

# Standard Seven: Library and Other Information Resources

## OVERVIEW

Northeastern's information and technology resources infrastructure includes

- The Information Services (IS) office.
- The University Libraries and the School of Law Library.
- The new Center for Innovation and Excellence in Teaching and Learning (CIETL), in collaboration with the Educational Technology (EdTech) Center.
- IS/IT functions housed separately within some academic units, primarily the College of Engineering, the College of Computer and Information Science, and the College of Professional Studies (CPS).

### *Information Services*

Information Services, the central unit responsible for the primary information technology (IT) infrastructure, supports the University's information resource needs through network, applications, and academic technology support services. It includes a service desk that provides application and desktop support, multiple IT training functions, and audiovisual equipment support for more than 145 classrooms and other common areas. The unit is headed by the Vice President for Information Services.

### *University Libraries*

The University Libraries serve as the host and gateway to information resources and information literacy training for all Northeastern campuses. They also provide local community access. The Libraries collaborate with library facilities in the John D. O'Bryant African-American Institute and the Marine Science Center at Nahant, and work closely with the School of Law information facilities. The acting dean of University Libraries reports to the Provost.

The School of Law's Department of Information and Research Services is divided into two units, the Law Library and the Office of Computer Services, and is under the direction of the assistant dean and director for information and research services, who reports to the School of Law dean.

### *CIETL and EdTech*

The Center for Innovation and Excellence in Teaching and Learning (CIETL) was created by the Office of the Provost in 2007 to supersede the previous Center for Effective University Teaching (CEUT) and provide leadership in the design, delivery, and assessment of teaching. CIETL includes a faculty director and a team of faculty fellows who will work on department-based, college-based, and cross-disciplinary projects. CIETL works in close collaboration with the Educational Technology (EdTech) Center which explores, develops and implements technology for teaching, learning, and research.

## ***Unit-based Information and Technology Support***

The separate information and technology needs of colleges, departments, and research centers are accommodated, in some cases, by decentralized and specialized support services maintained by the individual units. These services range from student support to the upkeep of leading-edge research computing developments. The College of Engineering, the College of Computer and Information Science, and the College of Professional Studies, for example, maintain both staff and infrastructure to support their programs.

### **DESCRIPTION**

#### ***Planning and Oversight***

**Information Services.** Northeastern does not currently manage the full range of its information services and technology through a University-wide governance model. Colleges and units with specialized computational or hardware requirements establish priorities and fund the majority of their own needs. Priorities for administrative computing are set during negotiations among IS, Finance, and Enrollment Management. The Faculty Senate has a standing Information Technology Policy Committee and the IS Providers group, an ad hoc group of representatives from the decentralized units, has a technical subgroup that meets to evaluate information-resource solutions. IS also works in tandem with the Office of the Provost on academic technology issues and policy.

**University Libraries.** The Libraries are currently implementing their Strategic Plan 2006–2009, as well as their accompanying Major Operational Goals. Oversight of library planning is provided by the Office of the Provost and the Faculty Senate’s Committee for Library Policies and Operations. Oversight for the School of Law’s Department of Information and Research Services is conducted within the Law School.

**CIETL and EdTech.** A formal statement of purpose and strategic plan for the newly formed CIETL is under development. The EdTech Center was originally under Information Services but in 2002 its reporting line was moved to the Provost’s Office.

**Policies.** A comprehensive suite of policies and guidance on the appropriate use of information resources and systems and advice on issues such as computer and data security is provided on the IS website ([www.infoservices.neu.edu/aup.html](http://www.infoservices.neu.edu/aup.html)). Oversight of appropriate use is handled by the IS Office of Information Security and Identity Services. Digital resources made available via University Libraries web services are flagged for licensing and access restrictions. IS monitors software licensing requirements.

#### ***Financial Support***

**Information Services.** The central budget for IS for fiscal year 2009 is \$25,682,959, distributed as follows:

Academic	\$11,824,434
Student	\$5,074,696
Administration	<u>\$8,783,829</u>
Total	\$25,682,959

These funds cover all IS costs, including salaries; software applications; renewal and licensing (administrative, academic, and enterprise); maintenance and repair, including the Service Desk and 24/7 availability of a student computing area; technology acquisitions and other secondary and outsourcing costs; costs associated with IT security; the licensing for the learning management system (Blackboard); and hardware and software associated with the infrastructure, including membership in Internet 2.

There has been no increase in the central IS operational budget in the past three years, with the exception of special one-time funding for 100 percent wireless coverage (except in residence-hall rooms) on the Huntington Avenue campus, and the Unified Digital Campus project, which is in progress. The latter project will replace the current student, finance, and advancement information systems and allow additional access and review of data to support programmatic, student, and financial decisions.

**University Libraries.** The University Libraries budget for fiscal year 2009 is \$10,590,931, an increase of \$567,508 over fiscal 2007. This is distributed as follows:

Collections	\$4,908,280
Staffing	\$5,348,730
Operations	\$333,921
Total	\$10,590,931

Increases in the Libraries' budget have been irregular over the last five years, with base-line adjustments being accompanied by one-time supplements. In a trend common to many academic libraries, spending on monographs and other formats has declined as spending on serials and electronic resources has risen disproportionately to accommodate persistent journal price inflation.

The University Libraries are active members of the Boston Library Consortium, NELINET, and NERL (NorthEast Research Libraries) consortia, through which significantly discounted purchases of primarily electronic resources are leveraged. The University also benefits from access to the databases made available statewide via the MLIN network (Massachusetts Library Information Network) and funded through the Massachusetts Board of Library Commissioners.

The budget of the School of Law's Department of Information and Research Services, covering library and computing services, for fiscal year 2008 was \$1,157,823 for staff and \$1,155,081 for operations and materials.

**CIETL and EdTech.** For its first year of existence (FY09) the budget for CIETL will be \$209,766. The EdTech Center budget for FY2009 is \$712,158. Of this, \$671,302 is attributable to staff costs and \$40,856 to operating and equipment costs.

## **Staffing**

**Information Services.** Central IS staff includes 125 full-time employees (FTE) and additional part-time student staffers, as needed. The central IS number has held more or less steady for the past three years, reflecting a decrease of 11 FTE in 2004. Staffing includes individuals with specialist

information-management and technical skills in, for example, high-performance research computing and learning-management support and training.

**University Libraries.** The University Libraries currently employ 74 FTE staff, a reduction from 82 in 2002. Thirty-seven are professional (MLIS or equivalent) librarians. Additionally, the Libraries currently employ 21 part-time staff and 117 work-study students. Law library and computing staffing includes 12 professionals and five support staff.

**CIETL and EdTech.** The EdTech Center includes a director and five full- and part-time professional staff. Beyond the faculty director's position, appointments to the new CIETL unit are in development.

**Unit-based information and technology support.** There are also approximately 50 full- and part-time IT personnel employed by the academic units and funded through the academic budget. The College of Professional Studies has a staff of four instructional designers, a Blackboard administrator, and two full-time and approximately ten part-time staff members supporting streaming-media equipment and processes.

### ***Resources Supporting the Academic and Research Program***

The University Libraries serve as the primary source of access to information resources for the institution. Total library holdings as of June 2007 include 976,932 printed volumes, 112,687 e-books, 2,395,695 microforms, 6,196 serial subscriptions, 27,273 licensed electronic journals, 158,623 government publications, and 4,568 cubic feet of archival and manuscript collections. Library policy prioritizes the acquisition of e-only formats for serial resources and selected categories of monographs. All efforts are made to license access for the benefit of remote users on a par with faculty and students on campus. Northeastern's membership in the Boston Library Consortium extends the collections available to faculty and students to some 34,000,000 volumes and associated materials.

Multiple network and access tools — including an online catalog, an e-journal database, and the library webpages — offer access to the University Libraries collections (see [www.lib.neu.edu](http://www.lib.neu.edu)). The Libraries also support access to digital resources via IRis, Northeastern's institutional repository (<http://iris.lib.neu.edu>), and uses link resolution, federated search, and Electronic Resource Management software supplied by Innovative Interfaces, Inc.

Content supplied via the University Libraries is augmented by several resources managed by Information Services. These include site licensing for academic software and provision for the antivirus software required on all centrally managed computers. The University Libraries and IS partner to support secure authentication for off-campus access to library resources through a proxy server.

The majority of the University's high-performance computational requirements are funded and maintained in the specific academic units. In 2004, in collaboration with the Office of the Provost, Information Services began hosting a 62-node cluster. IS maintains the computing environment, and the cluster is governed by a group of faculty members, the Vice Provost for Research, and IS representatives.

## ***Services, Programs, and Instruction***

**Information Services.** IS at Northeastern provides central information using secure high-speed connectivity to the Internet (including Internet 2) through the on-campus network (NUnet). To provide continuous access to up-to-date information resources, IS built the myNEU portals, which give students, faculty, and staff electronic single sign-on to many university services.

Training is provided through IS, the libraries, CPS, and the EdTech Center.

Resources available through IS can be found in Standard Eight and additional information on services is available at <http://www.infoservices.neu.edu>.

**University Libraries.** The library provides both in-library and online, live-chat reference services. In 2007 the Digital Media Design Studio was inaugurated to support the creation of collaborative and interdisciplinary course-related multimedia projects (see [www.lib.neu.edu/libraries\\_and\\_collections/media\\_center/digital\\_media](http://www.lib.neu.edu/libraries_and_collections/media_center/digital_media)).

Librarians provide an extensive program of instruction and information literacy training. (939 sessions were taught in fiscal year 2007.) Groups receiving instruction include all freshman classes, honors seminars, and classes associated with the Advanced Writing in the Disciplines program.

The Libraries are a designated Government Publications depository and provide all the associated services to Northeastern users and the local community. The Department of Archives and Special Collections actively solicits, acquires, and makes accessible historically significant university materials as well as the documentation of underrepresented local communities (see [www.lib.neu.edu/archives](http://www.lib.neu.edu/archives)). The Libraries also offer a full program of cultural events. ([www.lib.neu.edu/libraries\\_and\\_collections/libraries/calendar\\_of\\_events](http://www.lib.neu.edu/libraries_and_collections/libraries/calendar_of_events))

**CIETL and EdTech.** CIETL will be important to the implementation of the NU Core by supporting instruction, particularly in large classroom sections, and by promoting and aiding in assessment. CIETL and EdTech are collaborating to integrate technology into teaching and to support assessment. Their first major project has been to develop an e-portfolio pilot that can be incorporated into the mainstream of the University.

The EdTech Center continues to support the University community in a variety of ways, including designing and developing websites and educational tools, hosting seminars, producing learning resources for online learning, and customizing open-source software and applications.

## ***Facilities***

**Information Services.** The facilities supported by IS are covered in Standard Eight.

**University Libraries.** Snell Library has seating for 1,693, group study rooms, 602 individual carrels, capacity for 1,250,000 volumes, and a 24/7 Cybercafe that seats 72. In the last five years, significant floor space area has been converted from fixed shelving to open group study space and flexible, relaxed seating. One measure of Snell's continuing relevance is the 1,945,218 visits recorded in fiscal year 2007.

The separately administered Law Library is located in the Knowles building. Seating, which comprises 198 carrel seats and 227 non-carrel seats, a 20-seat computer lab, and two study rooms, is available across five floors.

**CIETL and EdTech.** By Fall 2008, CIETL and the EdTech Center will be installed in newly renovated space on the second floor of Snell Library.

**Unit-based information and technology support.** Most of the colleges and a number of smaller units have student computing areas, some of them with discipline-specific equipment. For instance, Bouvé College of Health Sciences has several labs with technology applicable to nursing and aural and audio diagnosis; music, architecture, and journalism provide laboratories that fill specific technology needs.

## **APPRAISAL**

### ***Information Services***

Two recent studies provide useful information on information technology at Northeastern. The first is a community satisfaction survey with data from 2006 and 2008, conducted by an outside firm, and the second is an audit of information technology at Northeastern, carried out by an independent consultant (the “Goldstein report”).

Overall, both reports show high satisfaction with the University’s current information technology environment, with students, faculty, and staff giving consistently high marks to Information Services’ access, timeliness, and support through the Service Center.

Satisfaction increased with the introduction of 100 percent wireless coverage on the Huntington Avenue campus (with the exception of residence hall rooms). The network has been consistent, with little disruption, and equipment necessary to keep it robust is continually upgraded.

Respondents noted that the availability of desktop software was sufficient, although documentation on that software could be improved. The area of least satisfaction, as reported by faculty, staff, and students, was the university e-mail system.

The Goldstein report concludes that Northeastern’s technology is for the most part reliable, well-managed, and meeting the needs of most of the community, and that investments in technology are in line with comparable institutions. The report notes that as colleges and units have addressed their own unique information technology needs, they have produced some overlapping services and capabilities. Reducing duplication would lead to greater efficiency but would not result in significant cost savings, because certain units will continue to retain localized information technology staff to support their particular needs.

Internally, Information Services has undergone both restructuring and some cost-saving measures to increase efficiency and meet new and emerging technology demands. In 2008, the Help Desk and Call Center were merged into the Service Desk, which now offers desktop, online, over-the-phone, one-on-one, and classroom training for hardware and software.

Information Services collaborates frequently to replace or enhance paper-based forms and reporting that are critical to Northeastern. Examples include FACT and the recent implementation of TRACE.

Although the use of information technology for teaching and learning has increased each year, the lack of a coordinated effort has resulted in overlapping offerings or gaps in technology innovation and implementation. The Goldstein report recommends a “learning technology strategy” to coordinate the efforts of the EdTech Center, the colleges and units, the University Libraries, and other areas.

### ***University Libraries***

The Library’s purchasing power, like that of all comparator institutions, has been severely diminished by an annual rate of price inflation for journal and database subscriptions that has averaged over 9 percent per year for the last two decades (<http://www.allenpress.com/static/newsletters/pdf/JP-2007-01.pdf>). By contrast, the Library’s base collections budget, some 80 percent of which is devoted to journal and database subscriptions, has increased annually by about 5 percent on average over the last five years. The University has been able to offset this discrepancy with some one-time budget supplements. Failing to keep pace with inflation has resulted in a spending for books and journals per full-time student of \$291 (fiscal year 2006), compared with \$348 by universities ranked 51 to 100 in the *U.S. News and World Report* “Top 100” ranking.

To keep expenditures within budgeted limits, 1,780 subscriptions were canceled between 2002 and 2007. Even so, subscription spending is still relatively high in comparison to peer-group libraries. The biggest diminution has been in spending on monographs; numbers have fallen from 19,292 in 2002 to 9,244 in 2007.

To offset this loss, the Libraries have made improving resource sharing and interlibrary-loan (ILL) services a special priority. ILL borrowing increased by 193 percent between 2005 and 2007.

The University and the University Libraries have instituted a number of mechanisms to ensure that collections match University teaching and research needs. These include collection assessments, ongoing library staff review of usage data for online journals and databases, and a suite of Collection Development policies and plans developed in collaboration with faculty. Initial findings of the current collection assessment indicate that overall levels of undergraduate information resources are adequate but that there are significant shortfalls in research collections in key subject areas.

The Libraries have partnered with the Department of English’s Writing Program to develop, administer, and assess instruments that measure student outcomes from library instruction sessions. They recently developed a tool to assess student learning as measured by the Association of College and Research Libraries (ACRL) Information Literacy Competency Standards ([www.ala.org/ala/acrl/acrlstandards/standards.pdf](http://www.ala.org/ala/acrl/acrlstandards/standards.pdf)). Results were very positive among the 2,100 students who participated in an online pre- and post-instruction questionnaire. Competencies with which students found difficulty have been given greater emphasis in subsequent library presentations.

The Libraries and the English Department are currently administering another jointly developed assessment tool to determine which sources students use in writing research papers, analyze how students find their sources, and provide further feedback on the effectiveness of library instruction.

Feedback from two locally administered satisfaction surveys, LibQUAL 2004 and 2007, has led to significant changes in the library's environment and operations. Responses in 2004 led to a rapid increase in the number of available e-journals and the acquisition of TDNet software to aid in its use. Other changes included a rearrangement of study space to facilitate group work, redesign of elements of the website, and customer service training for critical public service staff.

LibQUAL 2007's feedback stimulated another round of library projects to further upgrade the website, introduce improved federated or Google-like searching, and acquire the Web of Science. Finally, a comprehensive library assessment planning process has been developed.

### ***CIETL and EdTech***

Because CIETL is new, an evaluation of its impact would be premature. The EdTech Center, however, has an established track record of delivering high-quality and cost-effective instruction and design support. It has created more than 100 websites over the last two years, engages hundreds of faculty members annually via various information exchanges, and provides an in-house means of free one-on-one training for faculty members on current technologies. Feedback it gathers is used to plan new programming.

## **PROJECTION**

### ***Information Services***

The current data center is inadequate in both space and location and will need to be moved. IS and the Senior Vice President of Administration and Finance are in negotiations for off-site data center space.

Information Services is reviewing the storage requirements for a variety of areas: research, e-mail, archives, and graphic-intensive applications, with a variety of solutions under consideration. In response to concerns expressed about e-mail, IS is reviewing both student and faculty/staff e-mail systems.

To address the need for better-coordinated planning and resource management, as outlined in the Goldstein report, Information Services will assemble an advisory board with broad university representation.

### ***University Libraries***

The emphases of the current strategic plan of the University Libraries need to be aligned with those of the new institutional Academic Plan. For instance, the Academic Plan's focus on interdisciplinary research and on global and experiential learning will require widespread access to a richer seam of information. An early priority in fiscal year 2009 will be a comprehensive needs assessment to assure this alignment.

The Libraries will need to work closely with the Provost's Office to improve the funding model for resource allocation. The most realistic collections strategy for the Libraries over the next five years will rest on funding increases appropriate to the University's increased research ambition, consortial engagement to further improve purchasing power, and rapid and cost-effective document delivery. The Libraries also plan a new emphasis on linking to open-access and open-source resources.

The Libraries are working closely with the University's Office of Advancement to enhance their advancement and development unit in order to provide a supplementary income stream.

The University lacks a coordinated strategy for the long-term preservation of its digital assets. The Libraries have already developed expertise in this area through the well-established archival program and the creation of the digital institutional repository IRis and the Digital Media Design Studio. The Libraries now look to collaborate with IS, the Office of the Provost, and others to create a University Records Management Program and a robust digital-library infrastructure for the acquisition, storage, and management of campus information assets.

Given the rapidly evolving digital environment, the Libraries project significant changes in physical configuration and services. Plans include further conversions of space away from physical storage toward IT-enabled, flexible group work areas for students, and further collaboration with IS and a range of academic units to develop additional facilities and services for data acquisition and preservation.

The Libraries are currently reviewing software that would allow for a more continuous assessment of collections and services by, for example, posing assessment questions to randomly chosen visitors to the website.

### ***CIETL and EdTech***

CIETL, EdTech, and IS are currently looking at the necessary costs of, and technology requirements for, an e-portfolio system that has assessment, résumé, and design capabilities. A larger pilot program is in place for academic year 2008-2009 ([http://www.edtech.neu.edu/interactive\\_tools/eportfolios/pilot\\_projects/](http://www.edtech.neu.edu/interactive_tools/eportfolios/pilot_projects/)). The initiative will help tie students' academic and experiential-learning activities to the NU Core.

## **INSTITUTIONAL EFFECTIVENESS**

The University Libraries and Information Services have applied and will continue to apply assessment surveys and other instruments to establish and refine effective services.

For instance, results from the LibQUAL surveys in 2004 and 2007 have led to significant changes in the library's environment and operations. The Libraries also periodically conduct assessments of specific collections. They are currently reviewing software that would allow for more continuous assessment of collections and services.

In addition to its 2006 and 2008 community-satisfaction surveys, IS periodically surveys the Northeastern community and conducts focus groups. The outcomes of these surveys and focus groups have been used to better align IS services and determine how to prioritize expenditures.