*

#### **Description**

The Rabb School of Continuing Studies includes the Division of Graduate Professional Studies (GPS), the Summer School Division and the Osher Institute for Lifelong Learning, a non-credit, peer-led program for mature adults. The Division of Graduate Professional Studies offers academic programming in selected current and emerging professions. Students can earn an M.S. in Bioinformatics, an M.S. in Management of Projects and Programs, an M.S. in Information Technology Management, or a Master of Software Engineering. All four programs also offer the option of earning a graduate certificate. Students can take up to four courses before seeking formal admission to a program. Courses are offered in the evening and online to meet the needs of working adults. Students study part-time while pursuing their professional careers, often receiving support for their studies from their employers. Students range in age from their 20s to their 50s, and many already have a master’s degree. In the

Information Technology Management and Software Engineering programs, graduate certificates and master's degrees can be earned entirely online.

Admission to graduate certificate programs is open to anyone with a high school diploma or a GED certificate, although nearly all students have at least a college degree. Applicants to the master's degree programs must have a bachelor's degree from a regionally accredited institution of higher education. They must also submit a letter of reference and a statement of goals, together with their official transcripts. Admissions decisions are based on a review of these materials, an assessment of the applicant's relevant professional experience, and performance in any classes taken prior to application. Students whose native language is not English and who have not completed a bachelor's degree in an English-speaking institution must demonstrate proficiency in English through the TOEFL exam or successful employment in an English-speaking environment.

The master's degree programs require ten courses, except for Bioinformatics, which requires 12 courses; the graduate certificate programs range from five to seven courses. The larger number of courses in the master's programs accommodates additional electives, together with the same core courses, thereby enabling interested students to progress easily from the graduate certificate into the master's degree program. The Division of Graduate Professional Studies also offers foundation courses as preparation for studies in Bioinformatics and Software Engineering. Foundation courses do not carry graduate credit.

The Division of Graduate Professional Studies offers several credit-bearing courses at one corporate site, but does not offer any certificates or degrees at any off-campus location. The same academic standards are maintained for the off-campus courses, and the same faculty teach them. Credits earned off-campus can be applied to a graduate certificate or master's degree program, contingent upon admission into a program.

### **Appraisal**

The Division of Graduate Professional Studies has a distinctive character and unique purpose within Brandeis University, which entails particular challenges and opportunities. It must maintain high academic standards, while relying on adjunct faculty and enrolling part-time students, who typically combine their studies with full-time employment. It must adapt to the demands of the marketplace, while also securing academic approval of its programs from the appropriate faculty governance bodies. As a new and different form of graduate education at Brandeis, it must work to become an integral part of the University, while also remaining true to its distinctive mission.

GPS has a rigorous process for ensuring the quality of its faculty. Nearly all faculty members are working professionals in the field in which they teach, and they bring to the classroom current, practical material. When applying for a teaching position, they must prepare a syllabus outline and a teaching module drawn from it, which they then present at an interview. Both professional and character references are required, and prior teaching experience is a plus. Inexperienced instructors are frequently paired with a faculty mentor for a term,

and new instructors who wish to teach online must take a five-week online training course, developed and taught by GPS.

Program chairs or other senior instructors observe instructors in the classroom and online, and students complete a course evaluation form at the conclusion of each course. These evaluations tend to be quite frank, as GPS courses are populated by older, working students, who are devoting time and money to professional education in order to advance their careers. In addition, GPS has introduced a systematic program of assessment of student learning that will further contribute to the evaluation and improvement of course content and pedagogy. This is discussed below, in the section on Assessment of Student Learning.

The two newer programs in GPS—Bioinformatics, and Management of Projects and Programs—have Professional Advisory Committees composed of experienced professionals in the relevant fields. The Committees meet annually to review the curriculum and individual syllabi, and to offer advice on changes or new directions. The Committees maintain connections between the programs and the field, helping to ensure that students are well served.

### **Projection**

GPS is opportunistic in the best sense, seizing upon opportunities to develop niche programs that address regional and national needs for a highly educated professional workforce. Looking ahead, GPS will continue to provide professional education to working students in selected fields, based on the anticipated needs and possibilities of the market in Eastern Massachusetts and in the growing market for distance learning. GPS will also continue to seek out corporate partners interested in offering their employees the kind of advanced professional education that GPS provides. Through the use of outcomes-based assessment, a culture of continuous improvement is being developed within GPS that will result in further refinements of the existing programs. Having pioneered at Brandeis the creation of part-time graduate programs for working professionals, as well as online graduate education, GPS can now offer its expertise to other schools within the University that wish to make their offerings available to a broader group of students.

As it has prospered and expanded, the Rabb School has outgrown its makeshift administrative quarters. A recently acquired property, across the street from the University's main entrance, is being renovated to house the Rabb School divisions and will establish a permanent identity for the school. The school will continue to use classrooms that are empty after 5:30 pm, a system increasingly challenged, as the daytime class schedule extends progressively into the early evening. The current arrangements have made it possible to launch programs, and distance learning provides a responsible way to cope with limited space, while continuing to grow.

### ***Integrity in the Awarding of Academic Credit***

#### **Overview**

Academic credit, certificates, and degrees are awarded at Brandeis in keeping with the norms of American higher education. The University's system of faculty governance provides for academic review of degree and certificate programs to ensure that they meet appropriate standards; and administrative procedures, centered in the Office of the University Registrar, ensure that the relevant policies are applied scrupulously and consistently. Students and faculty have ready access to policies and regulations through the *University Bulletin* and the Brandeis website.

### **Description and Appraisal**

All degree and certificate programs have clearly stated requirements, including a specified number of credits and, for full-time programs, semesters of residency. The appropriate bodies within the individual schools review requirements whenever a new program is established, as well as significant changes in the requirements of existing programs and proposals for new courses. The Undergraduate Curriculum Committee exercises general oversight of undergraduate degree requirements. The Board of Trustees has the ultimate authority to approve proposals to establish or abolish degree programs.

The transcripts of all graduating students are audited by the Registrar's Office prior to the awarding of degrees or certificates. Transfer credits are evaluated by the Registrar's Office when students matriculate at Brandeis, to determine whether they can be counted toward a degree and toward specific requirements. Only courses with a grade of C- or better, taken at an accredited institution, are eligible for undergraduate transfer credit. Credits to be applied toward requirements for a major or minor must be approved by the appropriate department or program. For graduate transfer credit, a grade of B- or better is required, and both the program and the Office of the University Registrar must give approval. Courses taken during study abroad are reviewed and approved by the Study Abroad Office, as well as the Office of the University Registrar.

The Committee on Academic Standing (COAS)—comprising the Dean of Arts and Sciences, the Dean of Student Life, the Associate Dean for Undergraduate Academic Affairs, the University Registrar, and eight members of the faculty drawn from the four schools within the College of Arts and Sciences—monitors undergraduates' academic progress and standing. COAS also hears petitions for exemption from undergraduate degree requirements and policies, as well as cases of required withdrawal from or readmission to the University. The relevant programs and the respective School Councils monitor graduate students' academic progress and standing.

The University retains direct responsibility for all academic programs, with the exception of a few courses offered through academic consortia. The latter courses are reviewed by Brandeis faculty coordinators and approved through the University's standard procedures. No more than half of the required credits for a bachelor's degree, and no more than half of a major may be earned at another institution. No credits may be transferred toward one-year master's programs, no more than 16 credits toward two-year programs, and no more than two courses for the part-time master's programs in IBS and GPS. No more than 32

credits taken elsewhere may be counted toward the Ph.D. Brandeis does not award academic credit for “life experience,” pre-collegiate or remedial coursework, or for experiential learning completed outside the academic structure.

As recommended by the appropriate academic department, credit is awarded for qualifying scores of not less than 4 on Advanced Placement exams. AP credits may be counted toward general education requirements and, in some departments, toward the major. A chart can be found in the *University Bulletin*, setting out the specific policy for each AP exam.

Each fall, departments and programs determine the courses to be offered in the next academic year and put forward plans for the two following years, as well. The general frequency of every course is stated in the *University Bulletin*. Class schedules for each semester are published at least two weeks before the start of early registration (October for the following spring semester, April for the following fall semester). No problems regarding the lack of availability of needed courses have emerged in auditing transcripts for graduation or through complaints from students.

Every course must include a syllabus that sets out the course requirements. The *Student Rights and Responsibilities* handbook clearly explains Brandeis’s expectations of academic honesty, and accusations of academic misconduct are adjudicated through a judicial system involving both students and faculty. A student, who wishes to file a grievance concerning a final grade, can pursue a defined appeal process, involving the instructor, the department chair, and ultimately the dean of the school (or, in the Division of Graduate Professional Studies, the executive director).

Continuing education is offered through the Division of Graduate Professional Studies (GPS) in the Rabb School. Procedures for ensuring academic standards are no less stringent than in the other schools of the University. GPS is integrated into the administrative structure of the University, through the Office of the University Registrar, Library and Technology Services, and Student Financial Services. GPS students have the same access as other students to libraries and electronic services. All distance learning courses offered through GPS require weekly assignments, as well as regular online interaction with the instructor and other students. Summer School is also under the auspices of the Rabb School; courses run for five weeks and include 37 contact hours.

All distance learning courses, which are offered through GPS, also follow the same term schedule as classroom-based courses. Courses require weekly assignments as well as regular online interaction with the instructor and other students. Online courses are developed in conjunction with classroom-based courses, and are compared to their counterparts to ensure that the same learning outcomes are achieved.

Brandeis continues to publish a printed *University Bulletin*, even as the online version and the Brandeis website have become important sources of information

on academic programs, requirements and regulations. The proliferation of departmental and program websites does pose certain challenges for ensuring consistency and completeness of information, and the University is working to develop the necessary oversight procedures.

### **Projection**

Brandeis does not anticipate any substantial changes to its policies and procedures for ensuring integrity in the awarding of academic credit. The University does recognize that better monitoring of web postings is needed, and Library and Technology Services is currently evaluating Web Content Management Systems.

The University intends to make greater use of the possibilities offered by the Web to provide more timely information and to link information together. A student is currently able to go to the online course listings and quickly find out what courses are being offered and read their descriptions. Ideally, the course syllabi should be available, as well as a listing of which faculty members are on leave in a given semester or year.

Now that GPS has come into its own, the *University Bulletin* will include the descriptions of its policies, programs, and courses. The *Bulletin* will also be pruned of courses that have fallen out of departments' regular offerings. A student should be able to count on any listed course being offered at least once during his or her four years at Brandeis. The University will also undertake to develop a regular review process to ensure the accuracy of course titles and descriptions.

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## *Assessment of Student Learning*

### **Overview**

Assessment of student learning is built into the fabric of education at Brandeis as at other schools. It occurs naturally through the interaction of students and faculty in and out of the classroom, and it is formalized through the evaluation and grading of student work. Placement exams, portfolios, and senior theses also contribute to student assessment. Important kinds of learning also occur in such settings as residence halls and student organizations; however, this learning does not as readily lend itself to formal assessment. The challenges, then, are to specify learning objectives, to determine the effectiveness of existing methods of assessment, to consider what improvements or additional methods would be useful, and to integrate assessment into individual and institutional judgments at all levels. Initiatives in each of the schools are at varying stages in addressing these matters.

### **Description and Appraisal**

Brandeis's distinctive character, as a hybrid of a research university and a liberal arts college, aids it in attracting faculty who care about teaching as well as

scholarship. Classes are generally small<sup>47</sup>, and faculty are encouraged to get to know their students individually. All faculty in Arts and Sciences are expected to teach undergraduates. Interaction between students and faculty is central to a Brandeis education. Much assessment of student learning occurs in the context of such interactions.

The most obvious and pervasive form of assessment is the grading of students' work, which, at its best, provides detailed information on the strengths and weaknesses of each student, together with a summary statement in the form of a numerical or letter grade. Midterm evaluations of satisfactory or unsatisfactory progress, which faculty members are encouraged to submit, provide an early warning system for students who may be experiencing academic difficulties. These evaluations are forwarded by the Registrar's Office to the Office of Undergraduate Academic Affairs, which oversees academic advising for the College of Arts and Sciences. Final course grades and overall grade point averages provide regular summary information on a student's academic achievement. The Office of Undergraduate Academic Affairs receives a report on every undergraduate whose grades are unsatisfactory (below C-), and the Committee on Academic Standing makes determinations about academic alert or warning, probation, withdrawal, and readmission.

Brandeis has not remained immune to grade inflation. A study of grading patterns in the College of Arts and Sciences conducted by the University Registrar showed a modest upward creep in grading, although it should also be noted that the academic qualifications of entering students have risen markedly in the past decade. A grade of B has become, *de facto*, the sign of average work at Brandeis, but, inasmuch as that has become the norm at most leading colleges and universities, it is unlikely that Bs or the resulting grade point averages mislead anyone.

The interaction of students and faculty also makes possible informal assessments of student learning. Good teachers are alive to signs of comprehension or confusion. They encourage students to ask questions, and are readily available for additional assistance or to continue a discussion begun in class. Further assistance is available from the Office of Student Enrichment Services, which offers peer tutoring and workshops designed to strengthen students' academic skills. Academic advisors have particular responsibility for monitoring student progress and for intervening as needed, and the Office of Undergraduate Academic Affairs provides additional support and professional expertise.<sup>48</sup> Student Support Services, a federally funded program, provides special advising, tutoring, and peer mentoring to first-generation college students who come from families of limited means.

Departments and programs exercise collective responsibility for the academic progress of their majors. In some departments (the sciences, in particular), the

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<sup>47</sup> About 80% of undergraduate classes have fewer than 30 students, and graduate classes infrequently exceed or even approach that size. See Appendix 4J.

<sup>48</sup> See Standard 6.

sequence of courses provides a natural measure of academic progress—students must have mastered the material in earlier courses in order to succeed in more advanced courses. Other departments do not have a specified sequence, but are able to keep an eye on their majors through formal and informal consultations among the faculty. This is more easily accomplished, of course, in departments with small to moderate numbers of majors. For students who do honors work, a senior thesis or project provides a further measure of learning in the major.

The deans and department chairs have reviewed and approved a set of overarching learning objectives for the University, derived from the Brandeis mission statement.

### **University Learning Goals**

**Brandeis University students will be able to:**

1. Pursue knowledge responsibly, evaluate it and transmit it to others
  - Think critically, abstractly and logically to evaluate and solve problems
  - Conduct research effectively and systematically
  - Develop intellectual creativity and the desire to learn throughout life
2. Communicate clearly and effectively in both written and oral forms
  - Develop effective written and oral presentations that are clear and persuasive
  - Frame complicated information and ideas in terms that are readily understood
  - Demonstrate sensitivity and respect for differences in individual styles, perspectives, and values
3. Demonstrate competency and ability in chosen areas of study
  - Develop an understanding of resources and procedures of fields and the ability to use them
  - Possess an appropriate core of knowledge in chosen fields
  - Demonstrate the ability to formulate principles and theories and incorporate new information in chosen fields
4. Appreciate their social and ethical responsibilities as citizens of the world
  - Display an openness to different viewpoints and cultures
  - Reflect upon the ethical dimensions of their decisions and actions
  - Contribute to creating a just society

In Arts and Sciences, an inventory of assessment methods among a sample of 11 departments<sup>49</sup> and programs revealed that assessment practices varied among them—in part because of the divergent nature of the fields, and in part because of the differing degrees of commitment to assessment. The Education program, not surprisingly, was the most strongly committed, as it teaches assessment as part of its curriculum. Its own assessment practices include not just the evaluation of academic performance in Education classes, but also portfolio

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<sup>49</sup> See Appendix 4L.

assessments and field assessments of student teachers. In other departments and programs, assessment generally takes the more conventional forms described above, but the inventory revealed a willingness to explore new forms of assessment and new ways to use the results. As a first step in this direction, the departments and programs have been asked to formulate specific learning objectives that can form the basis of assessment plans.

The professional schools are further along in developing systematic assessment plans—IBS and the Rabb School, in particular, have taken the lead. IBS has formulated learning objectives for each of its programs and is developing methods for determining how well students have attained these objectives. Beginning in spring 2006, IBS formally assessed student learning in relation to a quarter of these objectives, and it will gradually expand assessment over succeeding semesters to cover all of the objectives. In Rabb's Division of Graduate Professional Studies, learning objectives have been formulated for each program, and a template has been created to identify the ways in which individual course objectives contribute directly to program outcomes. Over the past year, faculty in GPS have examined course content and pedagogy in light of this new template, and by September 2006, all courses will make use of an outcomes-based syllabus template. Student learning will be assessed in relation to stated learning objectives, and the results will inform the evaluation of students, as well as the evaluation and improvement of course content and pedagogy.

At the Heller School, the M.A. program in Sustainable International Development, by far the largest program in the School, has been working to develop a statement of core competencies that graduates of the program should attain through the required courses in the program. As currently conceived, the SID program will test for these core competencies, and assessment will be expanded over time to include the additional skills and knowledge taught in the electives.

Brandeis's comprehensive course evaluation system<sup>50</sup> and senior surveys<sup>51</sup> provide regular evidence of how well the University serves its students. Some faculty members employ midcourse evaluations, and a number of departments also use their Undergraduate Departmental Representative (UDR) as an ongoing, informal source of and conduit for student evaluations. While student contentment with their academic experience is not proof of student learning, it is generally a good sign, and discontentment, when it occurs, alerts the institution to perceived shortcomings. The Provost has initiated a review of existing sources of data, to determine how better to exploit this information for purposes of assessment of student learning.

With the establishment in 2000 of the Division of Students and Enrollment, Brandeis adopted a much more systematic approach to evaluating the quality of students' experiences outside the classroom, including both academic support

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<sup>50</sup> See Appendix 4K.

<sup>51</sup> Available in the Team Room.

programs and extracurricular activities. Feedback from students is regularly sought through surveys and focus groups, and the results are used in reviewing programs. The Division also engages in longitudinal studies to assess student growth and maturation during the four years of undergraduate study.

### **Projection**

Brandeis has begun to develop a systematic program of assessment, proceeding from two directions at once. The central administration is providing support and encouragement, and will devise ways to build the results of assessment into the review of schools, departments, and programs and into academic planning. Specific assessment plans are expected to emerge from the faculty at the department, program, and school levels. It would be neither prudent nor productive to impose a uniform assessment plan on the different academic programs, with their diverse educational purposes and methods and their strong traditions of intellectual autonomy.

The first step in developing an organizational structure to support the assessment initiative came with the hiring of an assistant provost with specific responsibility for assessment. He is currently focusing on assessment in Arts and Sciences, which has lagged behind the professional schools in developing assessment plans. Starting this fall, he will chair a Working Group on Assessment, including faculty from each of the four schools within Arts and Sciences. The Working Group will pursue answers to a set of specific questions in order to determine what kinds of assessment are already occurring and how well they are working, and to determine, as well, what new forms of assessment are needed and how they could best be used<sup>52</sup>. The Working Group is expected to issue its report next spring.

Through the assessment inventory undertaken in Arts and Sciences last summer, some candidates for pilot assessment projects emerged. The History Department is developing an assessment plan that will provide evidence, on a continuing basis, of the effectiveness of its major. The plan involves formulating more precise and explicit learning objectives that will form the basis of a non-credit test that graduating seniors in the department will be asked to take in their final semester. The test will assess whether seniors have developed the intellectual skills and habits that the study of history should foster: the ability to use a primary source, to explore a historical problem, to develop a balanced argument, and, in general, to think about a past society that differs from one's own. The department is discussing what specific content might also be included in the test, together with the assessment of essential skills. The department will measure the results of the test against the newly formulated learning objectives.

The expository writing program is developing a three-part assessment plan. First, the program is formulating a set of course outcomes for its University Writing Seminars, measuring critical reading and writing, knowledge of conventions, and familiarity with various aspects of the writing process. In writing portfolio evaluation sessions, instructors will look for evidence that

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<sup>52</sup> See Appendix 4M for Charge to Working Group on Assessment of Student Learning

students are achieving expected outcomes. Second, the program is producing a teaching handbook for University Seminar instructors, listing guidelines for student-centered discussions, multi-staged assignments, peer-editing workshops and individual conferencing. The course evaluation forms (which are specific to the program) will be revised to assess whether these recommendations are reflected in the actual teaching. Third, the program is publishing a magazine of exemplary student essays, which will serve as a teaching tool and simultaneously highlight students who have met the course outcomes with distinction.

The Chemistry Department is developing an assessment plan focused on its introductory course, Chemistry 11, and specifically, on the efficacy of supplementary instruction and tutoring. A few years ago, the department decided to abolish Chemistry 10, a separate introductory course for inadequately prepared students, and instead established a system of help sessions with a faculty member, along with peer tutoring sessions. The department has monitored the effectiveness of this new approach, and the results to date suggest that student performance has not been hurt by the elimination of Chemistry 10. A more rigorous assessment plan is being developed to ensure that the new system continues to function effectively and to determine what improvements, if any, could be made.

The University will continue to work with departments and programs to develop strategic assessment plans. The assessment inventory last summer revealed receptiveness to assessment, as well as uncertainty about how to proceed. Discussions will continue in order to keep (or place) assessment on departmental agendas and to disseminate information and insights about assessment practices. In conjunction with this initiative, departments will be supported in sending representatives to assessment workshops. As noted above, the professional schools are further along in developing assessment plans, and they will continue to refine and implement those plans.

To build assessment into academic programs and decision-making means not merely changing particular policies and procedures, but also changing elements of the academic culture. In support of these changes, Brandeis plans to sponsor a year-long seminar for interested faculty, addressing the nature and purposes of a liberal education. Serious and sustained analysis will provide the essential philosophical underpinning for assessment. The new assistant provost has been developing, over the summer, an intellectual prospectus for such a seminar. In the coming year, he will work with the Provost to seek out the necessary funds and to make the practical arrangements that will enable faculty to participate in such a seminar in the following year.

### **Institutional Effectiveness**

The institutional ethos of Brandeis favors innovation and discourages complacency, as evidenced by the steady emergence of new undergraduate and graduate programs and the discontinuation of others over the past decade. A system of committees and school councils ensures careful review of proposals for new programs and changes to existing ones. The University also recognizes a

need to regularly review ongoing programs and practices. Assessment initiatives in each of the schools will contribute to this, as will the plan to conduct reviews of departments on a fixed schedule.