

Report to the  
Faculty, Administration, Trustees, Students  
Of  
Worcester Polytechnic Institute  
Worcester, Massachusetts

By

An Evaluation Team representing the  
Commission on Institutions of Higher Education  
of the  
New England Association of Schools and Colleges

Prepared after study of the institution's  
self-evaluation report and a visit to  
the campus September 30 – October 3, 2001

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COMMISSION ON INSTITUTIONS OF HIGHER EDUCATION

NEW ENGLAND ASSOCIATION OF SCHOOLS AND COLLEGES

PREFACE PAGE: Worcester Polytechnic Institute

1. HISTORY: Year chartered or authorized 1865 Year first degrees awarded 1871

2. TYPE OF CONTROL (CHECK OR FILL-IN):

State PUBLIC Nonprofit  PRIVATE  
 City \_\_\_\_\_ Religious group (name) \_\_\_\_\_  
 Other Specify \_\_\_\_\_ Other (specify) \_\_\_\_\_

3. DEGREE LEVEL (CHECK ALL APPROPRIATE CATEGORIES):

Associate \_\_\_\_\_ Baccalaureate  Master's  Professional \_\_\_\_\_ Doctoral

4. ENROLLMENT IN DEGREE PROGRAMS (FOR FALL SEMESTER OF THE MOST CURRENT YEAR):

	<u>FULL-TIME</u>	<u>PART-TIME</u>	<u>FTE</u>
Associate	_____	_____	_____
Baccalaureate	<u>2689</u>	<u>50</u>	_____
Graduate	<u>470</u>	<u>361</u>	_____

5. CURRENT FACULTY:

Full-time 238 Part-time 100 FTE 276.06

6. CURRENT FUND DATA FOR MOST RECENTLY COMPLETED FISCAL YEAR  
 (SPECIFY YEAR) FY 2001:

<u>EXPENDITURES</u>		<u>REVENUES</u>	
Instruction	<u>\$45,463,896</u>	Tuition (Net)	<u>\$45,428,880</u>
General	<u>19,894,658</u>	Gov't Appropriations	<u>0</u>
Auxiliary Enterprises	<u>6,181,899</u>	Gifts/Grants/Endowment	<u>37,597,152</u>
Other	<u>34,594,176</u>	Auxiliary Enterprises	<u>9,806,035</u>
TOTAL:	<u>\$106,134,629</u>	Other	<u>13,340,842</u>
		TOTAL:	<u>\$106,172,909</u>

7. OFF-CAMPUS LOCATIONS:

Total 2 In-state 2 Out-of-state \_\_\_\_\_

8. ACCREDITATION HISTORY:

Candidacy: None Initial Accreditation: 1937 Last Comprehensive Eval: Fall, 1991  
 Last Commission Action: Fifth-year report accepted.  
 Last Action Taken on: November 8, 1996

9. OTHER CHARACTERISTICS:

## Introduction

This document is the report of the team charged by the New England Association of Schools and Colleges (NEASC) to visit the Worcester Polytechnic Institute (WPI) and assist NEASC in the matter of continuation in accreditation for WPI. The team visited WPI from September 30 to October 3, 2001. We were graciously received and warmly engaged by members of the administration, faculty, student body, staff, and Trustees. The team very much enjoyed its time at WPI and hopes that this report will be received in the spirit of critical assessment, encouragement, and acclaim in which it is offered.

The purpose of accreditation for American colleges and universities is both to provide quality assurance and to encourage institutions to work continuously to improve their performance and increase their effectiveness. The actual process associated with accreditation involves both self-evaluation and peer review. For the current review WPI prepared a two-volume self study which the visiting team found enormously informative and helpful in understanding the character, qualities, and programs of WPI, as well as the Institute's aspirations and challenges. Not without its challenges, WPI is nonetheless one of the nation's truly fine technological institutes.

The team arrived at WPI at an inauspicious moment for higher education and for the nation. The economic downturn which had begun during the previous winter had accelerated during the summer to the point of recession. On September 11, less than three weeks prior to the site visit, thousands of American lives were lost in terrorist hijackings of four jetliners and subsequent crashes into the World Trade Center in New York and the Pentagon in Washington, D.C. At the time of the visit it was too early to know fully the impact and implications of these developments for the immediate future, but it was clear that the effect on WPI, as well as on all of higher education and American society, would be profound.

WPI was founded in 1865 on the principle of integrating theory and practice. This philosophy is embodied in a revolutionary approach to technological education, the WPI Plan, that was developed three decades ago, and which has since been adopted in various forms by a number of WPI's competitors. Key to this curriculum is a set of projects requiring both independent and collaborative work in which students marshal their knowledge in both broad and practical ways. WPI students tackle problems not only *of* the real world, but *in* the real world. (In particular, an innovative program of Global Studies promotes WPI students working in teams, under close faculty guidance, for two-month experiences solving important problems at a variety of sites around the world.) To this leadership position in education WPI has in recent years added increased faculty strength in research and scholarship, and expanded programs in graduate education.

President Edward Alton Parrish took office at WPI in August, 1995, having served previously as Dean of the School of Engineering at Vanderbilt University. Shortly after his arrival at WPI, President Parrish initiated a planning process that resulted in a strategic plan entitled New Vision, New Ideas, New Resources: An Ambitious Plan to Raise the University to New Levels of Quality and Prestige. Developed through a highly collaborative effort of faculty and

administrators, this Plan was approved by the Institute's Board of Trustees in February, 1999. The Plan serves as a living, continually evolving tool for planning, action, and evaluation. The Plan is updated annually by President Parish himself. It provided important context for the Institute's Self-Study. The comprehensive nature of the Plan, and the associated processes of feedback, updating, and task completion, place WPI in a position of national leadership with respect to the assessment of effectiveness and outcomes of its academic programs.

WPI is an institution of many superb qualities and assets, not least among them the vision and strength of the leadership team comprising President Parrish and his cabinet. They have a deep appreciation for the Institute's heritage and achievements, and a clear notion of the opportunities and requirements for actualizing its considerable additional potential. Complementary assets include a strongly dedicated faculty and staff; a culture of collaboration across the various disciplines, departments and programs; a beautiful campus with facilities that have been well maintained and utilized; a strong tradition of prudent, conservative, financial management together with a generally strong financial profile; excellent, productive relations with the city of Worcester; a top-flight program in information technology, both in support of the teaching and research programs and in general service to the information and communication needs of the campus; and, as important as any, a student body of exceptionally fine quality and character. The pride and enthusiasm of the WPI students for their programs, their faculty, their administration, and their membership in the WPI community is clearly evident. Many of the WPI faculty are distinguished contributors to research and scholarship in their fields; most are deeply committed teachers, mentors, and advisors of students.

In preparing this report the team has worked diligently to present a balanced assessment of both strengths and concerns, and to distinguish as far as possible the more immediate issues and concerns from those of a continuing or longer-term nature. The individual sections that follow, each corresponding to one of the eleven standards for accreditation, make specific note of the relevant strengths as observed by the team as well as any noted concerns. Several of these are overarching in nature, and thus worthy of mention at the outset.

The recent economic downturn has exacerbated for WPI, as it has for many institutions, the frustration in one's reach exceeding one's grasp. WPI is well positioned to compete for outstanding faculty and students, but constrained by limited financial resources. Start-up and facilities costs for faculty recruited in engineering and the related disciplines have risen dramatically, as have the costs of supporting graduate students. The most recently matriculated freshman class required significantly more financial aid than did its predecessors, a phenomenon tied no doubt directly to the developing recession. Plans for the construction of a new academic building have been deferred, primarily because of escalating projected costs. The outstanding organization and facilities in the information technology area have brought significant additional demands to the operating budget.

Beyond the challenge to financial resources there are more human concerns. Faculty, while deeply devoted to the important mission of teaching, carry heavy responsibilities. In addition to teaching loads that are full by any standard, they spend a great deal of time directing individual student projects, advising students, leading student teams on international projects, and participating in the strong WPI tradition of faculty governance. Academic administrators are

similarly stretched, with a relatively small staff in the Provost's office handling all academic administration above the level of the departments and the programs. Previous reports to the NEASC have noted WPI's difficulty in recruiting both women and minority faculty and students. While significant gains have been made in the number of women faculty and students, the goal of increasing the number of students and faculty of color to more satisfying levels remains an important yet elusive challenge. More than any other, this concern arose early and often in the team's deliberations as a matter in which stronger resolve and better insights are required.

It is often the case that difficult times bring increased resolve to focus on what is most important and enduring in the essential work of teaching and learning, research and scholarship, and institutional advancement in the broadest sense. WPI is well positioned to respond to this "opportunity" by virtue of its strong executive leadership, the quality and loyalty of its faculty and staff, and the genuine enthusiasm that its students hold for their membership in the WPI community. The team hopes that the information contained in this report will be helpful to our WPI colleagues in this regard, and we express to them our very best wishes for their noble and important work. We express as well a particular hope that the Institute's considerable financial strength will enable it to maintain good progress in its academic development, especially in the recruitment of outstanding faculty, despite the current economic challenges.

## **Mission and Purposes**

The Worcester Polytechnic Institute has a clearly and consistently articulated mission. While the Institute's goal of pursuing higher education in a way that encompasses theory and practice dates back to its founding in 1865, its pursuit of that goal has been especially innovative, sustained and highly successful over the last thirty years. WPI has pioneered and refined a problem-based curriculum which requires an unusually high degree of responsibility from students for the shaping of their undergraduate efforts, and which demands a remarkable commitment from the faculty for project supervision and advising, as well as more traditional types of teaching. Students are frequently engaged in projects that involve them in the research agenda of faculty or in problem solving that is defined by actual problems in society. These efforts have required an unusual degree of collaboration and consensus about the distinctive character of the institution, and a strong understanding on the part of faculty, students, staff, and administration about the core values of the school's educational philosophy. WPI has successfully pioneered a framework which a number of schools are attempting to emulate, but without the benefit of WPI's significant iterative experience in program design and implementation, not to mention its remarkable culture which has attracted an intellectually capable, motivated student body. WPI students have an unusually high degree of interest in assuming responsibility for their educational programs and an interest in team-based collaboration which together provide excellent preparation for professional life.

The formal WPI mission was most recently articulated by the Board of Trustees in 1987:

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.

This statement appears in a range of documents which present the institution, ranging from the Undergraduate Catalogue, to the present Self-Study. Expanded in a variety of contexts, it has provided a general sense of direction for the institution, as well as guidance for how specific units of the school should contribute to achieving WPI's mission.

Perhaps what is particularly impressive about WPI is the spirit of the culture that has been developed, and the ways in which students and faculty transmit the culture to the institution's newer members. The team witnessed both subtle and dramatic examples of this spirit, and we were impressed by the continued striving to craft an ever improving learning environment, one which will be increasingly affected by the research quality of the faculty in the future. We believe that WPI has accurately framed and communicated its mission and purposes, and that it has made important contributions to higher education through sustained innovation and a remarkable collaboration among students and faculty. We also sense that the commitment to the mission remains strong, and is reflected in all aspects of the community, from the Trustees, to the faculty, students, and administration.

## **Planning and Evaluation**

WPI is a place where planning and evaluation have received an unusual degree of attention. While the most recent period of planning was marked by the onset of a new Administration in 1995, it has largely confirmed, refreshed, and further invigorated the basic direction of the school and helped strengthen a consensus about direction. The recent planning effort was characterized by a high degree of faculty involvement continuing the successful innovation which began in about 1970 when the WPI Plan was created, and in which some members of the current faculty played important roles. It was also planning set against the backdrop of an unusual willingness on the part of the faculty to critique the initial experiment and adapt it over time, and of a culture where students value WPI's educational philosophy and the degree of control it accords students.

Soon after his arrival in 1995 President Edward Parrish set out to involve the community in a multiyear effort to consider WPI's future. In the words of the Self-Study, the President "envisioned a multiyear process in which faculty, students and staff would take a 360-degree view of WPI's current position and potential future positions relative to other technological universities. The goal was to determine how the University's current strengths could lead to sustained advantages, and which new strengths should be developed." The actual process that followed was overseen by the Strategic Plan Steering Committee, which included faculty, students, senior administrators, and staff. Thirteen Task Forces drawing upon more than 60 members of the community studied strengths and weaknesses, identified opportunities and challenges, and recommended action. Six months later the umbrella committee produced a

report that formed the foundation for the campus-wide discussion, which in turn produced considerable support. The following year a Planning and Implementation Committee again comprised of faculty, students, administration, and staff was asked to complete the planning process by framing overall goals. The Committee quickly produced a draft that launched a further interactive process, one that involved recommendations from the various faculty governance committees. Later in the year, the community was invited to participate in prioritizing the goals, using Web-based polling. The President himself then synthesized the results in a document which he created with the aid of his Cabinet. WPI's sensitive and active Board of Trustees specifically endorsed the President's articulation as WPI's action plan. Informed by this process, the President and the Trustees also launched a fundraising campaign with a goal of raising \$150 million in support of some of the most pressing priorities. These included (1) the long awaited and now completed campus center, (2) new resources for student financial aid, and (3) support for faculty expansion, especially endowed chairs.

The President's commitment to the Plan is illustrated by the fact that he personally monitors and updates a Web-based tracking document designed to monitor and record progress in implementing the plan and keeping it fresh in the minds of all members of the WPI community. Regular discussion in the President's Cabinet, as well as the Provost's frequent meetings with department chairs, reinforce the resolve to keep strategy and priorities in focus.

WPI engages in careful budget planning, framed by a number of principles such as a culture of balanced budgets, endowment payout rates derived by two-year averages one year removed, the construction of five-year budgets which assists planning, and the Banner computer program which provides current information. The staff periodically models different budget scenarios to inform current and longer term decision-making. The team noted that WPI now carries a relatively small amount of debt and has a remarkably strong financial stature. Given the pressing need for constructing and improving academic facilities, and the important goal of further developing the academic quality of the faculty, we wish to encourage the administration and Trustees to reconsider the current prohibition on the use of debt to finance academic facilities. Building tomorrow's Institute today could hasten *both* gains in quality and associated strengths in student and faculty recruitment.

Comprehensive space needs analysis seems to have entered the planning process later than might have been ideal. An outside consultant is now engaged, however, and it is difficult to fault a school which has accomplished an unusual degree of success in so many aspects of planning for not reaching all of the areas it might have addressed early on. We also note that, as is the case for many colleges and universities, assessment of facility needs and prioritization seem to be artificially bifurcated, with "smaller" projects and deferred maintenance subject to one process, and larger projects to another. The result is that facilities dollars are not pooled to produce a comprehensive picture from which priorities can be set. However, the current system does tend to protect the aggressive deferred maintenance agenda, where the backlog of projects is dramatically smaller than those faced by the majority of institutions of higher education. At WPI most of the campus buildings are in very fine condition.

The timing of this visit presented unusual challenges for the school and the team. WPI had identified several areas of recent budget concern. Two of these (a significant decline in

continuing education revenues and declining endowment value) are directly traceable to the economic slow down which began to affect financial projections in the most recent spring term, and a third (high financial aid requirements) may be partially related to the economy. However, less than a month after the destruction of the World Trade Center and other attempted terrorist acts, it is difficult to project how the economy will affect our higher educational institutions. We can say, however, that WPI is beginning to assess how it would respond to, and prepare for, the need for budget strictures. Without question the Institute will be better informed because of the strategic planning work that has been conducted over the recent years.

WPI has also engaged in a high degree of assessment of its programs. A major part of the impetus for this practice is the pride the faculty have justifiably taken in the educational innovations launched over more than three decades ago, and the passion for making continued improvements. This capacity for assessment is an unusual phenomenon, and received appropriate tangible recognition from ABET, when WPI was named as one of two test institutions for its new standards which emphasize assessment. What this team finds unfortunate and puzzling, is that WPI has not received broad recognition for its remarkable educational innovations, and its now longstanding commitments to focusing on the effects of educational methods and the empowerment of students. As we detail later in this report, WPI's innovations require much of both faculty and students. In this and other senses, this is indeed a model institution, one which has been willing to rethink certain aspects of its program based upon what it learns in the evaluation process. Iteration and sustained attention to educational reform are dominant parts of the WPI culture.

A few additional words about WPI's culture of innovation, planning and evaluation are appropriate. WPI has a remarkable culture of openness. That may be a product of a highly collegial, collaborative faculty culture, as well as a deep devotion to students. But this culture of openness is also a testament to presidential leadership demonstrating the capacity to listen, and examine, and reexamine. Having said this, the team believes that there is one area of critical long-term importance (highlighted as such in the plan), where the evaluation of strategy and direction does not as yet comport with WPI's high standards and its "can do" attitudes. That is the area of creating a culture which supports diversity, a topic which we will visit at a number of points in this report, because we are concerned that there is an inadequate understanding of what will be required to bring about change, or an insufficient will to bring about change, or both.

## **Organization and Governance**

WPI is in full compliance with the standard on organization and governance, which says in part, "The institution has a system of governance that facilitates the successful accomplishment of its mission and purposes." In fact, WPI goes well beyond minimal compliance to offer an exceptionally strong example of collegial governance appropriate for an institution of its size and character. This is due, it appears, to the hard work, dedication, and vigorous participation in governance on the part of trustees, administrators, faculty, and staff over the past half-decade.

The ultimate responsibility for the welfare of the institution rests with the Board of Trustees. WPI is fortunate to have an active and engaged Board whose members support the mission of the

Institute, enjoy the confidence of the administration and faculty, and energetically support the academic program of the University and its capital campaign. As successful entrepreneurs and business executives and professionals, they are well positioned to advance the welfare of the Institute and to offer shrewd and insightful advice. The Board, which is still largely composed of white males, is aware of the need to continue to diversify itself by the further recruitment of women and people of color. In light of the long-standing need to diversify further the faculty and student body, more aggressive leadership and example at the Board level would be helpful.

The current President has engaged his colleagues on the Board and on the faculty to address the challenging opportunities facing the Institute. He receives high marks from the faculty and the Board for his leadership of the strategic planning effort and the subsequent action plans that flow from it. As evidence of his deep personal involvement, he is said to have drafted much of the plan himself, on the basis of faculty input and ideas. His official cabinet is exceptionally large, providing the Institute a central forum for the examination of issues from diverse perspectives and the dissemination of information. However, the large size of the official cabinet has required the creation of a smaller de facto functional cabinet of the vice presidents and the associate provost. It may be important to recognize in a more public manner the existence and functions of this smaller inner cabinet.

The Provost and his Associate and Assistant Provosts are widely seen as effective leaders of the academic units and are judged to work in close harmony with the President. The Provost's commitment to the advancement of the academic excellence of the Institute is clear and well articulated. It is also clear that he recognizes that his academic aspirations may need to be tempered by the fiscal constraints and uncertainties of the coming months and possibly years. The visiting team could not help but observe that the Institute does not currently have a Dean of Graduate Studies, Dean of Undergraduate Studies, or other administrative support offices. Under the present circumstances, given the need to dedicate resources to front-line faculty and student services, the team does not recommend the multiplication of mid- or high-level administrative offices. Nevertheless, the team would be remiss if it did not comment on what appears to be an exceedingly heavy administrative load placed on the associate and assistant provosts. And as the Institute succeeds further in expanding its research base and its graduate enrollment, the work will only increase. Further, the team feels compelled to ask if expanded staffing in an office such as the Office of Research Administration would not in the end pay for itself by increased success in obtaining external grants.

Faculty governance at WPI is defined by the Constitution of the WPI Faculty, which is subject to approval by the Board of Trustees and which has been amended as recently as April 12, 2001. Faculty participation in governance has been described to the team as intense and vigorous, but most often confined to approximately 25% of the faculty, of whom approximately half are engaged in governance year in and year out. Approximately half the faculty are said to vote each year in the elections to the standing committees of the faculty. Given the heavy teaching load of the faculty and the many points of engagement of the faculty with their colleagues and students, perhaps this modest participation of the faculty in governance is understandable. On one hand, it may indicate that generally the faculty members believe the Institute is moving in the right direction and that they are confident in the judgment of their colleagues. On the other hand, the question must be asked: what are the long-term implications for the preservation of institutional

memory and the cultivation of future faculty leaders and administrators? The torch has been passed from the generation of faculty who first created the notable WPI Plan, and the second generation has preserved and adjusted the Plan to fit changed needs and circumstances. Will the governance experience and institutional awareness be sufficiently strong when WPI next needs vigorous faculty involvement perhaps in redefining itself or charting a new course?

In addition to the formal structures of governance, on this and on most campuses, there is also a virtual governance system imbedded in the administrative processes by which important decisions are made in such diverse areas as campus landscaping, provision of information technologies, or faculty mentoring. It seems to the visiting team that WPI has in place a set of traditions, practices, and communication channels that facilitate good and effective results in these areas of virtual governance.

The accreditation standard calls for “provisions for consideration of student views and judgments in those matters in which students have a direct and reasonable interest.” This is an issue to which the Institute may want to give further consideration. Some students who spoke with members of the visiting team expressed a strong desire to be more involved with and helpful to the Institute, while feeling that their voices were not wanted or welcomed. One approach would be to add student representation to the Board of Trustees. Less formally, students might be added to various planning committees of the Institute.

## **Programs and Instructions**

The Institute’s Self Study and its various catalogues and other publications make clear the wealth of courses and programs available to both undergraduate and graduate students. Consistent with the Institute’s mission, most undergraduate students major in a field of engineering or science. Yet the course offerings in the humanities and the social sciences, including foreign languages and other subjects available at neighboring campuses via a consortium agreement, provide fully worthy components of students’ degree programs. Faculty advising is key to shaping effective programs for individual students. Although there are no particular course requirements, each undergraduate completes a “sufficiency” project in which the learning from a suite of humanities courses is synthesized in a work expressing the student’s mastery and application of relevant aspects of these subjects.

The Institute provides an unusually project-intensive education for undergraduates. Students have rich and extensive opportunities to integrate their academic experience from the course work into Sufficiency Projects, Interactive Qualifying Projects (IQP) and Major Qualifying Projects (MQP). Such experience is valuable in real life where a problem may require knowledge of different subject areas integrated into a solution that must be communicated in a lucid style. As a result, the students seem to have achieved an enriching academic experience. Off-campus MQP’s, including those with international exposure, have added a new dimension to the programs. Students appreciate opportunities for close interaction with faculty.

An effective system for academic advising is in place and starts immediately upon the student’s arrival on campus. During the first semester the freshmen receive academic advising from peer

students and from faculty (Insight Advisor) with demonstrated interests in first year students. During the following semester, the students are eased into their majors where an assigned faculty member becomes the advisor. The peer advisor continues to provide important inputs into academic planning. The bridging program helps bring the innovation of the WPI program into the first year and there appears to be a correlation between participation and higher levels of achievement in the upper class years.

An extensive program in continuing education is offered at two sites in western suburban Boston, one in Waltham and the other at a location called Metrowest on the edge of Framingham. The team's chairman visited each of the two centers prior to the full site visit. Each center provides approximately 22,000 square feet of classrooms, offices, and support space. Both facilities are equipped with the latest computer, communications, and teaching technologies, and both offer an up-to-date array of courses in information technology and related subjects. Graduate courses are offered at both the MetroWest and Waltham campuses. Management courses are offered at the Waltham Campus; Computer Science and Electrical Engineering at both campuses. The Institute seems to have done an excellent job of identifying the training and educational needs of the students and the sponsoring companies, although the competition in this region for this type of program is particularly keen. Though the continuing education program has had an excellent record of continuing enrollments by employees from participating companies, and the overall quality of the program seems quite high, the recent economic downturn has brought a sharp decline in enrollment. In response to changing needs, continuing education is undertaking further consultation with companies and review of programs

WPI has highly professional staff in the offices of Undergraduate Admissions and student Financial Assistance. The admissions staff has a strong record of attracting increasingly large pools of strong applicants, although a recent decline in yield on offers of admission is of some concern. To some extent this is the expected result of competing for stronger students. Opportunity remains, however, to broaden the Institute's appeal outside the New England region, and to more significantly diversify the entering classes. The team expressed a belief that a closer relationship between the admissions and Provost's offices could strengthen the recruitment program, as could the greater use of student volunteers, especially among the seemingly eager minority student volunteers. The Office of Financial Assistance plays an important role in both assisting students of demonstrated financial need and helping achieve overall enrollment goals. A new marketing strategy and plan, currently the subject of much discussion on the campus, should have a significant impact on student recruitment.

The special nature of the undergraduate curriculum was cause for several concerns. Project-based teaching, and the unusually heavy requirements for individual advising of students, place heavy demands on the faculty. Even though the annual teaching load consists of no more than three or four courses in most cases, the overall requirements on faculty of the teaching program are quite heavy. Given the Institute's additional aspirations to continue increasing its research profile, expectations of faculty may reach unrealistically high levels. The administration has responded to this concern by adding a significant number of new faculty positions. Keeping the various expectations of faculty in proper balance and perspective will be a continuing challenge.

Program and Instruction standards call for periodic program reviews. The Self-Study indicated that the Institute intended to review two programs per year. Since the 1991 visit, however, only two programs have been reviewed. The team recommends more regular review of academic programs, especially graduate programs.

The mission of the Institute is to educate “men and women in engineering, science, management and the humanities in preparation for professional practice.” More recently WPI has increased its emphasis on research and graduate education at the doctoral level. The Institute may wish to review articles 4.22 and 4.23 of Standard Four of the NEASC which speak to the preparation of students for licensing in the (engineering) professions. In many engineering disciplines professional status is obtained through professional licensing by respective states. The Institute is on record in urging its graduates to take the Fundamental Examination during their senior year and offers an II-session FE Review course annually.

Some doctoral programs seem to lack a critical mass of students. Doctoral programs require funds to support research assistants. Such funds are generally obtained from federal funding agencies or corporate research. Only very limited help is available to the already heavily burdened faculty in identifying and developing grant proposals. Synergy among development, research administration, and grant administration may yield better results.

The Institute has a long history of commitment to the undergraduate program with more recent thrusts in graduate education. As a result, a number of issues such as access to the Library and laboratories continue to be based on the needs and schedules of the undergraduate programs. The graduate students sometimes feel left out. Problems are often compounded for international students (both undergraduate and graduate) when the campus is completely closed during the winter break. The team recommends that WPI carefully consider its ambitions in the area of graduate education taking care to create the infrastructure (funding, graduate housing) that is necessary for successful growth in this area.

## **Faculty**

By all accounts, Worcester Polytechnic Institute meets the standard for Faculty set by NEASC. The WPI faculty is of very high quality and dedicated to fulfilling the mission and goals of the institution. The faculty is committed to preserving the distinctiveness and enhancing the strengths of the WPI Plan, with its focus on undergraduate education while, at the same time, developing complementary graduate programs. Their level of engagement in teaching and research has instilled a sense of excitement in the institution. In recognition of the demands on the faculty in a course- and project-based degree program, the administration has made a strong commitment to provide sufficient additional faculty positions to meet expectations for teaching, research, and service. New faculty are recruited in national searches which draw candidates from highly competitive programs. The process of recruitment is open and orderly, adhering to the guidelines approved by the faculty and in accord with requirements for equal opportunity employment. The review processes through which faculty are reappointed and eventually tenured and promoted are well documented and understood, and involve significant faculty input and recommendations. As expected, quality of teaching and advising is an important criterion,

along with accomplishment in research, in tenure decisions, and serious efforts are made to document teaching quality beyond standard student course evaluations. Graduate teaching assistants undergo training before they are allowed to assume responsibilities for grading and laboratory and section support, for which they are closely supervised by faculty. WPI salaries are competitive at most levels with the schools with which the institution compares itself and an effort has been made in recent years to improve salaries, especially at the level of full professor, relative to the comparison group.

Faculty assignments and workloads reflect the mission of a strong, innovative team- and project-based pedagogy. While there is expressed concern about faculty workloads, faculty commitment results in intense involvement in the learning environment and the educational development of students. Faculty workloads are consistent within departments; department heads regularly monitor the distribution of responsibility among faculty colleagues. Increasing the size of the faculty is intended to help address the issue of faculty workloads, but continued monitoring should still be undertaken. The policies with regard to faculty, for the most part, are clearly defined in written documents; these policies have undergone review and revision when appropriate in response to faculty concerns although there are sections of the Faculty Handbook such as retirement, which are in need of updating. The charge of evaluating faculty is undertaken with apparent seriousness at every level. The institution has established mechanisms to ensure the protection and fostering of academic freedom and the monitoring of professional and ethical conduct.

The WPI faculty are remarkable for their dedication and loyalty to the institution. In joining the Faculty, they become part of a unique environment characterized by a strong personal commitment to teaching and advising undergraduates. It was the faculty who developed and implemented the WPI Plan. And it is the faculty who ensure its continuity and improvement in taking on a range of activities that are at once energizing and enervating: advising freshmen through the Insight program, advising departmental majors, teaching courses and advising independent and group projects, assessing outcomes, maintaining research programs (which enhance their teaching), and participation in institutional initiatives, such as the formulation of the Strategic Plan, the review of the Self-Study for NEASC, and the faculty retreat to discuss the marketing plan. This sense of community is indeed impressive and extends to relationships among the faculty and with the administration. The collegiality that has developed, as evidenced in collaborative projects and a willingness for department heads to share resources across departments, should stand as a point of pride for WPI. Further, the confidence of the faculty in the administration (and in its organizational structure) is testimony to the overall strength of the institution.

Of particular note is the effort over the past five years to build the faculty to support WPI's programs and goals, as endorsed by the current strategic plan. This has resulted not only in substantial growth of the faculty since 1995, but also in progress in changing its composition through the hiring of a critical mass of women and several minority faculty. This has meant meeting the challenge in the search and recruitment process to identify individuals uniquely suited to WPI, those devoted to undergraduate teaching who also have strong research agendas, instilling in them a sense of the suitability of the WPI environment for their personal and professional success, and providing them with the resources (start-up packages and space) to

balance teaching and research. These efforts to build the faculty also include opportunities for professional development through orientation and mentoring programs for new faculty, reduced teaching loads in the first year, and annual reviews in many departments (beyond the mandated reviews in the second and fourth years). The recent introduction of a parental leave policy in which a new parent may postpone the tenure review for a year further supports the professional development of probationary faculty.

Success in faculty recruitment also carries with it a downside. Supporting faculty research requires an initial allocation of space and funding for renovation and start-up; sustaining faculty research requires providing an appropriate infrastructure going forward, for example, to deal with space constraints and to secure external grant support. (The Office of Research Administration is understaffed but could well pay for itself if it had the resources to fulfill its mission.) All of these needs take up limited resources in an environment of high faculty expectations and increased competition from other institutions. If WPI is to be more than an undergraduate program with a strong teaching faculty, it will need to be prepared to support new faculty at higher levels, both directly and indirectly, to enable them to achieve productivity in their research at an early stage. The implications of the need (and cost) of infrastructure support suggest that slowing the pace of new hiring may be a necessary trade-off to support and retain those faculty already in place who represent the future of the institution.

Another concern is the issue of faculty diversity, specifically continuing efforts in the hiring of minority and women faculty. The visiting team recognizes the progress WPI has made recently in diversifying the faculty, along with the constraints that departments face in the availability of candidates in certain fields. However, to achieve the goals set forth in the strategic plan and to provide a community for a diverse student body, the recruitment of minority and women faculty needs to be an ongoing effort. It requires a continuing commitment on the part of the faculty and the administration and the establishment of strategies within each department for identifying candidates. This may mean in some instances departing from standard search practices, without compromising quality, by focusing search efforts on targets of opportunity, inviting a strong candidate to visit for a term or a year, canvassing graduate programs, professional organizations, and referral networks to develop a pool of strong candidates. Thinking broadly and strategically puts field definitions secondary to a standard of overall excellence. We expect these are not new concepts to a faculty and administration already making strides in this area, but we cannot emphasize enough how important these efforts are to the health of an institution concerned with broadening its applicant pool and seeking recognition for its innovative programs in a national context.

Finally, the question of who is a faculty member and the appointment and review of non-tenure track and adjunct faculty are issues of concern. Instituting a formal review process is of mutual benefit to the individual, as a form of professional development, and to WPI, for monitoring teaching. Achieving some consistency in the categorization and description of appointments will enhance reputation and raise morale.

## Student Services

The Division of Student Affairs is responsible for maintaining both the quality of student life and general community standards. This area is overseen by the Vice President for Student Affairs and includes 13 offices: Campus Center and Student Activities, Diversity and Women's Programs, Health Center, Healthy Alternatives Office, International Students and Scholars Program, Minority Affairs, Residential Services, Student Activities Office, the Student Development and Counseling Center, Physical Education and Athletics, Career Development, Financial Aid, and Enrollment Management. The department appears to be very committed to providing students with a broad array of services that both educate and stimulate them to challenge attitudes, behaviors, and their places in society. It is clear that the department's staff takes great pride in their role in student development on campus. The department subscribes to the core values of care, respect, perspective, empowerment, and honesty to provide the structure for student-related initiatives.

WPI provides a very exciting environment for its students both intellectually and socially. The opening of the Campus Center in March 2001 has fulfilled its anticipated role and increased the sense of community in students, faculty, and staff. The activities held in the Center are overseen by the Director and are funded by a student activities fee. The Student Government Association allocates these funds using both a set formula and a degree of discretion based upon the purpose and general quality of proposed activities. From mid-March to mid-May, the Center hosted 320 meetings, activities, and events. There have been concerts, career fairs, open house programs, athletic and student leader recognition programs, academic conferences, and corporate meetings. A Campus Advisory Board has been established this term to advise the Director on issues of programming, meeting space, and community usage. The student government associations for both undergraduate and graduate students at WPI are both involved and vocal in the utilization of the Campus Center with discussions focusing on: more diverse programming, the influence of Greek life at WPI, and community service opportunities.

Diversity and Women's Programs has an ambitious set of goals: to support diversity on the WPI campus through outreach programs to high school girls and under-represented minority students; to develop programming on diversity issues for the WPI community; to provide on-going support and advocacy for female students; and to assist in recruitment of diverse students and faculty. Student focus groups have assisted in identifying and setting the goals and priorities of this office. What might be helpful is a discussion of the results of the focus groups in a larger arena. The Diversity and Women's Programs should be proud of their current offerings, especially the Kids and Goats Mentoring Program and the Gompei's Lecture Series. While there appears to be ample opportunity for women to become involved, few of the minority women at WPI are actually participating in any of these programs. The Institute should work to ensure that those designing the programs accurately ascertain the needs and interests of minority students. In addition, there seems to be an on-going need for gender-issues training targeted to specific groups such as Resident Assistants, fraternity and sorority members, athletes, and indeed, the general community. At the time of the site visit, there was no single person responsible for Title IX education on campus.

The issue of Diversity is an issue that remains a constant concern at WPI. The Minority Affairs Office, a staff of one, oversees many wonderful programs in an attempt to recruit and retain minority students at WPI. Summer Programs and Outreach Programs that were successful in the past years, however, have taken a downturn in participation. An assessment of the programs and of the Office in general was launched in March 1999. One of the significant outcomes of the assessment was that the return of minority recruitment to the Admissions Office, instead of remaining with Minority Affairs, may have put the issue on a back burner. Recruitment of this population needs a clearer marketing strategy for success.

The Health Center sees to the standard medical care of students, health education, and other on-going programming. The Health Center's staff is very dedicated to serving students in areas that are preventative as well as those in which intervention is necessary. The Healthy Alternatives Office addresses alcohol and drug abuse prevention on campus as well as HIV/AIDS awareness and other important issues affecting this age group. Programming from this office begins during Orientation and continues both on- and off-campus throughout the year. The primary concerns are campus security, dangerous drinking, inappropriate behaviors among students, and off-campus behavior that reflects negatively upon the Institute.

International House functions as a center for international education as well as a place which tries to foster community among these students, scholars, staff, and faculty. In the fall 2001 semester there are 437 International Students attending the institution: 136 undergraduates and 301 graduate students. While the Institute heavily recruits this population, there remains the problem of housing these students upon arrival, during extended vacations, and over the summer sessions when many are engaged in internships and academic projects. There is an extensive International Student Handbook as well as programs and activities to encourage these students to participate fully in the community. International students praise the academic qualities of the institution and are generally happy with their out-of-classroom experiences. English as a Second Language is offered but only required for those teaching assistants who score below 46 on the SPEAK test. Several graduate students spoke of the need to have a more comprehensive orientation and intensive language instruction for those who become teaching assistants.

Residential Services at WPI strives to create residence halls that are safe, healthy, personally and intellectually challenging, as well as fostering a welcoming climate for diversity. There are many areas in which this department has right to be proud: online freshman housing applications, a commitment to make all campus housing smoke-free, a web page, theme housing, and sprinkler systems in all residence halls. However, there are concerns among the Director and staff, such as a reduction in staffing and the recent phenomenon of admitting students past the deadline (creating a housing problem for the first time in 3 years). Several issues are particularly important to Residential Services because they have had an impact on the quality of student life: overcrowding in student rooms, the loss of common area and lounge space, and over full-capacity usage in bathrooms. RA's currently supervise students in the halls; however, the director would like to see the use of resident directors.

On-going training for the residential staff seems to be current and appropriate for the needs of the residents. Topics in the training sessions include suicide, communication, eating disorders, alcohol abuse, and spirituality. The student residential staff seems to be the most diverse of

student leaders on campus including women, students of color, and international students. The responsibility to stay abreast of off-campus housing and student rights is a challenge for this staff and one that they see as increasing with increased enrollments.

The Student Development and Counseling Center's mission is to provide pro-active educational programming and training as well as counseling, referral, and crisis intervention. The staff participates in student training programs such as RA training throughout the year. Stress and sadness are the two issues most frequently presented by students. Last year there were 300 student visits, leading the Director to see the need for at least one more fulltime staff member. Students of color had 20 visits to the department last year; faculty and staff visits are up as well as parental consultations. The entire staff is clearly loyal and excited not only about the institution but about the students.

In November 2000, a Study of the Quality of Life at WPI: The Expectations, Competencies, Involvement, Climate and Satisfaction of Undergraduate Students was undertaken. The results should be valuable in planning for the Institute's future.

Students are engaged with their academic work and see the extracurricular experiences as integral to the WPI education. Students clearly appreciate the new Campus Center yet verbalized the concern that the Institute continue to find ways to create community within the Center. Staff in this department are hard working and dedicated to the mission of WPI and to the general welfare of the students. Many other departments not mentioned in this section are also doing a splendid job in making students feel part of the community including athletics, intramural/club sports, and campus security.

Among the major concerns for this standard and section of the report is the issue of diversity, especially concerning students of color and how they feel the Institute views them. These students spoke of feelings of racism in and out of the classroom and shared their desire that the Minority Affairs Office be granted additional staff. These students clearly wish for a stronger signal from the upper administration that they are welcome. More support from the administration and staff, and the inclusion of these students in planning and recruitment activities, will pay tremendous dividends. Female students, by comparison, seem most interested in not being so singled out that they become a "minority." They do not see themselves as such; however, the staff who work with programs for women saw areas of needed improvement: more support from the athletic department regarding scheduling of practice fields, etc., physical fitness equipment upgrades, where and how to recruit. Regardless of the categories in which they might be placed, however, the students that we met were delighted with their academic experiences and absolutely see themselves as ambassadors of WPI.

## **Libraries and Information Technology**

The WPI Libraries are providing effective leadership in promoting access to information by increasing access to e-journals, databases, and e-books. Access to the scientific and technical literatures has been greatly improved and faculty have commented positively on the impact of e-journals and sci-tech databases (including Web of Science) on their own productivity. The

Library's strategy is to license more electronic resources for the desktops of faculty and students, particularly graduate students, so the research time of the faculty can be more effectively leveraged.

Increased support for the journal and database acquisitions budget and the commitment from the administration to continue this support ensures that as faculty continue to embrace this new technology, the electronic collections will be sustainable. The current acquisition of books and media appears to be adequate to the curriculum and research programs of WPI.

By establishing a Periodical Advisory Committee composed of faculty and library staff, the process of deciding on which journals and databases to acquire, retain, or discontinue, receives appropriate community input. This process has also enabled the library to cancel print subscriptions when there are full text electronic alternatives available online.

The Library has proposed and is working to gain acceptance by the academic departments for the electronic submission of theses and dissertations. The Library currently houses the student IQP and MQP reports. Working with colleagues in Information Technology, the Library has proposed that these documents be submitted electronically. An electronic database of these reports can contribute significantly to the effort to market the uniqueness of the WPI undergraduate program. Prospective students and partners would have the opportunity to understand the range of topics and the high quality of student work at WPI online. An effective forum for implementing these ideas and gaining the support of academic departments has not yet been implemented.

Library hours are of concern to some students, but this concern may also be true for the new Student Center. Analysis of the Library's usage suggests that despite vocal expressions of need, student use of the Library in late evening hours does not seem to be significant. The demand for longer hours should be evaluated against the increasing access the Library provides to databases, journals, and e-books over the Web on and off campus.

The Library has made creative use of consortia in sharing resources as well acquiring resources through purchasing cooperatives. The Library appears to run an efficient operation and has successfully experimented with outsourcing for library cataloging (fire protection engineering collection) and processing of new acquisitions in order to reduce costs and improve efficiency. These efforts may be undermined by the inability to acquire library resources over the Web by the use of WPI purchase credit cards. Increasingly, many publishers, societies, and book dealers accept credit card orders over the Web.

Throughout the Library, the carrels, chairs, and general furnishings show their age and use and do not convey a sense of pride of place to the students (with the exception of groups of casual seating on most floors). The Library building itself seems adequate to the program, but the carpet and furnishings are in desperate need of replacement. The Gordon Library provides a small number of individual study rooms and networks connections are being installed. None of the rooms is equipped with computers and the furnishings are of the same character as those throughout the library.

In these days of competitiveness in student recruiting and concerns with the quality of student life, it is important that the Library spaces be upgraded. A plan for a major renovation of the facility is in development and the necessary fund raising has been earmarked in the capital campaign. If the full renovation cannot go forward in the next three years, serious efforts should be made to provide cosmetic and furnishings improvements. Scattered throughout Gordon Library, one can find paintings, prints, engravings, and other art works. Unfortunately, for the most part, the artwork is on unpainted cinder block walls and looks somewhat out of place. Some paint, new carpet, and upgraded furnishings would do wonders for the Library.

Shepley, Bulfinch, Richardson and Abbot have completed a master plan study of the facility and its potential. The initial vision for the facility includes a relocation of the IT Helpdesk and PC support; support for digital resources; web development and support; space for computer and information literacy programs; group spaces for student study and work with multimedia and technology; as well as the more traditional library information services, instruction, and collections. The creation of an information and support facility along these lines would enhance WPI's reputation for leadership in the integration of information technologies and library information services and serve as a model for other institutions. A committee to develop the vision and the program is currently being established.

### **Information Technology**

The work of the Information Technology group and its various divisions received universal high praise from all constituents. The appointment of a Vice President for Information Technology provides, at the cabinet level, an effective conduit for the communication of the IT infrastructure needs and the role of information technologies in teaching, project work, and research.

The staff of the Information Technology group works well together and has a strong sense of community, collaboration, and teamwork. Evidence of a strong sense of responsibility and accountability to their constituents abounds. Their strength, professionalism, and leadership have fostered an outstanding reputation within WPI. They also effectively market their achievements and strengths by participating in national surveys and they have recently received national recognition.

There is a clear strategy of managing all IT infrastructure activities, implementing administrative and academic computing systems and support; centralizing computing support, implementing Internet2; developing replacement cycles for pcs; developing training programs; and providing instructional media support and services to faculty, staff, and students. In order to establish liaisons with its constituents, IT is currently establishing an advisory committee composed of faculty representatives from the academic departments and the administrative units, staff, and students. This advisory group will create forums for each constituent group to present, discuss, and share their information technology needs and ideas and may well serve as a model for other service groups at WPI.

### **Collaborative Support for Teaching and Learning**

New state-of-the-art instruction capable of accommodating 32 students at 16 workstations is about to be opened in Gordon Library. The facility is attractive, well arranged and designed, and stands in stark contrast to the tawdry furnishings in the rest of Gordon Library. A second

computer training room with 12 workstations will also be opened in the fall of 2001. Information Technology effectively manages a wide range of computing labs across the WPI campus.

The Library continues to develop an aggressive information literacy program and is working effectively with the Web Coordinator and the Instructional Media Center to diffuse the program more extensively into the curriculum. IT has a strong program of training courses for computer software and applications. Together these two programs are an outstanding example of the potentially effective collaboration across these groups. The Library's Web group has done a great deal of excellent and effective Web work for the WPI campus. However, consistent graphical standards for Web sites across the WPI Web are not evident. This is no doubt due to the lack of standards and the dispersion of responsibility and authority over many departments and units. The development of a new marketing program for WPI should provide the opportunity for the Library's Web group and others in IT to work collaboratively with the program and the communications staff and contribute to the overall marketing of WPI through the Web.

### **Instructional Media Center**

The Instructional Media Center serves as a focal point for promoting and developing the use of information technology in teaching, learning, and scholarship and provides a full range of educational technology and campus media services. In addition to a wide range of technology and media services, this group has shown much creativity in pushing the application of technology in teaching by establishing fellowships, creating myWPI, implementing Blackboard, and supporting the Advanced Distance Learning Network. Their work with assisting faculty in developing instructional materials and migrating courses to ADLN receives high praise from the faculty. Several grant proposals for faculty instructional development and the development of digital resources have been unsuccessful and a wider net of funding opportunities needs to be identified to encourage and support growth in this area. Staff should be encouraged to continue to pursue outside funding opportunities in this area.

The Information Technology group has strong support within the WPI community and has many accomplishments to its credit. As one of the strengths of WPI, it will need to continue to receive resources appropriate to its significant tasks in building and maintaining the infrastructure, providing information and computing support services, and advancing the diffusion of technology in teaching and learning.

## **Physical Resources**

WPI is located on 80 acres of land in Worcester, in a neighborhood that has a mix of residential and professional buildings along with the major cultural center of the city. The Institute, in addition to its 32 major buildings, has been aggressive in acquiring property in the area to provide housing for their students that now includes 38 houses and a 24-unit apartment building. Other properties have been acquired that provide for expansion opportunities as well as investments.

The Director of Physical Plant reports to the Vice President for Administration and both are members of the President's Cabinet, which is important as priorities for allocation of resources are considered. Deferred maintenance is calculated to be at \$12,000,000 and is kept on a file that is updated regularly. In the past ten years \$28 million above the regular budget has been invested in major campus projects, with safety and ADA compliance receiving the highest priority. This has had a tremendous impact on the appearance of many classrooms and laboratories as well as keeping the technology current. The creation of a pedestrian mall on what was formally West Street and the new Campus Center has dramatically improved the campus appearance and feel. This action is a tribute to the ability of Worcester and WPI to work to strengthen the Institute and in turn the city. An external consultant has been hired to conduct a space audit, which will help the Institute determine current and future space needs. This will also provide the Institute the opportunity to create a facilities master plan, linked to the Strategic Plan, and to follow up with a financial plan that will incorporate capital campaign as well as debt financing opportunities.

There are facilities on campus that need attention, particularly those for women. Restrooms and recreation spaces, including equipment for women, are needed throughout the campus. Access to the library, the campus center, and laboratories is a concern on the part of the students and faculty. The Library is in need of major renovations including a reorganization of space in order to accommodate project work groups, which are a central part of the curriculum. Stratton Hall, an academic building, is not currently ADA compliant and Stoddard Resident Hall is in need of major repairs.

WPI has met in all respects the standards for physical resources. The developing space planning document should serve as an excellent starting point for the development of a facilities master plan for the campus.

## **Financial Resources**

The administration has a budget process that involves many constituents and which produces recommendations to the President's Cabinet containing both operating and capital budgets. The recommendations flow on to the Board of Trustees through the Budget and Finance Committee. The budget has a five-year planning horizon and is based on predictions for key variables such as tuition, fees, salary increases, etc. The Board of Trustees approves a summary budget in February. Details are then refined by the administration and a final budget is approved in May.

As a policy of the Board, WPI operates with a balanced budget. Budget control is accomplished through periodic status reports, computerized information on revenue and expenditures, and a culture of strong fiscal responsibility. The Institute has an excellent credit rating (A+) from Standard and Poor's and is well below the capacity level of borrowing. The endowment is carefully managed and has increased significantly in the past 6 years. The Institute observes a conservative rate of avancement. The Institute has the capacity to endure a major loss of revenue from operations and continue to provide the day-to-day academic programs without an impact on quality.

Tuition dependency and the high level of tuition discount continue to challenge the Institute. The percentage of discount as a percentage of cost of attendance (COA) is shown below.

	ACTUAL	ACTUAL	ACTUAL	ACTUAL	PROJECTED
% of COA	FY 1998	FY 1999	FY2000	FY2001	FY2002
Freshman	32.4%	33.7%	33.7%	35.2%	38.5%
Upperclass Students	29.9%	30.2%	30.3%	29.5%	30.6%

A relatively small applicant pool (3,244) and a high acceptance rate (79%) make the Institute less selective and a low yield on offers of admission (26%) contributes to the discount problem.

Team members wished to encourage the Institute to develop an integrated planning document that incorporates the strategic plan, the space plan, the facilities master plan, and a financial plan, and to consider creative ways to fund capital needs that include debt to bridge expectations that are included in the capital campaign (i.e. library renovations and expansion of academic space).

## Public Disclosure

A review of the Institute’s catalogs, print publications, and the Web site indicates that there are no deficiencies in WPI’s efforts in public disclosure. Its mission, educational offerings, policies, course offerings, research activities, environment, etc., are consistently and accurately portrayed. The educational and research backgrounds of faculty are provided and their professorial, adjunct or affiliate status is indicated. The Web site appears to be consistent with print publications, particularly in terms of the course descriptions, catalog, admission policies, and other policies. In addition, forms are readily downloadable for student use and a six-year archive of the catalog is maintained on the Web site. Disclosure statements are made available at the appropriate points.

Many courses in the humanities and social sciences are offered every other year and this is so indicated in both venues, printed catalog and Web site. In addition, the Web site, as appropriate, provides up-to-date information on new and experimental courses. Undergraduate and graduate course evaluation data is readily available to members of the WPI community on the Web.

The marketing effort the Institute has proposed should include a thorough review of publications including reviewing the consistency of representations in departmental Web sites. Increasingly, the Web is becoming one of the primary vehicles for marketing, communications, branding, and public disclosure.

## Integrity

The accreditation standard reads, in part, “The institution subscribes to, exemplifies, and advocates high ethical standards in the management of its affairs and in all of its dealings with students, faculty, staff, external agencies and organizations, and the general public.” The

Self-Study report makes clear that the Institute meets this standard in and through its publications, administrative procedures, and practices. Its various offices comply with the standards of their respective professional organizations. And the appropriate committees for appeals of personnel decisions, access to two ombudspersons, and procedures for raising and resolving grievances provide the necessary structures to protect individuals in an equitable manner. The staff surveys provide a means for problems to be identified and issues to be raised for more general consideration.

Although the team did not receive any complaints of sexual harassment or indications that there is a problem on campus, it may be advisable for the Institute to take more vigorous actions than it has to date to educate the community on the prevention of sexual harassment and the proper steps to take when it occurs. It has been the experience of many other campuses that workshops and employee orientation sessions on harassment are necessary to assist faculty, staff, and students in recognizing harassment and dealing with it in the proper manner. Liability for the actions or omissions of administrators and supervisors can have serious financial consequences for an institution.

Elsewhere in this report of the team's observations, the issue of increasing racial and gender diversity has received considerable attention. Here, the team will simply recognize the progress that has been made, while urging more vigorous actions on all fronts to recruit and attract a more diverse population to work and study at WPI.

The team further commends continuation of the discussion of a statement on academic dishonesty and a Campus Creed. As the report of April 24, 2001 to the Committee on Governance from the Ad Hoc Committee on Academic Honesty makes clear, there are differences in perspective among faculty and students. The prevalence of information technology and the heavy involvement of students in team projects are just two reasons for giving the perennial question of honesty and integrity in academic work a sustained consideration. The faculty and students are to be commended for taking the issue very seriously and for working together to create guidelines and a framework for addressing academic integrity.

## **Conclusion**

The site visiting team was very favorably impressed by what we saw and learned at WPI. The administration has a clear notion of where it is taking the Institute and it has the management and leadership talent to succeed. The faculty is deeply committed to the Institute's mission and provides a strong sense of tradition, firmly rooted in the WPI Plan. The administration and the faculty share the important aspiration of increasing the research stature of the Institute without compromising the essential quality of excellence in undergraduate education. The Board of Trustees is strongly and actively supportive of the Institute's leadership and goals. WPI students have a deep pride and a genuine enthusiasm for their membership in the WPI community. The academic programs operate at a very high level of quality and integrity.

Planning, evaluation, and assessment are watchwords at WPI. From the highest levels of the Institute and its grandest plans to the implementation of everyday activities, the Institute proceeds in thoughtful, measured paces according to carefully developed plans that are the subject of nearly continual monitoring, evaluation, feedback, and modification.

While the preceding sections are rich with advice, and while we wish to be helpful to our WPI colleagues by reflecting at substantial length on our observations, no issue identified during our visit rose to the level of cause for a formal recommendation. The recent economic recession has brought challenges common throughout higher education, especially to programs such as continuing education where WPI has considerable exposure. Space planning and faculty recruitment are also being affected by the economic downturn. But the administration has a firm grasp of the associated issues, and we hope the problem will be short lived in any event. There were, however, three issues that dominated much of our discussion and on which we hope our report will be of some assistance: the need to find more effective means of recruiting minority faculty, staff, and students; the impression of some degree of overlap and a possible need for sharpening the focus of some programs within the Division of Student Affairs; and the wish that WPI might take a slightly more aggressive approach to financing the necessary investments in faculty and facilities development despite the current economic challenges.

On behalf of my colleagues on the site visiting team, I wish to extend our gratitude and best wishes to President Parrish and to all members of the WPI Community.

Respectfully submitted,

Dennis D. Berkey