

## STANDARD ONE: MISSION AND PURPOSES

### Introduction

The Act of Incorporation of May 10, 1865, in the Commonwealth of Massachusetts defined WPI's institutional purpose as "aid[ing] in the advancement, development and practical application of science in connection with the arts, agriculture, manufactures, mercantile business and such other kindred branches of practical education as said corporation shall determine." At WPI's dedication on November 11, 1868, the University's first president, Charles O. Thompson, declared that "the main design of this school is to make it an educational force; to open the delights of learning to the mechanic and the manufacturer; as well as to the professional man; to aid in giving practical expression to the maxim that knowledge is power." Now serving its constituents in its second century, WPI continues to build upon these origins, upholding the University tradition of "The Two Towers" embodied physically in the two towers of the first two University buildings and intellectually in the University motto, "Lehr und Kunst" (Theory and Practice).

WPI most recently revised its mission and goals statements in 1987 (see the texts below from the *WPI Undergraduate Catalog*). In addition to referring to the education of men and women, these public statements emphasize WPI's strong commitments to research, to graduate education (programs begun in 1898), and to continuing education (programs begun in 1977).

### WPI's Mission and Goal Statements

WPI's mission and goal statements are presented below. The mission statement specifies the objectives of a WPI education that can be anticipated as the careers of its graduates unfold. The more detailed goal statement articulates outcomes expected of graduating students. WPI's progress in measuring and assessing these outcomes and in using the results for planning will be discussed under Standard 2.

The 1987 mission and goal statements were newly adopted before the NEASC visit of 1991. In the two years preceding the NEASC visit, various constituencies consulted the mission and goal statements as part of preparing for the visit. No campus-wide reevaluation of the mission and goal statements was undertaken given a general consensus that they were still applicable to WPI in their current forms.

## **The Mission of WPI**

WPI educates talented men and women in engineering, science, management, and humanities in preparation for careers of professional practice, civic contribution, and leadership, facilitated by active lifelong learning. This educational process is true to the founders' directive to create, to discover, and to convey knowledge at the frontiers of academic inquiry for the betterment of society. Knowledge is created and discovered in the scholarly activities of faculty and students ranging across educational methodology, professional practice, and basic research. Knowledge is conveyed through scholarly publication and instruction. (*Adopted by the Board of Trustees, May 22, 1987.*)

## **The Goal of WPI**

WPI was founded in 1865 to create and convey the latest science and engineering knowledge in ways that would be most useful to the society from which its students came. Since that time, the disciplines of human inquiry have expanded extraordinarily, as have WPI's constituencies. The WPI curriculum, accordingly, has been reshaped numerous times, but it has remained true to its original mission of fusing academic inquiry with social needs, of blending abstraction with immediacy, of linking new knowledge to applications.

The goals of the undergraduate program are to lead students to develop an excellent grasp of fundamental concepts in their principal areas of study; to lay a foundation for life-long renewal of knowledge; to gain a mature understanding of themselves; and, most importantly, to form a deep appreciation of the interrelationships among basic knowledge, technological advance, and human need. These principles are today manifest in the *WPI Plan*, a unique, project-oriented program which emphasizes intensive learning experiences and direct application of knowledge. WPI remains committed to continued educational improvement and innovation.

The goals of WPI's programs of graduate instruction and research are to create and convey knowledge at the frontiers of academic inquiry. These endeavors are founded on the principle that vigorously pursued and rigorously assessed scholarship is the lifeblood of the institution. High quality graduate instruction conveys the arts of scholarship to new generations, and it assists working professionals in maintaining currency in a world where knowledge becomes obsolete with ever-increasing rapidity.

A WPI education encompasses continuous striving for excellence coupled with an examination of the contexts of learning so that knowledge is won not only for its own sake but also for the sake of the human community of which the people of WPI are part. (*Endorsed by the WPI Faculty on March 5, 1987, and by the Board of Trustees on October 16, 1987*)

The 1987 mission and goal statements provides the broad frameworks for recent institutional planning, which culminated in the document, *New Vision, New Ideas, New Resources: An Ambitious Plan to Raise the University to New Levels of Quality and Prestige*. This document will be discussed in Standard 2.

## Divisional Missions and Descriptions

The missions and descriptions of the five individual units of WPI, led by the vice presidents of academic affairs, administration, development and university relations, information technology, and student affairs, are presented below.

### **Division of Academic Affairs/Provost's Office**

#### **Mission**

The Division of Academic Affairs, led by the provost and vice president for academic affairs, has two major responsibilities: first, to provide the resources to enable students to succeed academically at WPI and to assess the outcomes of a WPI education; and, second, to support the professional achievement of the faculty. The objectives of this division are thus coincident with WPI's mission and goal statements.

#### **Description**

The provost has oversight responsibilities for all academic departments and programs, for the scholarly and research activities of students and the faculty, and for the academic resources and operations that support WPI's mission and goal. WPI's academic organization is based on 14 departments with appointed heads all reporting directly to the provost; WPI does not have individual schools with associated deans. In addition, the Interdisciplinary and Global Studies Division, Graduate Admissions, the Department of Continuing and Professional Education, the School of Industrial Management, the Office of Sponsored Research Programs, and the Registrar's Office are part of the Academic Affairs Division. There is strong shared governance at WPI, and the Provost's Office interacts closely with the various faculty governance committees. The administrative duties of the Provost's Office are divided among the provost, the associate provost, and the assistant provost. The breakdown of the individual responsibilities for these three positions is presented in Standard 3.

### **Division of Administration**

#### **Mission**

The mission of the Division of Administration is to support and monitor the investment and budget activities of WPI; to record financial data using sound fiscal processes in accordance with WPI's overall mission statement; and to provide a safe, clean, properly maintained environment for the WPI community, in support of academic and social activities.

#### **Description**

The Division of Administration consists of three groups: the Business Office, the Physical Plant Office and Campus Police. The Business Office encompasses Accounting, Budget, Human Resources, Treasury, Events Coordination and Administrative Services.

The **Business Office** helps develop the operating and capital budgets to ensure that they are consistent with WPI's strategic plan; oversees current financial operations and results; ensures

the adequacy of insurance coverage for capital assets; reviews and approves personnel and benefit policies and procedures; and ensures that a viable long-range financial plan is in place. The office undergoes an annual audit of financial statements and, as in the past, expects to receive an unqualified opinion stating that the financial statements fairly present the financial position of WPI. The Office of Events Coordination schedules campus events. Administrative Services provides mailing and duplicating services.

The **Physical Plant Office** consists of Building Services, Trades Services, Grounds Services, and Environmental and Occupational Safety. These departments provide a safe, clean, properly maintained environment for the WPI community.

**Campus Police** provides a safe environment for all members of the WPI community and visitors to the WPI campus.

## **Division of Development and University Relations**

### **Mission**

The mission of the Division of Development and University Relations is to support the mission and goal of WPI by building mutually beneficial relationships with a broad range of strategically important constituencies, enhancing the University's image and name recognition, and raising financial resources.

### **Description**

Development and University Relations performs a number of functions that are directly related to the success of WPI and to realizing the goals of the University's strategic plan. These activities include raising resources from individuals, corporations and foundations to support the University's strategic objectives. The Development Office manages programs for annual giving, anniversary giving, major giving, planned giving, and foundation and corporate giving, as well as programs for identifying and researching prospective donors, recording and acknowledging gifts, and stewarding donors.

The Division also dedicates considerable time to building relationships with constituents that have the potential to support the University and its mission. These audiences include local, state and federal governments, WPI neighbors, the Worcester community, corporations and businesses, parents, and the University's 25,000 living alumni. Working cooperatively with the WPI Alumni Association, the Alumni Office works to build bonds between the University and its graduates by offering them programs and services of interest, keeping them informed about their alma mater, supporting their career and lifelong learning needs, and providing opportunities for them to use their talents and expertise in support of the University.

Enhancing the University's image and building its reputation and name recognition are also important functions of Development and University Relations. Through regular periodicals, hundreds of other publications, news releases and advisories, Web pages, special events, and other communications and image-building tools, the Communications Group and Special Projects Office promote the University and its people and programs to prospective students, the news media, alumni, opinion leaders, the on-campus community, and many other audiences.

## **Division of Information Technology**

### **Mission**

The mission of the Information Technology Division, in keeping with the mission of WPI, is to catalyze the University's ability to create, discover and convey knowledge through innovative leadership, a superior technological infrastructure, excellent resources, and commitment to educating users in the technology that the division acquires and supports.

### **Description**

The Information Technology Division was formed in July 1998 under the leadership of the newly created position of vice president of information technology. For many years previously, the needs of the three departments now within IT had been bypassed in favor of other pressing needs on campus, so that staffing and resources were inadequate to support the rapidly growing demands for technology and assistance. The new organization brought the IT needs of the community into sharp focus, and much progress has been made over the past two years through the allocation of additional funding for computing, networking, educational technology, library resources, additional staff, and equity for exempt IT staff salaries.

The Information Technology Division is comprised of three major departments: the Computing and Communications Center, the Instructional Media Center and Advanced Distance Learning Network, and the George C. Gordon Library.

The **Computing and Communications Center** provides the infrastructure for communication, computing, storage, software utilities and applications to support academics, research and administration of the University.

The **George C. Gordon Library** serves the academic research and informational needs of the WPI community by providing quality resources, services and instruction to faculty, students and staff on campus and at remote locations.

The **Instructional Media Center** serves as a focal point for promoting and developing the use of information technology in teaching, learning and scholarship. The **Advanced Distance Learning Network** provides the infrastructure necessary to facilitate widespread utilization of educational technology.

## **Division of Student Affairs**

### **Mission**

The Division of Student Affairs is a University partner in the educational process, providing access to the institution, and promoting intellectual development, interpersonal and intrapersonal effectiveness, and life management. The division includes the Admissions Office, the Career Development Center, the Financial Aid Office, the Physical Education and Athletics Department, and the Student Life Office.

The **Admissions Office** recruits and enrolls the appropriate quantity, quality and composite of students who academically and personally meet WPI's goals and objectives.

The **Career Development Center** team assists students and alumni in developing, evaluating and effectively initiating and implementing relevant and satisfying career plans. The team promotes a greater awareness of the world of work and its trend within the academic and business communities. Programs foster self-knowledge and career awareness and planning; promote experiential education; support optimal employment or further professional preparation; build relationships, and market WPI.

The **Financial Aid Office** develops policies, reviews regulations, and administers financial resources to maintain institutional enrollment goals by assisting academically and financially eligible students to enroll and persist to degree completion at WPI.

The **Physical Education and Athletics Department** provides a setting that encourages the understanding and development of lifetime sports. Opportunities exist to seek one's ultimate athletic potential through intercollegiate athletics, intramurals, and club sports, and to develop an appreciation of fitness, wellness and recreation. Programs promote leadership, teamwork, cooperation, dedication, communication, competition and self-discipline.

The **Student Life Office** staff promotes learning and development through intentional programs, and provides services and activities designed to expand knowledge and understanding, influence attitudes, change behaviors and develop skills.

## **Description**

Outcomes associated with the division can be categorized into the four dimensions articulated in the division's mission statement: interpersonal and intrapersonal effectiveness, intellectual development, and life management. In keeping with WPI's mission, expected outcomes include:

**Interpersonal:** Effective written and verbal communication; appreciation for community responsibility; empathy for others; an appreciation for diversity; ability to work collaboratively; ability to balance cooperation and competitiveness.

**Intrapersonal:** Recognition of personal abilities and developmental needs; understanding of one's self; enhanced self-confidence; realistic self-appraisal; development of a personal value system.

**Intellectual:** Appreciation for lifelong learning; understanding ways to finance education; understanding the steps associated with career decision-making.

**Life Management:** Ability to live independently; having a plan for personal wellness; ability to identify and implement alternative solutions to problems; ability to plan and organize a task; a knowledge of resources and how to use them to meet personal and professional goals.

# Appraisal

## **Provost's Office/Academic Affairs**

WPI's mission and goal statements were drafted 15 years ago, but many believe they continue to provide good direction for the University's developing and changing academic programs and outcomes. The objectives of the undergraduate and graduate programs are well defined, and are supported by appropriate assessment procedures that have been useful in preparation for outcomes-based accreditation. At the same time, the experience of preparing for the present self-study has shown the need to focus more attention within the whole community on examining the existing goal and mission statements.

In recent years, WPI has developed a feedback system whereby, increasingly, the assessment of undergraduate student learning achievement, as embodied in the mission and goal statements, is used to improve programs and to allocate resources. By defining learning outcomes and measuring their success, WPI has focused renewed attention on the current mission and goal statements. In particular, in spring 2001 faculty began discussing the coherence of the general education program, as it "embodies the institution's definition of an educated person" (Standard 4.15). Faculty members are also discussing overall institutional outcomes as distinct from the current departmental outcomes, which are comparatively well defined.

Continuing education has, in recent years, grown dramatically, with new major off-campus sites in Waltham and Southborough/MetroWest. Distance learning programs have also enjoyed considerable growth.

WPI has been engaged in strategic planning for the last five years. A new strategic plan, adopted in 1999, has five goals, 21 objectives and over 100 action items. Most of the action items have been dealt with, at least in part, and the status of these individual efforts is available on a continually updated Web site. Details of the strategic plan are discussed in Standard 3.

## **Administration**

In terms of fulfilling its mission statement, the Accounting Office provides performance measures (as outlined in Table 2-4 of the strategic plan) to provide quantitative assessment of the progress toward the plan's outcome objectives. At present, the Banner Finance System requires much effort to extract the appropriate information necessary for such financial reporting.

The Office of Physical Plant is involved directly in many of the goals of the strategic plan. The completion of the Campus Center and planning for new academic and parking facilities require more support from Physical Plant personnel. Current staff support for new construction and major renovations is extremely taxed, and a number of outside vendors are currently augmenting engineering support. A recent employee opinion survey suggests a need for a more aggressive approach to maintenance and the need to obtain and respond to customer feedback.

Competition for capital funds threatens the funds available for deferred maintenance of buildings. As facilities grow older, funding for deferred maintenance must grow to assure that facilities are maintained at their current levels. Staffing levels and funding for materials will also

need to be increased as campus buildings age. Professional development of the Physical Plant staff and the introduction of new methods and new equipment will be one approach to providing improved service to the campus community. Another approach will be the implementation of an automated customer feedback loop to ensure continued customer satisfaction.

## **Development and University Relations**

Two key challenges face the staff of the Development and University Relations Office in terms of its mission: participation and image building. The challenge of participation is particularly acute in the areas of alumni giving and alumni relations. Participation by young alumni in the Annual Fund has been declining in recent years for reasons that are not entirely understood. Participation by alumni in events and programs has also been in decline, due, in part, to the increasingly busy lifestyles and increasing geographic dispersion of younger graduates. In the area of image building, WPI's reputation and name recognition decline steadily with increasing distance from campus. Beyond its traditional recruiting base of New England, the University has little or no image. These challenges are interrelated, since alumni participation helps boost the University's quality and an enhanced image helps motivate alumni to participate. Increased recognition of WPI's excellence also makes it easier to recruit high-quality students and raise funds from corporations and foundations, which in turn fuels the growth in prestige that builds alumni pride.

The Development and University Relations Office is addressing the challenges of participation and image building through four major initiatives. The \$150 million *Campaign for WPI*, publicly launched in April 1999 and set to conclude on June 30, 2003, will raise funds for many of the goals and objectives of the University's strategic plan. To encourage participation by all graduates, a class-based giving program has been developed that encourages alumni to give unrestricted dollars to the campaign through their class reunions and to make separate gifts to the campaign's capital and programmatic goals.

The Development Office engaged a consultant to carry out a marketing research study to help identify the factors that have contributed to declining participation by young alumni, and to develop new marketing messages and strategies that will motivate these graduates to give. Another consultant completed a major marketing research program aimed at better defining WPI's image and competitive posture, and at developing marketing messages that will capture the University's distinctive qualities.

With the Alumni Association, which has developed its own five-year master plan, the Alumni Office is working to develop programs, services and communications programs that target the needs and interests of WPI graduates. These include career services and lifelong learning programs offered in conjunction with the University, regional programs that enable alumni to connect to the University from a distance, and an online community for alumni.

## **Information Technology**

Goal 5 of the strategic plan focuses on the need for high quality information technology resources, giving the division an important role to play in support of WPI's mission over the next 10 years. Problems in many areas affect adversely the ability of division to fulfill its mission.

Needs include more space for IT staff; additional funding to support all the computing and networking requests, and library resources and space. There is also a need to better organize staff to support faculty in the use of technology for local and distance learning. The division as a whole does not have formal outcome assessment measures, although Gordon Library measures various kinds of library use and has developed evaluation forms to assess the value of its instruction.

## **Student Affairs**

The departments within the division have well-articulated purpose statements and a set of outcomes that are congruent with the mission of the University. Identifying methods to assess the achievement of outcomes has begun in some departments. In the Admissions and Financial Aid offices, the immediate priority has been the ongoing implementation of the Banner system, a new database, and the relocation and construction of new offices to better meet the needs of our students and their families.

WPI recently embarked on several new initiatives involving Student Affairs and supported by the strategic plan. To make progress on an important commitment to the diversity of the campus, in spring 2001 WPI created and staffed a new position, director of diversity and women's programs. In addition, the initiatives included the opening, in March 2001, of the new Campus Center, which serves as a laboratory for community building; increased recruitment efforts to meet the admissions goals for women, students of color and international students; the creation of career development services capable of meeting the increased needs of our students as well as alumni and adult learners; and the promotion of healthy alternatives options capable of shaping the campus environment into one that does not tolerate substance abuse.

## **Projection**

### **Provost's Office/Academic Affairs**

While the WPI mission statement acknowledges the expectation that graduates will pursue lifelong learning, it does not suggest that WPI play an active role, other than to "convey knowledge at the frontiers." It would be beneficial to explicitly include geographic and temporal outreach as represented by continuing education and distance learning capabilities in any revision of the mission statement. Similarly, WPI's goal statement does not anticipate continuing education needs nor distance learning technologies as means of conveying the latest science and engineering knowledge for the sake of the human community. On revision, the goal statement should be appropriately altered.

Recognizing how difficult it has been to stimulate widespread discussion of the relevance and currency of the WPI goal and mission statements in preparation for this self-study, at least one senior member of the faculty has suggested the faculty explore a mechanism for reviewing the goal and mission statements annually. Such a process would at least make everyone aware of the importance of these statements and of the need to keep them current.

## **Administration**

To enable managers to respond to constituents in a timely manner, additional resources may be needed to make it easier to extract reports from the Banner system for use in preparing annual financial statements and strategic performance measures. To alleviate the pressure of meeting new regulatory reporting requirements, funding requests for additional staff have been submitted and approved for inclusion in the five-year budget plan. The focus on increasing sponsored and institutional research and the construction of additional major facilities may require additional resources for support personnel. In fact, a new position for research administration is included in the FY 2002 budget.

## **Development and University Relations**

The research conducted by the external marketing consultant firm was discussed at the February 2001 “retreat” of the Board of Trustees. It formed the foundation for a positioning platform for the University and a draft marketing and communications plan aimed at broadening WPI’s reputation and name recognition well beyond New England. The positioning, draft plan, goals, and funding plan were presented to the board in May 2001.

## **Information Technology**

During the 2001-02 academic year, the IT Division will develop and implement outcome assessment tools to measure the value of its services and resources. In addition, a computer replacement and funding strategy will be finalized; a distance learning education (ADLN program) business plan continues to be implemented; library resources will be increased; a plan will be developed for library renovation; an Internet2 connection is being established through WPI’s Goddard GigaPoP, and further efforts will be directed toward incorporating information literacy into the curriculum. Future plans call for closer working relationships between areas within the IT Division to develop the staff and support infrastructure needed to provide world-class assistance.

## **Student Affairs**

In fall 2000, various Student Affairs departments began collecting data through formative and summative methods to determine progress on student learning outcomes. Feedback loops need to be created so that the results of the evaluation can be used as part of a continuous improvement plan.

The opening of the new Campus Center will not in itself bring a true sense of community to the campus. Programs, creative planning and collaboration among all constituencies will be needed to accomplish the task of shaping this third tower of community.

The creation of new offices for Admissions and Financial Aid will require a great deal of technical computer support from the Computing and Communications Center (CCC). CCC support is also necessary for the ongoing conversion to the Banner software and to meet the changing Financial Aid Office needs required to meet federal regulations.

Additionally, the results of the current marketing study and a recommendation to develop a new graphic image for the University will present a great challenge to the Admissions staff in the redesign of all publications.