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Fifth-year Report to NEASC
August 2006

Volume 1

2. Statement on Report Preparation.

Drafts of this report were supervised by the WPI vice presidents listed in italics.

Areas Identified For Special Emphasis, with primary authors

Concern 1 Diversity: *Carol Simpson*, Lance Schachterle (Associate Provost and NEASC Liaison), Calvin Hill (Director of Diversity Programs)
Concern 2 Research: *Carol Simpson,* Franc Lemire (Director of Research Administration)
Concern 3 Residential & Co-curricular Life: *Janet Richardson*, Philip Clay (Dean of Students)
Concern 4 Physical Resources: *Jeffrey Solomon*, John Miller (Director of Physical Plant and Associate VP for Administration)

Standards, with primary authors

Standard One: Mission and Purposes - *Carol Simpson,* Lance Schachterle
Standard Two: Planning and Evaluation - *Carol Simpson,* Lance Schachterle
Standard Three: Organization and Governance - *Jeffrey Solomon*
Standard Four: The Academic Program - *Carol Simpson,* Lance Schachterle
Standard Five: Faculty - *Carol Simpson,* Lance Schachterle
Standard Six: Students - *Janet Richardson*
Standard Seven: Library and other Information Resources - *Thomas Lynch,* Helen Shuster (Head of Gordon Library)
Standard Eight: Physical and Technological Resources - *Thomas Lynch*, Ben Thompson (Computing Services)
Standard Nine: Financial Resources - *Jeffrey Solomon*, Judi Trainor (Budget Officer)
Standard Ten: Public Disclosure - *Christopher Hardwick*
Standard Eleven: Integrity - *Christopher Hardwick*
Appendix: WPI Corporate and Professional Education- Stephen Flavin (Dean)

The core of the review for academic programs draws upon the on-going work, begun in 2004, of seven presidential commissions charged with reviewing WPI programs. Over fifty faculty worked on these commissions, along with staff and student members.

In addition, a draft response to Standard Four was discussed and approved by the WPI Committee on Academic Policy.

The report overall was edited by Associate Provost Lance Schachterle and reviewed by the Provost and Senior Vice President, Carol Simpson.

The report is approved by and submitted by President Dennis Berkey.
3. Institutional Overview.
(from the WPI Undergraduate Catalog; additional information is available at
http://www.wpi.edu/About/.)

THE TWO TOWERS TRADITION: THE SECOND CENTURY

WPI, the nation's third oldest private technological university, was established in 1865 by the New England industrialists John Boynton, Ichabod Washburn, and their associates. Boynton and Washburn endowed the first two buildings on campus as academic classrooms and practical shops. Boynton Hall and the Washburn Shops—renovated today into state-of-the-art facilities—still preserve their distinctive original towers. These "Two Towers" represent WPI's continued commitment to Academic Excellence through real-life project experience that synthesizes classroom learning.

WPI has awarded graduate degrees since 1898, adding new programs regularly in response to the developing needs of the professional world. WPI is among the top 50 science

colleges in the nation in terms of the percentage of undergraduates who receive doctorates. Presently, WPI offers the master's degree in 25 disciplines and the doctorate in 14.

The current student body of over 3,600 men and women includes about 1,000 full and part-time graduate students. Currently, students attend WPI from almost every state and over 60 foreign nations.

The current president of WPI, Dr. Dennis D. Berkey, assumed office in 2004 having served as faculty member, dean and provost at Boston University.

4. Responses to Areas Identified for Special Emphasis.
Note: In 2004, WPI posted a 2002-04 statement at www.wpi.edu/Academics/Outcomes on our work to respond to all four 2002 NEASC concerns; those 2002-04 postings are included in these overviews which are updated to summer 2006.

Concern 1. Achieving its (WPI's) own goals for diversifying its faculty and student body.

CONCERN: We recognize that a number of factors, such as the paucity of appropriate candidates for teaching positions in certain disciplines and the somewhat limited degree of interest in engineering careers among high-school students with divergent racial backgrounds, have proved to be obstacles to the Institute's fulfillment of its goals for diversifying its faculty and student body. Thus we are pleased to know that significant progress has been made of late with regard to gender diversity in the faculty and are also heartened to learn of the many recent initiatives designed to further diversify the campus, including enhanced efforts in the area of recruitment, increased funds for scholarships, plans for a multi-cultural center, and involvement in a National Science Foundation grant [Louis Stokes Alliance for Minority Progress or LSAMP] *to support minority participation. The Commission looks forward to learning of the Institute's further progress in this area in the 2006 report, in keeping with our standard on Programs and Instruction, which asks that an institution endeavor "to develop a student body which as a whole is broadly representative of the population the institution wishes to serve" (4.33) and our standard on Faculty, which specifies that an institution "addresses its own goals for the achievement of diversity of race, gender, and ethnicity" (5.4).*

Student Diversity.

(2002-04) WPI redirected some of the funds from the NSF-LSAMP grant to Admissions to support new recruitment and pipeline initiatives for underrepresented students. We increased the number of travel scholarships available for pre-qualified students of color to visit the campus. Other initiatives under LSAMP are the Martin Luther King Overnight Program; Leaders in Math and Science Student Conference for students nominated by their high school teachers; and funding the Kaplan prep course for students who will be here for the Strive Summer Program. These, of course, are in addition to the continuing pipeline initiatives in the Admissions Office and in the Office of Diversity and Women's Programs.

In January 2003, Calvin Hill, then a PhD student at Howard University, accepted the position of Director of Minority Affairs, vacated when Dawn Johnson left in spring 2002 to pursue doctoral work. One of his many contributions has been to establish a more accurate database than has previously existed to indicate the ethnic background (when self-identified by students) for the WPI undergraduate population. We hope that this database will enable us to track the matriculation and graduation rates for underrepresented student populations more precisely than has been possible in the past.

(2004-06) In the spring of 2005, the Minority Affairs Office and the Office of Diversity and Women's Programs held a retreat to examine the structure of, and relationship between, the two offices and the services that they provide to students. As a result of the retreat, the Office of Minority Affairs was renamed the Office of Diversity Programs, and all areas of diversity were consolidated under the single office. In addition to serving underrepresented populations in science and engineering, the office now focuses on all areas of diversity including religion, sexual orientation, and other minority populations at WPI such as Asian American students. The redesigned office of Women's Programs now reports to Diversity Programs. This restructuring has provided for more coordinated services in the area of diversity for the WPI campus community.

Dr. Calvin R. Hill is now in his third year as Director of Diversity Programs (previously the Director of Minority Affairs). Under his leadership, the office has seen a growth in student programs, pipeline initiatives, and community partnerships. In February of 2004, WPI opened a Multicultural Center called OASIS (Offering Acceptance, Safety and Inclusion for Students) by rehabilitating a house near campus. The center was opened to provide a place for WPI's underrepresented students to gather, build community, and feel supported in their individual cultural identities. At the same time, OASIS serves as a venue for programs and activities and provides a centralized location for all students to learn about culture. OASIS is also home to our Excellence in Math Science and Engineering (EMSEP) tutoring program.

With the size of our underrepresented student population increasing,[1] the services and programs to address their specific needs are being expanded and revised. To assist in this process, WPI has established partnerships with various community networks which include the Northeast LSAMP, Intel Corporation, the Greater Worcester Community Foundation, and the Worcester Higher Education Resource Center. These partnerships have provided additional resources to assist our efforts in the recruitment, retention and improving the quality of life of our underrepresented students. For example, WPI is now in its fifth year of funding through the NSF Northeast Louis Stokes Alliance for Minority Participation grant. During this period, WPI witnessed the largest increase in underrepresented student enrollment, which made up 8.5% of the class of 2008. Within this group, we saw a substantial increase in the number of African American students, with 29 in the class of 2008 as compared to 10 in the class of 2007. Our Hispanic and American Indian populations have remained constant.

Support for WPI's underrepresented population is achieved primarily through student involvement in the Excellence in Math Science and Engineering Program (EMSEP), an academic support program designed to aid in the retention of African-American, Latino, and Native American students at WPI. The program provides a comprehensive network of support services to eligible students during their enrollment at WPI. EMSEP works to support students of color by offering peer tutoring and mentoring, individual advising, cultural and social programs, professional development opportunities and community service projects. A summer program is offered to entering freshmen students of color to assist with the transition to college life. EMSEP maintains a 90% retention rate and 75% of the program participants have graduated from WPI. (Note that these rates are at least as

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[1] ALANA (African American, Latina, American Indian) students as a percentage of the first year class - A five year comparison: 2001 – 3.8%, 2002 – 4.4%, 2003 – 5.8%, 2004 – 8.5%, 2005 – 6.2%.

good as those for majority students at WPI.) The program is evaluated annually by new students. A survey of graduating seniors in the spring of 2006 asked them to reflect on the EMSEP program and their involvement over the course of their college years.

Another important component of WPI's work with underrepresented students is our commitment to diversifying the engineering pipeline and the technological workforce. New England's approximately 78,000 African American, Hispanic and American Indian college age students represent only 10 percent of the region's college enrollment. Furthermore, the percentage of these underrepresented students majoring in STEM disciplines is small. The primary goal of WPI's outreach programs is to increase enrollment, retention and graduation of underrepresented minority students in Science, Technology, Engineering and Mathematics (STEM) disciplines in the region.

The WPI Strive program is currently in its twelfth year of existence at WPI and it provides a hands-on exploration of engineering, math and science for African American, Latino and American Indian middle and high school students. In 2003 and 2004, WPI created two new academic year pipeline programs which complement our existing summer programs. The Math and Science Technology Education Resource Program (MASTER) and the Step into Strive program have provided over 100 Worcester area underrepresented students with exposure to the various STEM disciplines, as well as increasing their familiarity with WPI. Our many outreach programs demonstrate our overall commitment to diversifying the technological workforce.

The Registrar is responsible for tracking various kinds of data about WPI students. Below is a 21-year history of underrepresented student matriculations at WPI. The Office of Diversity Programs uses these data, with the information it has collected on student cohorts, to track graduation rates for these students. Increases in minority participation are slow, but steady.

ENROLLMENT OF UNDERGRADUATE MINORITIES AND WOMEN
Underrepresented Minorities are Blacks, Hispanics, and Native Americans

	Underrepresented Minorities	Percentage of Total	**Women**	Percentage of Total
FA85	45	1.7%	494	19.0%
FA86	47	1.8%	461	17.4%
FA87	31	1.2%	467	17.9%
FA88	28	1.1%	465	18.5%
FA89	37	1.3%	489	17.8%
FA90	38	1.4%	492	18.3%
FA91	39	1.4%	504	18.4%
FA92	58	2.1%	517	18.6%

FA93	90	3.2%	542	19.3%
FA94	84	3.1%	548	20.5%
FA95	84	3.2%	537	20.6%
FA96	115	4.5%	552	21.6%
FA97	126	4.8%	578	21.9%
FA98	125	4.7%	584	21.9%
FA99	124	4.6%	609	22.8%
	Underrepresented Minorities	Percentage of Total	**Women**	Percentage of Total
FA00	111	4.1%	626	23.2%
FA01	114	4.2%	610	22.5%
FA02	120	4.4%	633	23.4%
FA03	138	5.1%	644	23.8%
FA04	157	5.7%	674	24.4%
FA05	163	5.8%	693	24.7%

Faculty Diversity.

Diversifying the WPI faculty remains a major challenge. In 2002-03, one of four Black faculty left WPI to pursue a different career path. In the same year, WPI tenured its first Black faculty member.

When Provost Carney arrived at WPI in 1996, he sought to increase the number of women and minority faculty. Dr. Carol Simpson, who began as provost in February 2005, has continued the same commitment. The table below indicates progress made to date. Almost half of the over one hundred faculty hired recently are women and/or minorities.

Faculty Hiring in the Last Decade

Academic Year	New Hires	Minorities	Females
96/97	16	3	5
97/98	11	4	3
98/99	14	7	3
99/00	14	3	5
00/01	14	0	4
01/02	5	1	1

02/03	18	4	2
03/04	7	2	3
04/05	12	2	5
05/06	5	2	2
Total	**116**	**28**	**33**

Faculty Counts for Fall 2005		
Class	**Gender**	**Total**
Department Heads	F	1
	M	14
Department Heads Total		15
Full-Time, Non-Tenured	F	18
	M	34
Full-Time, Non-Tenured Total		52
Full-Time, Tenured	F	21
	M	120
Full-Time, Tenured Total		141
Grand Total		208

(2002-03) The Community Council, charged by the president to advise him on implementing greater diversity, identified a team of external consultants to work with WPI to increase our awareness of the significance of diversity issues. The council itself held a full-day retreat with the team in November 2002, which among other actions led to a detailed inventory of steps that have or could be taken to increase awareness of diversity issues on campus. That inventory was conducted in fall 2003. The Community Council, with support from the president, also organized a speakers series on pluralism and diversity, including as featured presentations Dr. Beverly Daniel Tatum, author of the widely-read *Why Are All the Black Kids Sitting Together in the Cafeteria* and Dr. Allan Johnson, author of *Privilege, Power and Difference*. In April 2002, Academic Affairs also invited Dr. William Wulf, President of the National Academy of Engineering, to address the community on the crucial importance of diversity to the engineering profession.

At the May 2003 Cabinet Retreat, the external consultants conducted a half-day workshop on pluralism for the president, vice presidents and their senior staff. The retreat was highly productive, was repeated later in the summer for senior staff and was conducted again in the fall for academic department and program heads.

(2004-06) Dr. Carol Simpson, a geoscientist with experience as an academic department head and as an associate provost at Boston University, and as a program director at NSF, became provost and senior vice president at WPI in February 2005. She has made clear to department heads, faculty search committee members, and to the faculty her commitment to continuing to diversify the WPI faculty. She has encouraged probationary female and minority faculty to make full use of existing family leave policies and has increased flexibility in stopping the tenure clock for family or personal reasons. A new initiative, piloted in spring 2005, will provide a flexible personal development account to female faculty that can be used toward the costs of child care. A monthly series of informal lunch discussions among female faculty began in AY2005 and is addressing a variety of issues

pertaining to sustaining a nurturing environment for women on campus. Dr. Simpson has also co-sponsored an experimental, interdisciplinary course in spring 2005 on "Men, Women and Power," which directly addressed gender issues.

Dr. Simpson also brings experience with efforts to increase diversity among the graduate student population through her past connections with the NSF-funded Northeast Alliance for Graduate Education and the Professoriate – a group of 10 universities whose goal is to increase the number of underrepresented minority doctoral degree recipients in the STEM disciplines. Many of the lessons learned from that experience will be put into practice over the next few years. A new initiative for AY 2006 will send a small number of WPI faculty and graduate students to visit historically Black and Hispanic universities to give research seminars and recruitment talks to prospective faculty and graduate students, and to invite interested individuals to visit the WPI campus. The AGEP work showed that such one-on-one contacts with faculty and students at target institutions are essential to build confidence that WPI can and will provide a welcoming environment for this population.

Dr. Simpson is WPI's first female provost and only the second female vice president. Prior to her appointment, President Berkey appointed Janet Richardson as Vice President for Student Affairs and Campus Life, and most recently, D'Anne Hurd was appointed Vice President for Business Development at the Gateway Park and university General Counsel. Several associate vice presidents are also women. In spring 2006, WPI appointed its first African-American vice president, Dexter Bailey, to the division of Development and Alumni Relations.

Concern #2. Providing research faculty with support for identifying and competing for extramural grant funds.

> ***CONCERN:*** *The Commission finds highly admirable the dedication of the Institute's talented faculty, evident in their willingness to assume extensive non-instructional responsibilities such as advising, leading teams overseas, and participating in governance, and in their readiness to collaborate across departments and programs. At the same time, however, the Institute's desire to continue increasing its research profile and to strengthen its graduate programs is exacerbating the demands on faculty, and it is not clear that the institution is providing all of the support needed for faculty to obtain the grant funding required for such items as research assistants or laboratory expansion. The visiting team noted that the Office of Research Administration is understaffed and there is limited help for faculty in identifying and developing grant proposals. Thus we wish to be apprised, in the 2006 report, of support being provided for Institute faculty in this endeavor, in fulfillment of our standards on Programs and Instruction and Faculty, which state in part.*

>> *Physical and administrative resources together with academic services are adequate to support the institution's research commitment (4.27)*

>> *Scholarship and research receive encouragement and support appropriate to the institution's purposes and objectives (4.28)*

>> *The institution provides its faculty with substantial and equitable opportunities for continued professional development throughout their careers. Such opportunities are consistent with and enhance the achievement of the institution's mission and purposes (5.12)*

In 2002-2003, WPI made the following improvements to the management capacity of the Office of Research Administration:

- o WPI committed to the purchase of the InfoEd Proposal and Award Tracking system, which was implemented in fiscal year 2004. This tool is being used to provide better and more timely information with which to manage the research enterprise at WPI. It will also be used to automate the identification and dissemination of funding opportunities as well as the review and approval of proposals.
- o The administrative temporary position was made permanent and the part-time status of the Director of Research Relations was increased to full-time.
- o The University supported the creation by ORA staff of a new professional development organization called the Alliance of Small Institution Sponsored Program Administrators (ASISPA), which provides a forum for training, networking, and resource development at small colleges, universities, and other non-profit organizations throughout the northeast. The ORA staff at WPI has benefited greatly from their liaison activities with individuals at other institutions and the expectation is for continued growth of the organization.
- o An assistant comptroller was added to improve financial assistance.
- o Cassidy Associates was retained to assist with Washington operations. The team assembled to focus on Congressional appropriations, corporate support, and technology spin offs includes the directors of government relations and of university and corporate relations, and the chief WPI administrator/research scientist.

In addition, as in the three previous fiscal years, WPI funded the Research Advancement Program (RAP) of the Research Development Council (RDC), which awarded a total of $50,000 to WPI faculty members for activities that encourage the submission of proposals, the creation of new ideas and continued professional development.

Finally, in 2002-03, the following infrastructure and support programs and policies were put in place:

- o Human Subjects Assurance approval was gained. WPI secured the services of the New England Institutional Review Board (NEIRB), and has developed an internal IRB.
- o A Research Integrity draft policy (as required by ORI) was developed by a faculty subcommittee.
- o A Conflict of Interest policy was written and approved by faculty and trustees.
- o A proposal for a WPI Intellectual Property/Technology Transfer Office was prepared in collaboration with a Trustee Subcommittee. Tech transfer activities were covered initially by a half-time contract employee as a temporary measure, with the goal of creating a fully-staffed Technology Transfer Office (TTO) in subsequent years.

In 2004-2005 and since, WPI made the following additional improvements:

- In mid-2005, the contract position in the TTO was converted into a full-time, permanent director position. The new Director of TTO has consolidated WPI's intellectual property (IP) portfolio, streamlined the processing of license agreements and patent applications, and is working directly with the university General Counsel to ensure full protection of all faculty and student IP. In addition, the director is actively involved in promoting WPI's IP to potential investors.
- The University created an additional professional position within ORA. This position, Associate Director of Post-Award and Administration, is responsible for effective follow-up with investigators on the technical and other reporting requirements of awards as well as non-financial closeout of awards. In addition, this position is playing a lead role in identifying the risks associated with specific compliance areas (e.g., human subjects, export controls, etc.) in an effort to assess the potential for exposures under audit for non-compliance. This position is the primary liaison with another newly-created position, Institutional Compliance Officer within the Budget and Finance Office, as part of a comprehensive compliance program for the University.
- The University reorganized ORA, such that the previous position of Director of Research Relations is now the Associate Director of Pre-Award Services. This position is responsible for providing competent assistance to faculty members in the preparation and submission of proposals to external sponsors. A primary focus of the position is to identify needs and provide training on the implementation of new electronic research administration initiatives, such as grants.gov.
- The Office of Research Administration continues to work toward total implementation of the InfoEd Proposal and Award Tracking system and has begun developing and disseminating regular reports that are a major improvement on reports generated from the prior database that was in use for a number of years. The InfoEd system implementation has taken considerably longer than expected due to the time needed to train new staff as well as initial problems with the software itself (i.e., it is very much like a smaller version of WPI's enterprise system, Banner, and it offers the same complexities and challenges to effectively complete the implementation process and make the system work to our advantage.)
- The University has provided several professional development opportunities for ORA staff, all of whom (except for the director) have been in their current positions for less than a year. These opportunities include attendance at an export controls workshop (July 2005), the NCURA annual meeting (November 2005), a comprehensive NCURA fundamentals of sponsored programs administration workshop (January 2006), and a PRIM&R workshop on human subjects (in February 2006). These workshops and conferences are in addition to registering for online webcasts on specific topics (e.g., compliance issues) as well as attendance at occasional Research Administrators Discussion Group (RADG) meetings.
- To assist faculty to become more competitive for external awards, ORA has begun to offer a series of workshops on how to write successful proposals. Provost Simpson has asked a committee to examine WPI's practice of requiring full tuition for graduate students on grant proposals, with a view to finding an optimum reduced rate that the university can afford and that would improve the chances of success for faculty proposals. A central pool of funds has been created in the Provost's office to support faculty travel to conferences where their research results are to be presented, and to develop research collaborations.
- The existing Research Development Council's seed funding programs were re-evaluated and re-structured in 2005 to provide more substantial internal awards to faculty. Awardees from this new Faculty Advancement in Research (FAR) program, which is to develop new ideas to a proof of concept stage, must undertake to submit a full proposal to an external funding agency within 18 months of the end of the
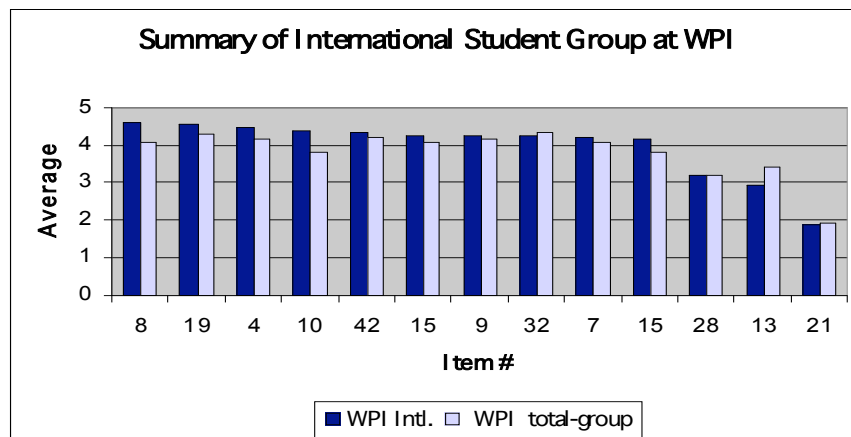
FAR award. Preference is given to new faculty and those who do not have an existing grant.

- Although the number of proposals submitted to outside funding agencies has not significantly increased in the past few years, the success of the faculty in obtaining external funding has increased. 2005 saw a record $16.5M in externally funded grants and contracts – an encouraging trend toward WPI's goal of $30M per year by 2015. A goal for the coming years is to substantially increase the amount of collaborative research among faculty, research scientists, and engineers in other institutions, especially at the nearby UMass Medical School and local biotech companies.

Concern 3: Addressing the residential and co-curricular needs of graduate and international students.

The visiting team had high praise for the Institute's "student body of exceptionally fine quality and character," and we were gratified to learn that these students are provided with an excellent array of services by the capable and committed staff in the Division of Student Affairs, which contributes to the stimulating environment on campus. It also appears to be the case, though, that the needs of traditional undergraduate students are being met better than those of other constituencies; the visiting team noted that graduate and international students are underserved in some respects. Complete closing of the campus during the winter break, for example, creates hardships for these two groups, and graduate students planning to become research assistants also expressed a desire for better orientation and language instruction. The Commission looks forward to learning in 2006 of further steps that have been taken to meet the needs of all institute students, in keeping with our standard on Student Services and its specifications that "the institution provides an environment which fosters the intellectual and personal development of its students consistent with its mission and purposes and mode of educational delivery. It is sensitive to the non-academic needs of its students" (6.1) and "It ensures that appropriate services, facilities, and technology are readily accessible to students in all programs in the institution" (6.2).

(2002-04) WPI has constituted a planning committee for graduate housing and food service and has conducted a survey of all graduate students to better understand their housing needs. We recognize that our current housing and food service accommodations for undergraduates do not meet the needs of our graduate students. The Master Planning Process begun in 2003 includes plans for some graduate student housing.

Regarding the needs of international students, it is interesting to note that with the exception of housing and food services, our international students have the highest level of satisfaction of all WPI undergraduate students. Based on the Student Satisfaction Survey administered in the spring of 2003, international students are satisfied or very satisfied with most aspects of WPI, exceeding both national norms and norms for the entire WPI sample. Their overall satisfaction score is 4.35 on a 5 point scale.

Summary of International Student Group at WPI

Item #	Item Name	WPI Intl.	WPI total_group
8	Flexibility of program	4.62	4.07
19	Computer services	4.55	4.28
4	Out-of-class availability of faculty	4.48	4.17
10	Availability of advisor	4.39	3.80
42	This college in general	4.35	4.20
15	College catalog/admissions publications	4.26	4.05
9	Tutorial services	4.25	4.15
32	Academic calendar	4.23	4.34
7	Class size relative to course type	4.19	4.07
15	Cultural programs	4.17	3.79
28	Availability of student housing	3.19	3.20
13	Food service	2.93	3.41
21	Parking facilities and services	1.92	1.93

(2004-06) The International House provides services for all international students as well as for international researchers and faculty. While a large portion of our time and resources must be devoted to regulatory matters such as immigration regulations, tax regulations and social security regulations, we take our charge to work on the co-curricular needs very seriously as reflected in our Mission Statement:

In an atmosphere that embraces cultural diversity and encourages social tolerance, the International House provides on-going programs and essential services to assist, educate, and support international students and scholars in their transition to US society and academic culture.

In an effort to ensure student, scholar, and institutional compliance with federal regulations, we provide professional expertise on immigration and employment issues. As advocates of international education, we promote the academic, professional and personal growth of international students and scholars and foster an appreciation of their many contributions to the WPI community at large.

Two years ago, we started to survey first year international undergraduate students regarding their level of satisfaction with the services provided by the International House and by the International Student Council (ISC). We asked about the level of satisfaction with services provided prior to attending WPI, Orientation, ISC Peer Mentor Program, International House Services and ISC Programs. On a scale from 1-5, 5 being Very Good, the students rated all categories a 4 or a 5.

A more comprehensive international student satisfaction survey was administered to all international undergraduate and graduate students in the spring of 2006. The response rate was 35.5%, divided equally between graduate and undergraduate international students. The areas that rated the highest in terms of satisfaction (combining the categories of satisfied and very satisfied) included: Pre-Orientation Program (91% satisfaction rating) International student services (87% satisfaction rating); accessibility of staff (85% satisfaction rating); and quality of information for pre-arrival and visa holders (76% satisfaction rating).

The two areas that received the lowest satisfaction ratings were services provided in the area of tax information and supplying social security information. For the tax season in spring of 2005, we developed an extensive tax link on our home page. It had the basic step-by-step instructions, a section with frequently asked questions and links to IRS and Massachusetts State Department of Revenue web sites. We updated this web link for the spring 2006 tax season and also made all the relevant forms available from the International House Resource Room. We emailed all international students a brief reminder about the forms required to be filed by international students and gave the link to our website. We also purchased the license for tax return software designed specifically for international students and scholars filing the Non Resident tax forms.

Despite these efforts, the result of our web survey regarding satisfaction with our services showed that tax information/advice provided by the International House received a lower rating than we would like. Thirty-four percent of the responses indicated that they were not satisfied or somewhat satisfied with the services. Thirty-five percent were satisfied and 11% were very satisfied. We will take a closer look at this service before next year's tax season to see if we can make improvements. However, our dilemma is that we have to be very careful not to be giving any direct tax advice, since we are not qualified as tax return preparers and could be liable for any erroneous advice we gave to students or scholars.

In the area of social security information, 38% reported that they were satisfied with the service, and 29% reported being very satisfied. Even though the government is working hard to secure the integrity of social security numbers and making sure they are only issued for the purpose of employment, as required by law, many private entities continue to require a social security number. This creates frustration on the part of our students who don't understand why they are not eligible for a social security number when cell phone companies, utilities companies, or landlords, keep asking for it. Our challenge is to continue to explain the regulations and assist students in obtaining the services they need without having a social security number.

When students and scholars are eligible to apply for a social security number, we have developed a packet with extensive information on the application process and the importance of protecting one's social security number in order to avoid identity theft. We know from our student satisfaction survey, that they are not as satisfied with our assistance as we would like, but unfortunately we do not control who is eligible for a social security number.

We also started analyzing data on the academic preparedness and performance of our international first year students, and it came as no surprise that overall our international first year students come better prepared in math and science and thus are able to start with more advanced math and science courses. The International House works closely with the ISC in organizing co-curricular activities on campus. This academic year, the ISC has, on average, organized two co-curricular programs each week. The programs range from theme lunches at the International House to major campus events such as the annual International Dinner with cultural entertainment. Other examples of programs include speakers, trips,

International Film Festival, Cultural Festival, and African Dinner. These programs, organized by the students with the support of the staff in the International House, are open to all students and actually have many graduate students in attendance. The ISC, as an organization, also includes graduate students in its membership as well as on its executive board.

The International House also provides English as a Second Language Programs. We currently have classes specifically designed for International Teaching Assistants (ITA's). For some ITA's, taking the ESL class is mandatory based on how they performed at a SPEAK test during their orientation week. For other ITA's, taking the class is recommended, but optional. The class is open to all International Research Assistants as well and many faculty members do encourage their RA's to take the TA class or the less intensive ESL Seminar Class which we offer each semester. Students rate the quality of the ESL program very highly and many students decide to continue with the ESL program for a second semester even when it is no longer a requirement.

The ESL director works closely with the staff and faculty in charge of the annual Teaching Assistant Orientation, a three-day program required of all new TA's. The TA orientation is no longer limited to new TA's, but is also offered to new Research Assistants who are encouraged, but not required, to participate.

The fact that WPI's undergraduate and graduate programs operate on two different academic calendars continues to create concerns for our graduate students who feel that many services are limited or not available during undergraduate breaks. This is a larger issue which is currently under review by several commissions looking at various aspects of WPI programs. Although we cannot point to a complete solution yet, it is something that the university will address in the future as the various commissions' recommendations are considered for implementation. In the meantime, WPI has increased the availability of its SNAP van escort service during term breaks for graduate students who work until late in the night. WPI is also subsidizing the coffee shop in the Campus Center through the summer months so that it will remain open for most of the day, and a summer concert series has brought a variety of entertainers to the Campus Center during lunch hours. For international students not able to go home or visit with friends/family over the winter break, the International House has provided housing during the winter break. In addition, the International House, in collaboration with the ISC, has experimented with the idea of creating an electronic network for students who are staying around during the breaks. Using this network, these students organized several social activities during recent term breaks.

New international graduate students are provided temporary housing at the International House upon their arrival while we assist them in finding permanent housing. The demand for on-campus graduate housing is closely related to the overall Worcester Housing market. Four to five years ago, we experienced a housing shortage (for rental properties) in Worcester and graduate students very much pushed for on campus housing which would meet their needs and would include cooking facilities, single rooms, and year-long leases. Plans are under way to construct dedicated housing for graduate students as part of WPI's expansion at Gateway Park (site at 75 Grove Street) in the next several years. In the meantime, the current rental market is such that our graduate students find off campus housing at a rent they can afford within a short commute from WPI.

To celebrate the importance of their contribution to WPI's mission and better integrate our graduate students into campus life, the Provost's office inaugurated the first annual Graduate Research Achievement Day (GRAD2006) in spring 2006. Over 120 graduate student posters were on display and a judging panel of more than 20 faculty reviewed and

awarded prizes to the best 3 in each of three categories. The event was considered a resounding success by faculty and students alike and will be repeated annually each spring, with minor modifications in response to solicited comments. Also to more appropriately honor the achievements of our graduate students, the traditional order of marching and degree conferral at Commencement was changed in 2006. In the revised order, doctoral degree recipients are the first to be honored after the honorary degree recipients, followed by the Master's degree recipients, rather than having to wait until after 800+ undergraduate and Master's degree conferrals as in past years. This simple change, coupled with provision of a special robing area for the doctoral candidates, has greatly improved the sense of recognition among all of our graduate students.

Many graduate students are rightly concerned about the rising costs of health care and the rather limited services that they currently obtain in return for the graduate student health fee. A committee of students, staff, and faculty has recently formed to examine this issue and will make recommendations to the administration during AY2006.

Concern 4. Meeting its physical resource needs

Concern: We applaud the Institute's commitment to maintaining a balanced budget, a conservative endowment-spending rate, and a minimal rate of debt service. At the same time, however, it appears that the institution's cautious approach to capital expenditures has deferred the construction of a new academic building and delayed the renovation of several facilities including student residences, an academic building and, perhaps most importantly the library beyond a point that seems warranted by fiscal conservatism, particularly in view of the Institute's excellent credit rating and growing endowment. While the Commission in no way wishes to offer specific advice on facilities management and spending policy, we would like to remind you of our standard on Physical Resources and its requirement that "the institution has sufficient and appropriate physical resources, including laboratories, network infrastructure, materials, equipment, and buildings and grounds, whether owned or rented; these are designed, maintained, and managed at both on- and off-campus sites to serve institutional needs as defined by its mission and purposes" (8.1). We anticipate hearing in 2006 of the ways in which the need for new construction and deferred maintenance of existing buildings has been addressed by the Institute.

(2002-04) In 2003-2003 President Parrish and the Board of Trustees, as part of overall strategic planning, engaged Shepley, Bulfinch, Richardson and Abbott to prepare a Campus Master Plan. The president and vice presidents, with senior staff from the City of Worcester, and several Trustees served as a Steering Committee, and a group of senior staff and faculty constituted an advisory group.

(2004-06) As a result in part of this campus-wide planning exercise, two major building projects have gone forward, and two others have moved into active planning. With a generous gift from the Bartlett family, WPI built a new undergraduate admissions building which was occupied in spring 2006. The Bartlett Center will enable more efficient use of space in the university's oldest building, Boynton Hall (where admissions and financial aid offices were located), and has significantly enhanced the appearance of the university quadrangle.

More central to our academic mission, a major new $40M+, four-story, Life Sciences and Engineering research building is under construction, with occupancy expected in the spring of 2007. President Berkey and the Trustees undertook this commitment to overcome the "space crunch" on the core campus. The new 124,600 square feet construction called

Gateway Park is about one-quarter mile from the main campus at a site jointly owned by WPI and the Worcester Business Development Corporation. WPI and WBDC intend Gateway Park to become a multi-use, research and commercial facility, the anchor to one of the major redevelopment efforts in the region intended to nurture research and development related to the bio-sciences and technologies. Research faculty from WPI's Departments of Biology and Biotechnology, Biomedical Engineering, Chemistry and Biochemistry, and Chemical Engineering —along with the new WPI Bioengineering Institute—will move their labs into approximately 73,000 square feet of this building that will be configured to promote interdisciplinary research.

When the Gateway building is occupied, substantial space will become available on the core campus, and all remaining Life Sciences-related undergraduate teaching will be consolidated in Goddard Hall, the current home of Chemistry/Biochemistry and Chemical Engineering. These moves will eliminate almost all wet lab facilities from the 100-plus-year-old Salisbury Laboratories building, and will open that building up to reuse for teaching and office space. A space survey that was undertaken by an external contractor in 2005 noted that although the actual square footage of available classroom space on campus was about average for an institution of WPI's size, its configuration and utilization needs to be revised. Plans are currently underway to reconfigure the Salisbury Laboratories building to provide much needed flexible seminar rooms as well as offices for the Humanities and Arts faculty who are currently dispersed among several buildings.

The Master Plan also highlighted campus needs related to facilities for recreation and athletics, parking, and additional undergraduate student housing. A master plan for recreation, athletics and parking was developed by a campus committee working with the architectural firm of Sasaki Associates. This plan has been strongly endorsed by the Trustees and the campus community and will be moving forward for additional planning. Preliminary planning is also under way in the form of site identification and architectural firm hiring to develop further campus housing.

Regarding deferred maintenance and a plan for addressing this issue along with the new construction, the firm of Sightlines LLC has been retained to study maintenance on the campus. Just as significantly, they will be recommending to the administration tactics and guidelines for the funding and planning necessary to maintain the current facilities at a level of maintenance consistent with good practice, when compared with a broad group of peer institutions.

During this period, significant re-investment on the campus has taken place with the re-use of space abandoned by the occupancy of the new Campus Center in 2001 as a "black box" theatre. This $500,000 state of the art facility is a substantial improvement for the growing WPI theatre program. Space was renovated and re-utilized in the Gordon Library to allow for compact storage and new reading spaces. The networking system in the residence halls has been completely replaced in the past two years. In addition over the past 3 years, a bond issue has resulted in funds to renovate 5 major lecture halls, the replacement of the roofing systems on two major campus buildings (Goddard Hall and Atwater Kent), and the expansion of electrical capacity in Goddard Hall. And, in the largest infrastructure improvement, the central steam plant with equipment over 60 years old was completely renovated with new, energy efficient equipment designed to greatly reduce emissions. This selection of projects totaled $14,400,000 in investment towards infrastructure.

5. Narrative: the Eleven Standards

Standard One: Mission and Purposes.

Description & Appraisal. The WPI faculty and trustees adopted the current mission and goal statements in 1987, as follows.

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.)

These statements served the university well in the NEASC general review of 2001, and remain effective guides for WPI's present academic planning. For example, when in 2004-06 WPI faculty members developed an option for a Bachelor of Arts degree at WPI, the existing mission and goal statements fully supported that initiative, which was adopted by the trustees and faculty in winter 2006. WPI thus remains in 2006 a technological university committed to teaching and research, with special emphasis on science, mathematics, engineering, and technology. At the same time, WPI believes its current

planning trajectory, to enlarge modestly the undergraduate student population, will be successful in part by making the case that a broad technologically-based education is an appropriate form of general, as well pre-professional, education.

Further, WPI's existing mission and goal statements fully support our initiatives to strengthen our graduate program, especially to increase the number of students achieving the doctorate degree at WPI.

In 2001, the WPI faculty adopted "A Statement of Values for Undergraduate Education at WPI," which now appears in our *Undergraduate Catalog* directly after the Mission and Goal Statements.

A Statement of Values for Undergraduate Education at WPI

1. *WPI's programs shall emphasize fundamental concepts, knowledge, and skill, and ensure that students are able to apply them within the context of their major disciplines.*

2. *WPI's programs shall emphasize the development of students as effective thinkers and communicators, able to use evidence to present their ideas with logic, clarity, and persuasion.*

3. *Programmatic breadth in general, and balance between technical and humanistic components in particular, are the hallmarks of a WPI undergraduate education. In addition to educating students in their major discipline, WPI's programs shall provide students with a broad preparation for fulfilling lives as responsible professionals and informed citizens.*

4. *Grounded in project and course experiences, a WPI education shall provide a firm foundation for life-long learning in a variety of fields. WPI programs shall emphasize inquiry-based learning and open-ended problem solving. Students shall bear a considerable responsibility for learning outside of the classroom.*

5. *WPI's programs shall be sufficiently flexible so as to allow students significant choice in and responsibility for planning their courses of study. Faculty, via the central teaching tasks of project and academic advising, shall ensure that student learning experiences encourage critical reflection, decision making, and personal growth.*

6. *WPI's programs shall emphasize the scientific, technical, societal, and humanistic contexts in which knowledge is applied and constructed. Education activities shall challenge students to make connections between disciplines, to consider multiple viewpoints, and to appreciate the consequences of their actions. The curriculum shall prominently feature integrative and interdisciplinary activities.*

7. *WPI's learning environment and educational activities shall balance personal responsibility and individual accountability with cooperation, collaboration and mutual respect. Members of the community shall be encouraged to value academic integrity, and to become conscious of the value that such integrity confers to themselves and to the community.*

8. *WPI shall be committed to assessment and improvement of student learning.*

Every undergraduate department and program has adapted this statement of values for their disciplines to provide a discussion of learning outcomes appropriate to their major. Each WPI department prints this statement at the beginning of the presentation of their major in the *Undergraduate Catalog*.

Projection: We believe the current Missions and Goals statements will serve WPI well for the immediate future, and have no plans to change them over the next five years. We believe we are in compliance with Standard One with respect to disclosing these statements as well as the more detailed student learning outcomes in specific fields. As seen in Standard Four, we monitor student achievement against these learning outcomes on a regular basis.

Standard Two: Planning and Evaluation.

Description & Appraisal. As noted above in our response to the 2001 NEASC concerns "Physical Resource Needs," under President Berkey, plans have gone forward for the construction of two new buildings (one completed in spring 2006 and the other scheduled for spring 2007) and for the design of several more.

With respect to academic programs, President Berkey challenged the faculty in the fall of 2004 to conduct a major review. He appointed seven presidential commissions to examine issues he identified as important in the undergraduate and graduate academic programs as well as in research, university strategic positioning, and faculty workload. These commissions are: 1) General Education and the First Year Experience; 2) Liberal and Fine Arts and the Sufficiency (Humanities Requirements); 3) The IQP (Interactive Qualifying Project) and Global Programs; 4) Research and Graduate Education; 5) Faculty Workloads; 6) WPI Shape and Size; and 7) University Rankings. Each commission was charged with carrying out its task and making progress reports to the community. The president and provost oversaw this work with a steering committee consisting of the chair of each commission, the Secretary of the Faculty, and several other senior faculty members. More than fifty faculty—almost one-fourth of the full-time faculty—participated in these commissions.

In 2005-06 all of the commissions completed their work and reported publicly on several occasions to the entire community, including the Board of Trustees at their winter retreat meeting. President Berkey is working with the steering committee for the commissions to ensure that general commission reports become specific proposals for new initiatives to bring to faculty governance. For example, we expect significant changes will soon be made in the WPI Humanities requirement to enable students and faculty to do the required final project as part of a seminar, rather than always as a one-on-one tutorial.

In addition, the president, provost and steering committee are overseeing several continuations of the existing commissions to ensure that objectives not achieved by the initial commissions receive necessary attention, including formulating appropriate recommendations for specific changes. Three campus-wide task forces moving forward involve: 1) a campus-wide reconsideration of our undergraduate general education requirements and the structure of the first year; 2) the creation of a university-wide writing requirement; and 3) new initiatives in research and graduate study.

Evaluation of Effectiveness. WPI continues to have a strong tradition of evaluating its academic programs, driven in part by the accreditation of roughly half our undergraduate academic programs by ABET, the Accrediting Board for Engineering and Technology. (Management is also accredited by AACSB, programs in chemistry by the ACS, and teacher preparation by the Massachusetts Department of Education.) WPI uses external advisory

boards associated with all academic departments and with many programs to guarantee that our planning is informed by current perspectives from graduates, employers, practitioners in the field, and faculty at other institutions. WPI also uses nationally-normed surveys of undergraduate student achievement, specifically the NSSE and EBI surveys. For both these surveys, WPI has created consortia of comparable institutions to guarantee that we can share data concerning similar student populations. WPI administered both surveys in spring 2006 and will use the results in 2006-07 to inform program improvement.

Finally, and most importantly with respect to ongoing evaluation, after the last NEASC self-study and visit of 2001 and the last ABET visit of 2002, the faculty agreed to establish an on-going subcommittee of our Committee on Academic Policy in order to make sure that WPI continued annually to carry out appropriate assessment of undergraduate academic programs, and to use the results of such assessment for continuous improvement. This subcommittee, the UOAC (Undergraduate Outcomes Assessment Committee), reports regularly to the CAP and makes recommendations for the continuing review of the learning outcomes of the undergraduate program. In its first year, UOAC compiled a comprehensive document that maps all of WPI's stated learning outcomes against all of the departmental project, course, and other potential data sources about student success in achieving these outcomes. UOAC this year is carrying out a pilot study to implement this assessment matrix using an academic department that volunteered to serve in this capacity.

To support faculty assessment with professional advice and data gathering/interpretation, WPI reconstituted the "Center for Educational Development and Assessment" (CEDA) in summer 2006, with the appointment of Prof. Chrys Demetry as center director, and with continued support for external assessment, now largely to be handled by professional staff of the Donahue Institute at the University of Massachusetts, Amherst.

All departments update their assessment and improvement plans at least biennially, and many do so more often. To ensure transparency concerning on-going assessment, WPI maintains a public web site (www.wpi.edu/Academics/Outcomes) which contain all the material from ABET and NEASC self-studies that those organizations permit WPI to publicize. The site also contains data from student outcomes surveys and from internal studies based on them. For example, the UOAC document mapping outcomes against

data sources, mentioned above, is available on the home page of this site as the Assessment Plan for Institutional Learning Outcomes (PDF).
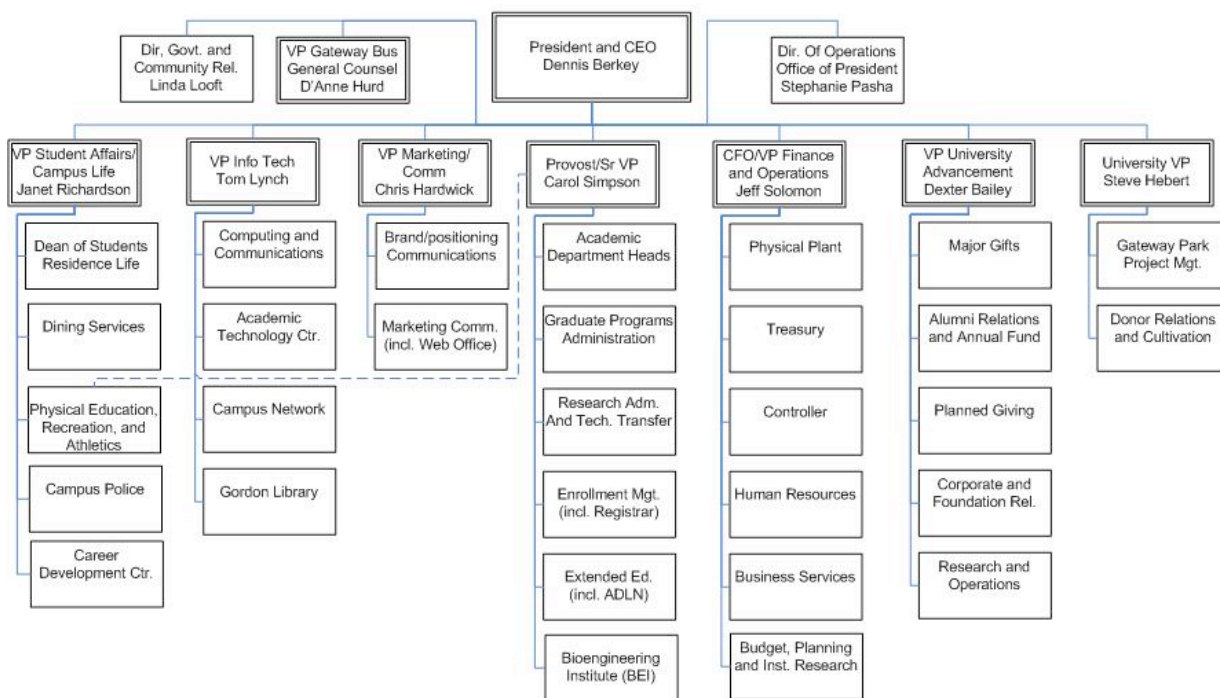
Projection. WPI has increased its commitment to planning and evaluation since the 2001 visit, and has enhanced the resources available for these tasks through both faculty committee assignments (UOAC) and administrative support (CEDA). We believe we have in place the staff needed to conduct sustainable and cost-effective program monitoring and improvement and that we are in compliance with Standard Two.

Standard Three: Organization and Governance.

Description & Appraisal. When Dr. Dennis Berkey became president of WPI in summer 2004, he reviewed the organizational structure of the institution and initiated major changes in the offices of the vice presidents reporting to him. A WPI organizational chart summarizing the current structure is found below:

WPI Organization Chart
February, 2006

		President and CEO Dennis Berkey		

Top row: Dir, Govt. and Community Rel. Linda Looft | VP Gateway Bus General Counsel D'Anne Hurd | President and CEO Dennis Berkey | Dir. Of Operations Office of President Stephanie Pasha

VP row: VP Student Affairs/ Campus Life Janet Richardson | VP Info Tech Tom Lynch | VP Marketing/ Comm Chris Hardwick | Provost/Sr VP Carol Simpson | CFO/VP Finance and Operations Jeff Solomon | VP University Advancement Dexter Bailey | University VP Steve Hebert

VP Student Affairs/ Campus Life	VP Info Tech	VP Marketing/ Comm	Provost/Sr VP	CFO/VP Finance and Operations	VP University Advancement	University VP
Dean of Students Residence Life	Computing and Communications	Brand/positioning Communications	Academic Department Heads	Physical Plant	Major Gifts	Gateway Park Project Mgt.
Dining Services	Academic Technology Ctr.	Marketing Comm. (incl. Web Office)	Graduate Programs Administration	Treasury	Alumni Relations and Annual Fund	Donor Relations and Cultivation
Physical Education, Recreation, and Athletics	Campus Network		Research Adm. And Tech. Transfer	Controller	Planned Giving	
Campus Police	Gordon Library		Enrollment Mgt. (incl. Registrar)	Human Resources	Corporate and Foundation Rel.	
Career Development Ctr.			Extended Ed. (incl. ADLN)	Business Services	Research and Operations	
			Bioengineering Institute (BEI)	Budget, Planning and Inst. Research		

WPI presently has eight vice presidents as follows (with only Dr. Lynch still in the same position he was in during the last NEASC visit):

Janet Richardson (Student Affairs and Campus Life); Dr. Thomas Lynch (Information Technology); Christopher Hardwick (Marketing and Communication); Dr. Carol Simpson (Provost and Senior Vice President); Jeffrey Solomon (CFO and Vice President for Finance and Operations); Dexter Bailey (University Advancement); Stephen Hebert (University Vice President); and D'Anne Hurd (Gateway Business Development and General Counsel).

President Berkey also began a broad review of board governance. At President Berkey's request, Vice President Solomon, in his capacity as Secretary of the Corporation, and D'Anne Hurd, University General Counsel, initiated a review of the trustee bylaws (last revised in 1998) and board committee charters to ensure that they reflect industry best practices and provide appropriate oversight of the University. Further, a plenary session of the Board at its February 2006 meeting focused exclusively on improving governance and making the board more effective. As a result, the university is revising its bylaws and committee charters and expects to advance recommendations on each to the Executive Committee at its winter meeting.

To promote communication within the entire community, Dr. Berkey instituted periodic "Town Meetings," usually once a quarter in the late afternoon. He and senior staff address important issues and take all questions from the floor. Managers are encouraged to let staff attend, and attendance regularly fills the largest meeting room on campus. Dr. Berkey also restructured the presidential cabinet to be broader and more inclusive, as a "University Council." In summer 2006 the administration and faculty began collaboration to design, implement and interpret a survey of staff attitudes.

In Academic Affairs, the major structural change made by Dr. Simpson has been the appointment of Dr. John Orr as Dean of Undergraduate Studies, effective July 1, 2006. The position of Dean of Undergraduate Studies was eliminated in some administrative consolidations in the early 1990's. However, reinstating the position is an important commitment to implementing the anticipated major initiatives emerging from the Presidential Commissions. Dr. Orr, a widely-respected teacher, scholar, and administrator (head of Electrical and Computer Engineering for 15 years), was selected after a rigorous campus-wide search in April and May 2006. We anticipate an additional complementary appointment for an Associate Dean of the First Year in fall 2006.

Another important change has been the assignment of all for credit and non-credit continuing education programs to the office of WPI Corporate and Professional Education, directed by Dean and Associate Provost Stephen Flavin. WPI Corporate and Professional Education is now responsible for all off-campus continuing education as well as distance education, and is divided into three major groups: Continuing Education (no credit), Corporate Education (mainly graduate credit), and Distance Learning (ADLN—graduate credit only). This office reports directly to the Provost, Dr. Simpson. A chart of these operations is presented in Standard 4, the Academic Program.

WPI Corporate and Professional Education has provided its own statement on how it responds to all eleven standards as an Appendix.

Projection. The new organizational structures put in place by Dr. Berkey and Dr. Simpson appear to be working effectively, individually and as a team. We believe we are in compliance with Standard Three.

Standard Four: The Academic Program.
Note: A substantive draft of this text was approved by the Committee on Academic Policy on April 25, 2006.

Description & Appraisal. Following the significant investment in self-study leading to the engineering accreditation (ABET) visit in 2001 and the NEASC decennial in 2002, WPI's challenge was to institutionalize sufficient periodic assessments to ensure on-going program improvement—and not to lapse into the typical pattern of comparative inaction only to reawaken from lethargy before the next major accreditation self-study and visit. As described briefly under "Evaluation" in our discussion of Standard 2, the WPI faculty created a new subcommittee reporting to the Committee on Academic Policy, to ensure that the assessment of undergraduate learning outcomes continues on a regular basis to support program improvement. WPI faculty now conduct some portion of the overall departmental assessment plan each year, both as part of their academic-year regular load and in some cases, for additional summer stipends.

The major program change since 2001 in the WPI undergraduate program has been the adoption in spring 2006 of a Bachelor of Arts option, as well as a specific undergraduate program leading to the BA involving complementary study of engineering, humanities, and the social sciences. These BA programs all have the same admissions and graduation requirements as the current requirements for the Bachelor of Science degree. We do not anticipate initially a large surge of new applicants; we believe we can launch the BA initiative with no new faculty resources since the one specific program was designed carefully to draw upon the current curriculum.

As indicated before, in 2004 President Berkey appointed seven faculty and staff commissions to review current status and future directions at WPI in areas where he believed change was needed. Several of these commissions dealt with curricular issues,

such as the quality of the WPI first year, the Humanities and Arts minor, and the Interactive Qualifying Projects. Specific program changes resulting from these commissions are now working their way through departmental and faculty governance. In addition, three new groups have begun more detailed and comprehensive plans for:

      1. a wholesale recasting of general education at WPI,

      2. significant changes to how the first year is presented, by, for example, designing a required first-year seminar, and

      3. a university-wide writing requirement.

Since 2001 WPI has also adopted several new majors. The first of these, in Interactive Media and Game Development (IMGD), was an instant success with current and new students when launched in fall 2005. Three new tenure-track faculty had been hired to begin the program, and several adjuncts were secured to keep up with student demand. An additional tenure-track faculty member will be hired in 2006. Other new programs being designed are in interdisciplinary Environmental Engineering (passed spring 2006), in interdisciplinary Robotics Engineering (proposals in final stages in 2005-06), and Bioinformatics (proposal expected in 2006-07).

The senior administration at WPI, with the full support of the Board of Trustees, plans to grow the undergraduate population at WPI by adding 25 to 30 net new students per year. The target intended over a multi year period, is 3200 undergraduate students, with 1200 full-time graduate students, and 20-30 doctorates being granted annually.

In terms of student self-assessment of their learning, in the academic year 2005-06 WPI faculty adopted a new internally-developed student course report. This form, which enables students to evaluate how well they believe they learned in a specific course, replaces an earlier and very outdated internally-developed form that was used through 2002, and an experiment that failed with an externally provided instrument. In addition, at WPI we have long wished to implement a student feedback system like that for courses for projects; logistics have always proved to be far more complicated, but now apparently are under control.

At the graduate level, we continue to grow student numbers and programs. WPI's Graduate Studies and Enrollment Office is responsible for developing and implementing marketing strategies and programs for the recruitment of full and part-time graduate students. The staff responds to inquiries, processes applications and ensures the proper implementation and monitoring of graduate admissions policies established by the University. The staff works closely with the Graduate Student Government, Graduate Coordinators, and Graduate Administrative Assistants. The Director is a member of the Committee on Graduate Studies and Research, prepares graduate survey data, and chairs the Graduate Fellowship Committee.

However, a crucial, immediate goal is to graduate at least twenty doctorates a year in order to be restored to the Carnegie Classification of doctoral research university. We have hovered around this number annually for some years, but granting fewer than twenty PhD's in 2003/04 led to our temporary reclassification in 2006 as a master's university. We are working hard to solve this problem by concentrating on increasing the number of doctoral candidates in key areas e.g., the biosciences, and by removing impediments (such as cost and time to degree) which slow down student progress to the most advanced degree. In 2006 we graduated 33 PhD's, which we anticipate will trigger a classification upgrade. Applications and acceptances of incoming graduate students increased in 2006, particularly from international students, and our university fellowships are now being given in preference to intending doctoral students. WPI plans to appoint an Associate Provost for

Research in 2006/07 to assist in growing the research portfolio and developing a strong and enhanced graduate population.

Finally, all electronic distance and continuing education, both for-credit and non-credit courses, have now been organized under a new unit, WPI Corporate and Professional Education, with a new dean, Stephen Flavin. A chart indicating those programs and services may be helpful in understanding these changes at a glance:

WPI CORPORATE AND PROFESSIONAL EDUCATION

	Continuing Education	Corporate Education	ADLN (Distance Learning)
UG/Grad	Not applicable	Primarily Graduate. Beginning to offer no-credit UG courses.	Graduate only
Type of Program	Seminars ranging from one day to weeks in length	4 to 6 course certificates. Specific M.S. degrees in agreement with Dept. Head.	Individual courses. 4 to 5 course certificates. M.S. MBA
Semester Basis	Set by Continuing Ed	Set by Corporate Ed	Follows standard graduate calendar
Credit Status	No credit	Graduate = credit UG = no credit (committee addressing potential of credit)	Credit and audit
Student Status	No admission process via WPI admissions offices.	Admitted into Extended Ed credit programs through normal Grad. Studies & Enrollment (GSE) procedures.	Admitted into WPI programs through normal GSE procedures. Non-degree students can enroll except for Management classes.
Faculty	Normally non-WPI faculty hired and supervised by Continuing Ed	WPI adjunct and full time faculty. All faculty approved by Dept. Head.	WPI adjunct and full time faculty. All faculty approved by Dept. Head.
Grading Policies	Cont. Ed. Credits issued, not grades.	Follow WPI grading policies	Follow WPI grading policies.
Transcripts	Not applicable	Normal transcript through Registrar's Office.	Normal transcript through Registrar's Office
Transfer of Credit	Not transferable/ Not applicable	Grad Certificate Programs - all courses transfer UG certificate program - do not transfer as is currently no credit program	Students are in a WPI certificate or degree program. Non-degree students converting to degree status would transfer WPI non-degree courses into

	Continuing Education	Corporate Education	ADLN (Distance Learning)
			degree/certificate program according to admission procedures.
Policies stated in WPI catalog	Corporate clients get contracts stating policies; individuals get confirmation policies.	All policies apply as stated in catalog for credit based courses.	All policies apply as stated in catalog for credit based courses.
Access to WPI Student Services	Not applicable	Access to all WPI student services.	Access to all WPI student services.
Computer Accounts	Currently do not have	Have computer accounts and normal student computer access.	Have computer accounts and normal student computer access.

Projection. We believe WPI is in compliance with Standard Four. We have a cost-effective system for on-going assessment of learning outcomes in place for the undergraduate program. The graduate program continues to be assessed, here as elsewhere, largely in terms of the quality of advanced level research as shown in masters' and doctoral theses. As noted, we need to understand better the dynamics of pursuing the doctorate at WPI to ensure we have appropriate numbers of highly-qualified candidates who complete their work in a timely and effective way. WPI Corporate and Professional Education is newly organized with leadership that knows how to assess learning outcomes and direct continuous improvement. Assessing the growth in scope and quality of all three programs is one of WPI's most important responsibilities in the next five years.

Standard Five: Faculty

Description & Appraisal. There have been several changes in faculty development programs since 2001. Provost Simpson is committed to faculty development to achieve excellence in both teaching and research. While she has made no fundamental changes in the already high expectations for faculty recruitment and tenure, she has provided additional resources for faculty development in key areas. In spring 2006, to assist faculty in developing their full potential as teachers, she appointed an outstanding faculty teacher scholar as Director of WPI's Center for Educational Development and Assessment. Graduate teaching assistants are being offered a series of training workshops both within WPI and through the Colleges of Worcester Consortium's Certificate in College Teaching program. New department heads are being encouraged (and funded) to take leadership courses offered by reputable institutes such as the University of Washington's ADVANCE Leadership Workshop and the American Council on Education.

Dr. Simpson also met with all probationary faculty in 2005/06 to clarify the expectations for tenure. It was important to reassure the junior faculty that although the standards and expectations under which they were hired continue to increase, they do so at a steady, not precipitous rate. Under Provost Simpson, WPI will continue to seek out and hire faculty with significant strengths and promise in both scholarship and teaching. Annually at WPI, tenure decisions are favorable for almost all candidates because the departments have done their job in developing faculty as teacher-scholars and in implementing rigorous 2- and 4-year reviews of probationary faculty; correspondingly, WPI has a culture that if a candidate

for tenure is not able to meet both expectations after repeated counseling and mentoring, separation from WPI is in everyone's best interest.

To better support research activity, Provost Simpson has added one new professional staff member to the office of Research Administration and has encouraged and supported ORA in their development of a series of workshops to increase faculty effectiveness at grant proposal writing. Her own background was as associate provost for research and graduate education at another university, and she has reshaped WPI's practices for encouraging research significantly. For example, the Faculty Advancement in Research program mentioned above has replaced numerous very small and somewhat ineffectual grants to support faculty research initiatives with fewer, but much larger awards, with correspondingly higher expectations for the scope of the proposal and for the faculty outcomes. 15% of the indirect cost rate on received awards is returned to departments and individual principal investigators (10% to departments and 5% to the PI) as incentive for additional grant seeking.

WPI's practice of charging full tuition for graduate students on research proposals is currently under review. Although it is prohibitively expensive to cost share graduate tuition in full, there are concerns that charging full tuition on proposal budgets is hurting the PI's chance of success by presenting a poor 'bang for the buck' ratio. A committee was formed in spring 2006 to examine ways that the tuition could be at least partially cost shared without too severe an impact on the operating budget. A report from that committee is expected in fall 2006.

Three new NSF-CAREER awards to WPI faculty in 2005 brought our share of these prestigious awards to 19 in total, and the most recent recipients now participate in an annual workshop for junior faculty to give guidance on successful strategies for CAREER proposals. Dr. Simpson herself delivers an annual seminar for new faculty on grant proposal preparation, based on her several years of experience as an NSF program director. We are emphasizing even greater cross-disciplinary collaboration for grant applications across departments and institutions, recognizing that increasingly large research grants require such expertise.

In spring 2005, Provost Simpson requested all academic departments to develop a 5-year strategic plan that would include planning for modest growth in the undergraduate student body and replacement of any impending retirements. Wherever possible, departments were asked to provide comparable data from peer institutions. These strategic plans are forming the basis for the continuing revitalization of the faculty, especially important after the Faculty Early Retirement Program of spring 2005, which brought 10 retirements of senior faculty. Although these retirements have meant a continuing reliance on adjunct professors to teach undergraduate courses, Provost Simpson is reviewing all adjunct requests with a view to consolidation into tenure track lines wherever feasible. The departments of Mathematical Sciences and of Humanities and Arts have both traditionally used a large proportion of adjunct faculty for instruction of essential courses (such as introductory calculus and introductory Spanish). A small number of full-time administrative/teaching positions are being created in these key areas and the provost has also asked the departments to ensure that tenured and tenure track faculty are fully engaged in teaching the introductory classes.

Projection: WPI believes we are in compliance with Standard Five in terms of increasing support to faculty for research to match increased expectations; and as indicated previously, in increasing the diversity of the faculty. Enhancing faculty success in securing external funding for scholarship will require careful support and monitoring. Given WPI's expectations for high-quality teaching *and* research, we must balance this objective with

continued emphasis on building the faculty during a period of modest planned annual growth of the undergraduate and graduate student target numbers.

Standard Six: Students

Description & Appraisal. Important structural changes in Academic Affairs include moving the office of Admissions and Financial Aid into Academic Affairs. Associate Vice President for Enrollment Management Kristin Tichenor now reports to Provost Carol Simpson. This move assures stronger academic oversight of Admissions and Financial Aid goals. The Registrar's Office has been brought under this new Enrollment Management structure as well, which has helped to foster greater synergy between recruitment and retention efforts. As part of those efforts, WPI has gathered considerable data concerning graduation rates and student debt levels, all of which is widely accessible to prospective and enrolled students.

In the past two years, the Division of Student Affairs and Campus Life (a new, more inclusive title) has undergone significant changes, with new senior leadership in the positions of Vice President for Student Affairs and the Dean of Students. We also have four new department heads in the division and several new staff members in various departments. In addition to changes in administrative leadership, some restructuring has taken place across the university, with Campus Police and Dining Services now reporting to this division. These changes have brought renewed vitality and energy to the division and a fresh perspective on the variety of services provided to WPI students.

The department mission statement reflects the university's mission and articulates the partnership that Student Affairs establishes in their co-curricular program and services to support and enhance student success. Each fall, every student receives the Campus Planner and Resource Guide, which articulates all university policies and grievance procedures. All faculty and students annually receive a brochure on academic integrity and training sessions on this important topic are included in Graduate Student Orientation, New Faculty Orientation, International Student Orientation, and Teaching Assistant Orientation. All policies and procedures are reviewed and updated annually. A new assessment instrument is under development to send to students who have been involved in the judicial system to determine whether they have met learning outcomes.

Orientation programs for graduate and undergraduate students are comprehensive and focus on both curricular and co-curricular topics. Participants evaluate these programs annually and this feedback is used to identify future improvements. We provide specialized orientation programs for international students and underrepresented students to meet some of the unique needs of these students. These programs, which supplement the regular orientation program, have positively impacted the retention rate of these populations and are rated very highly by participants. During the New Student Orientation Program, new students take a resource tour to help them locate and learn about essential student and academic support services. "Insight," a residentially based extended orientation program for new students, runs for the entire fall semester. A team consisting of a faculty member, a peer academic advisor, and a resident assistant meet regularly with students to ensure that they are adjusting to WPI both academically and socially. In the year ahead, an Office of the First Year will be established to coordinate all of the university's efforts in this area. A full complement of student clubs and organizations, as well as recreation and athletic opportunities, are available for graduate and undergraduate students to enhance their out of classroom experience. WPI provides leadership development to formal student leaders and leadership training opportunities are also available to non-leaders to assist them in developing their skills in these areas.

Student Development and Counseling and Health Services provide a variety of short- and long-term services to assist students, delivered through a combination of campus resources and referrals for specialized treatment in the community. These services are evaluated by students after their visits to assist in monitoring the quality of service delivery. In the 2006-2007 year, these offices will be working to develop a more unified vision for integrated delivery of services in physical and mental health.

We restructured our diversity program in 2005-06, with the Office of Women's Programs now reporting as part of a global office of Diversity Programs (formerly Minority Affairs). This new model has provided a more unified vision for the delivery of services to these specialized populations. Each of these programs has an external Advisory Board consisting of corporate and alumni/ae members that assist in program evaluation and design.

International students are supported through a complete range of activities and services that are consistently reviewed and evaluated. In 2005, a study was completed comparing the academic performance of first year international students with all first year students. The study showed that international students came to WPI better prepared in science and math and started at more advanced course levels. As a group, they performed better than the rest of the cohort. In the spring of 2006, we administered a Student Satisfaction Survey to a random sample of undergraduates and to all graduate students. The analysis of these data is reported under *Concern 3*. The ESL program assists international students in developing their written and verbal communication skills to achieve proficiency through a variety of summer and academic year programs. All programs are evaluated annually by participants to assist in course design for the following year.

WPI engaged in a Master Planning process in 2002-2003 to examine university needs and future expansion for the campus. In the area of student housing needs, plans are under way to build additional on-campus housing for undergraduate students. Dedicated housing for graduate students is being developed as part of WPI's expansion at Gateway Park by a private developer. Demand studies were conducted with undergraduate and graduate constituencies to help determine the housing preferences and desired amenities. The survey results are being used to shape the building program and design.

During the spring of 2004, all departments in the Dean of Students Office completed a self-assessment using the Council for the Advancement of Standards (CAS). This self-study was a thorough review of all student service areas to evaluate programs and their effectiveness and to identify areas which did not currently meet the CAS standards. The universal area of concern was the lack of comprehensive assessment within each programmatic area. Once the self-study process was complete, we established concrete goals across all functional areas to address areas of concern. The goals were included as part of the annual performance appraisal process for all staff and monitored for completion.

WPI has participated in the CIRP survey for over 30 years and the results are used to help understand the shifting perceptions and needs of the undergraduate population. This year we decided to end the administration of the CIRP survey and instead to focus on the results of the NSSE Survey which we have been administering for several years. A comprehensive student satisfaction survey was administered to undergraduate and graduate students in April of 2006; results and analysis are not yet available.

Projection. WPI has been able to increase undergraduate enrollment by twenty to thirty students per year in the last three years, with no diminution in quality or financial aid support. Retention and graduation rates remain high—well above the norms for our peer group, the Association of Independent Technological Universities. Some issues of access to a full range of services for graduate students when the undergraduates are away are still

difficult problems that will be worked on in the next five years, as we seek to make WPI a more competitive choice for more and better graduate students. We believe WPI is in compliance with Standard Six.

Standard Seven: Library and Other Information Sources

Description & Appraisal. Since the last NEASC review in 2001, Gordon Library, in collaboration with other departments within the Information Technology Division, has developed a Balanced Scorecard strategic plan that supports WPI's academic mission. We are in the process of measuring selected objectives that indicate successful outcomes. The library is beginning the process of developing its own cascading Balanced Scorecard to ensure its vision and mission align with both the WPI and IT goals and objectives and adhere to the NEASC standards.

Gordon Library is very cognizant of the new NEASC standards as they apply to the library and librarians are making strong efforts to ensure "students use information resources as an integral part of their education" as outlined in Standard Four, section 4.6 and also in Standard Seven, section 7.8. A new Information Literacy Plan has been developed over the past two years which outlines how the library attempts to assure that information resources are an integral part of students' education. We are working on various assessment options as a way to understand proficiency in the area of information literacy. Work is under way in collaboration with faculty to offer more seminars to Humanities students or potential First Year offerings, and expand our librarian interactions with on-campus Interactive Qualifying Project teams in order to help students appropriately build these essential skills. Numbers of students attending instruction sessions increased from 1447 in 2000 to well over 2000 in 2005. We anticipate faculty and administrative action mandating a more comprehensive enactment of recommendations in the Information Literacy Plan, as part of the new general education program now being discussed.

Gordon Library makes every effort to provide the most appropriate information resources necessary. Since the 2001 NEASC report was completed, the library has increased its electronic journal collection to over 23,000 titles and its electronic books to over 26,000. Electronic services such as electronic delivery of articles requested via Interlibrary Loan have been implemented. A digitization program is under way to create digital repositories of the library's special collections and students' intellectual output. These electronic resources and services are very well received by faculty and students on and off campus. The pilot under way in 2001 to submit and archive theses and dissertations electronically was officially approved by the faculty in 2002 and now there is another pilot to submit and archive IQPs and MQPs electronically. The faculty hopes to mandate this program in AY07.

Although plans were underway with architects in 2001 to create a plan for a renovated library, there has been limited progress toward major library renovation. A few interior spaces have been repurposed to meet growing student needs, for example, we have created 4 collaborative group study rooms equipped with plasma screens, dedicated PC, laptop connectivity, DVD, and VCR. These are incredibly popular with students who are clamoring for more of these spaces. The ground floor was opened up to provide much needed additional study spaces for students, but more needs to be done on this level to implement appropriate technologies. A newly reorganized service point in the main entrance area has improved the space for user/staff transactions and consultations. Extended hours were implemented at the end of each term at the request of the Student Government Association.

Finally, with respect to monitoring inappropriate uses of WPI technological resources, WPI has a full staff of network specialists who scrutinize overall systems usage ("24/7"); when activities unacceptable in the WPI "Acceptable Usage Policy" are detected, staff respond accordingly. The Board of Trustees has made clear they have the same high expectations for WPI they have in their own professional practices for acceptable use and security in all electronic information systems, and they have shared their council with our professional staff to make sure WPI remains fully current in these areas.

Projection: The Gordon Library has maintained a core print collection and is significantly expanding its electronic resources in response to the needs and preferences for acquiring information at a technological university. Since the last NEASC visit, the library and information technology professional staff have made significant advances both in user needs assessment and in hiring new staff who increasingly have been involved in both the planning and delivery of student learning. Expansion of both student numbers and research expectations will challenge all WPI information sources to continue improving ways of assessing best usage and meeting new demands, both in terms of physical resources such as the Gordon Library building and with new electronic needs.

Looking forward to 2011, we would like the Information Literacy Plan to be formally adopted by the administration and faculty so that information literacy is increasingly incorporated into the curriculum and outcomes of student learning indicate increasing proficiencies in these important skills. We plan even more interactive project integration with on-campus groups. We hope to participate in a First Year seminar currently being discussed by a Presidential Commission. The library's Instruction Coordinator is a member of the Commission on the First Year Experience and General Education, so some aspects should be actionable.

We hope to begin planning for both a total renovation of the infrastructure of the physical building which is well past its life expectancy, as well as a complete reorganization of the interior to meet the current and future needs of students and faculty. A possible expansion needs to be considered as projections for further growth in student numbers are exceeding the library building's capacity. This planning should take place in the context of the upcoming capital campaign.

We recognize that funding for library resources needs to keep pace on an annual basis with regular increases in costs for journals, databases, and books so that the library will be able to continue to provide the critical resources so necessary for WPI's faculty and students.

We believe we are in compliance with Standard Seven, but recognize the need to continue improving both the structure and content of the Library as student numbers and demands grow.

Standard Eight: Physical and Technological Resources

Description & Appraisal. The evolution of the IT infrastructure and technology support systems has continued since the last NEASC visit. Major upgrades of the network infrastructure have increased capacity and enhanced reliability with redundancy. Hardware for servers and client PCs has been upgraded to maintain reliability, provide for expanded needs, and maintain currency with technology. Software has also been regularly upgraded to most current versions of operating systems, as well as commonly used PC and business applications.

Security has been a primary focus. Staff positions have been redefined and added to focus on information security. The university has also made major investments in security

hardware and software to monitor and enforce security processes. The Information Technology division initiated and managed a program of multiple projects to ensure that WPI policies and practices relative to information/data compliance regulations were aligned with the new regulations. Project teams consisting of representatives from IT and each business area of focus were formed to evaluate, modify, and document the university's processes associated with the regulation.

The application of technology in academics has been a second important concern. The Instructional Media Center was renamed the Academic Technology Center (ATC), reflecting a focus on the broader application of technology in support of the academic mission of the university. The ATC provides programs for development of state of the art information technology literacy for faculty as well as daily assistance with course content and the integration of technology into existing courses. Technology-enabled facilities (classrooms, teaching labs, specialized labs and collaboration spaces) have been expanded and upgraded. Software for teaching (Blackboard, streaming video, tele-conferencing, webinars) as well as the 100+ applications used by courses and projects have been expanded and upgraded.

Projection. We believe WPI continues fully in compliance with this standard but acknowledge that the resource needs to remain current in both infrastructure and teaching technologies require very careful university-wide budget allocation. Our greatest challenge remains to develop university-wide information technology literacy. Given the rate that technology changes and advances, it has been a challenge to develop and maintain the skills to apply state of the art technologies to greatest benefit.

Standard Nine: Financial Resources

Description & Appraisal. Budget planning at WPI is done within the context of a five-year timeframe. Using the current year budget as a base, revenue and expenditure assumptions and parameters are input for the following four years. These include rates of increases for tuition and fees, salaries, debt service, utilities and other key variables. With respect to future planning considerations, the university is beginning to define what is commonly referred to as structural budget deficiencies. Within the context of a balanced budget, certain needed investments may not receive adequate funding levels. Conversely, certain resources may be used to a greater extent than what may be prudent for the long term. The sum of these items can be referred to as structural budget deficiencies. For WPI, these items may include, but are not limited to, amounts in excess of the annual salary pools in order to bring faculty and staff salaries to an appropriate benchmark, amounts in excess of the budgeted depreciation charges to maintain the physical plant at a certain level of deferred maintenance and to provide information technology funding at an appropriate level, and reductions in endowment support to a level consistent with the industry average of 5% or less. The administration and the trustees are beginning to define these issues, discuss appropriate benchmarks, quantify the deficiencies, and develop a long-range plan for adequate funding. Once concluded upon, future planning will take into consideration the budget impact associated with the reduction of these structural deficiencies, as well as the other planning assumptions and parameters necessary to produce balanced operating and capital budgets.

The university recently hired a new Vice President for Finance and Operations (CFO) who is strengthening the entire financial management process. A new budget analyst position has been created to add redundancy and enhance analytical capability within the Office of Budget and Planning. Detailed quarterly budget reviews are performed and the trustees are regularly updated on the status of the operating and capital budgets. The year-end audit for fiscal 2006 will take place on an earlier schedule than in prior years, and this will allow the fiscal 2008 budget development process to be initiated and completed at earlier dates. The

audit committee is taking a lead role in ensuring that management has adequate internal controls in place and emphasis is being placed on enhanced documentation of the control environments in all business cycles. Additionally, a business cycle risk analysis is being conducted to identify high risk areas for possible further review or internal audits. While already sound, these steps will ensure reliability of the critical financial information used for decision making.

The budget development process is designed to include a broad constituency of the university and to elicit needed programmatic, administrative and physical investments. Planning is done at the divisional level with vice presidents annually preparing a formal review of current budgets, identifying possible ways to improve efficiency and effectiveness, and prioritizing funding requests for investments in future years. Within the context of the planning model and balanced operating and capital budgets, the president and vice presidents determine an appropriate budget that advances the university's educational objectives. The proposed budget is presented for review and consideration to the Budget and Finance Committee of the Board of Trustees.

In fiscal year 2004, the university incurred an operating deficit after years of achieving balanced results. The university reported a small surplus for fiscal year 2005, and a new administration undertook a comprehensive analysis of the University's finances. The university is now projecting balanced results for fiscal 2006 and 2007. WPI is committed to using realistic revenue assumptions in its planning and to build into the budget adequate contingency funds to hedge against significant revenue shortfalls. Expenditure budgets have been scrutinized and historic budget variances have been identified and mitigated. Further, as noted above, the university is defining its structural budget deficiencies and will be working closely with the trustees to develop a plan to address these items.

WPI's books and records are audited annually by an external auditor in accordance with generally accepted auditing standards. The university has adopted many of the recommendations of the National Association of College and University Business Officers (NACUBO) for Sarbanes Oxley best practices related to governance, management and audit-related practices. Specifically, the audit committee ensures the independence and objectivity of the auditors. It retains the auditor on behalf of the university, signs the engagement letter, reviews the audit plan set forth by the auditor, and regularly meets with the auditor in executive session. The audited financial statements and management letter are reviewed by management and the audit committee, prior-year management letter comments are followed through, and the results of the audit are communicated by the chair of the audit committee to the full board of trustees.

WPI regularly reviews and evaluates its financial condition as part of its on-going due diligence and industry awareness. The university maintains public credit ratings with national rating agencies and as such is subject to thorough annual reviews of its financial condition. The university participates annually in the data exchange of the Association of Independent Technological Universities (AITU) as well as NACUBO benchmarking studies on tuition discounting and endowment performance. The results of these surveys are used extensively in helping to better understand WPI's absolute and relative financial position, trends and competitive advantages or disadvantages. Salary levels for faculty are benchmarked annually to the data published by the American Association of University Professors (AAUP) while salary levels for staff are benchmarked to other institutions using the data available through the College & University Professional Association (CUPA). Sightlines Facilities Asset Advisors was engaged recently to review operations and maintenance, and capital reinvestment expenditures of the physical plant at WPI and to compare WPI to other institutions.

Projection. We believe the oversight and management procedures outlined here assure WPI will remain in compliance with all aspects of Standard Nine.

Standard Ten: Public Disclosure

Description & Appraisal. The flow of accurate information within and off the campus is now handled by a new administrative division, Marketing & Communications, which was formed recently to ensure a more consistent flow of communications about the university's program offerings, faculty research and students to relevant external audiences. Marketing & Communications now includes all print and electronic information about WPI, which previously was administered under several offices. Thus the division is now structured in the following areas that focus on providing information to the broad range of WPI's stakeholders – including prospective students, parents, alumni, corporate recruiters, funding agencies, news media, academics and administrators at other key institutions.

- **The News Bureau** gathers and distributes news about events and activities taking place around the university and distributes them on an ongoing basis to relevant news bureaus over the wire service. This new function enables WPI to distribute news releases and media advisories on a weekly basis. Announcements relate to all aspects of the university's operations –including personnel, financial reporting, admissions and career placement data – as well as interesting stories taking place in various departments.

- **Research Communications** focuses exclusively on identifying and describing WPI faculty research and communicating that information to relevant audiences. This new function also provides information about faculty awards and speaking appearances to both internal and external audiences.

- **Alumni Communications** focuses on providing WPI alumni with information about events and activities taking place at the university, primarily though the alumni magazine, *Transformations*, and also through an electronic newsletter, The Bridge. The magazine's forthcoming issue will debut a column from President Berkey, in which he will focus on a key issues or subjects relevant to alumni and to the WPI Community.

- **Web Communications,** now part of Marketing & Communications, is a central point for a wide range of information about WPI. We will be implementing a Content Management System in the coming months that will make it significantly more efficient for departments to update and maintain content on the website without going through a technical bottleneck. The WPI home page, in particular, is a key resource for news and information about events and activities taking place at the university. The Provost and others have required review and updating of all WPI web materials, going down several levels to ensure accuracy and consistency of materials.

- **Campus Communications** now publishes @WPI, a newsletter for the community as well as for those visiting the campus that provides an overview of news, research and student activities taking place around the university.

With respect to the new NEASC standards concerning publication of information on financial aid, the office of Enrollment Management makes general information available on the WPI Financial Aid site (http://www.wpi.edu/Admin/FA/) and cumulative debt

information available within the loan portion of that site at
http://www.wpi.edu/Admin/FA/Returning/links.html). Graduation rates are noted within the
Outcomes section of the Admissions Web site, at
http://www.admissions.wpi.edu/Difference/outcomes.html.

WPI has striven to be highly transparent about our preparation for and the results of
accreditation self-studies and visits; see www.wpi.edu/Academics/Outcomes.

Projection. We believe we are in compliance with Standard Ten, and will continue to
monitor the accuracy and effectiveness of information flow from the new Division of
Marketing and Communications.

Standard Eleven: Integrity

Description & Appraisal. Since 2001 WPI has taken significant steps as a university in
several areas covered in Standard Eleven. A new office of Compliance, with a full-time
director, has been created to assure managerial oversight of the increasing number of federal
and state compliance requirements, as well as to inform the university community of the
highest ethical standards.

- **Intellectual Property Rights.** A new office, Technology Transfer, has been
created to assure equitable and rational assignments of IP rights along with market-
conscious development of such property. The office is headed by an experienced
full-time professional, as Director of Intellectual Property. Several Trustees with
experience in IP played a major role in updating WPI policies and designing the
new office.

- **Conflict of Interest.** WPI worked with senior faculty and external counsel to
design and implement a conflict of interest policy, to enable faculty with interests in
research and development associated with WPI to manage those interests according
to the highest current standards.

- **Privacy Rights.** Our website and other documents, as well as training sessions
from the Compliance officer and others, ensure that the community is aware of such
laws as FERPA.

- **Student Rights.** In 2004-05, with the help of university counsel, the WPI faculty
designed and voted a "Student Grade Appeal and Grade Change Policy." This
policy balances faculty and student rights if a student wishes to challenge a faculty
grade. Undergraduate, graduate, and continuing education students all have access
to this avenue of appeal.

- **Institutional Review Board.** WPI has created an internal faculty and staff review
board to assure compliance of all research with Federal Human Subjects
regulations. The board reviews all non-Federal proposals (Federal ones are sent to
an external Review Board), and also provides information and advice to faculty and
students designing projects (including surveys) involving human subjects.

With respect to external communication of WPI policies and procedures, Vice President
Christopher Hardwick is responsible for these areas as part of his oversight of Marketing &
Communication at WPI. He has begun a thorough review of WPI's presence on the World

Wide Web, and has reorganized that office substantially. One major concern is to assure consistency and accuracy in the way in which WPI is presented on our website. WPI has placed the information required by public disclosure on graduation rates and student debt in the admission section of the website. (See specifics in the previous Standard.) The goal for public disclosure at WPI is to assure that information presented to the public about university is attractive, consistent, and above all accurate. Specifically, the Division of Marketing & Communications is committed to the highest level of ethical standards in our operations as a department, in the information we publish and distribute to internal and external constituents and in our interactions with outside stakeholders.

- **Fact-Checking**: strict editing and fact-checking guidelines are in place to ensure the accuracy of information that we distribute and/or publish in university publications.

- **Editorial Review Boards**: editorial boards for our alumni magazine and faculty advisory groups for university communications ensure accuracy and integrity of our communications.

- **Web Compliance**: software programs ensure that our website and web communications are compliant with federal guidelines for the disabled.

- **Administrative Review**: information to be communicated to external audiences is reviewed with the senior administrative group of the university on a regular basis.

- **Collaboration with Business Units**: close collaboration exists with each of the administrative units, including the Business Office and Human Resources, to assist in the accurate and responsible flow of information to employees and to external constituents about the operation of the university.

Projection. Like all universities WPI is experiencing a steady increase in new requirements for compliance to federal and other regulations, especially but not entirely in the areas of teaching and research involving technologies. As the description above illustrates, we believe we have stayed abreast of these issues, but we recognize the need to devote resources increasingly to ensuring compliance integrity in the increasingly complex area of security. We believe we are in compliance with Standard Eleven.

6. Plans - Significant Issues And Initiatives In The Next Five Years (2006-2011)

The three most significant issues of importance to WPI in the next five years are:

1. **Implementation of the report of the seven Presidential Commissions**. These reports, now at the discussion-to-implementation stage, cover virtually all facets of university life. Their full implementation will occur as part of WPI's strategic move to increase our undergraduate and graduate populations by 3% to 5% per year. Such growth will require not only increasing effectiveness in marketing and admissions in our usual disciplines and geographical areas, but modest growth into new degrees, majors, and recruitment bases. Equal in importance to undergraduate admissions (our prime source of income) will be stabilizing the doctoral program (our prime source for scholarship and our scholarly reputation) to at least 20 PhD's per year, with 30-40 as our target in 5-10 years.

2. **Managing the growth of Gateway Park**. As indicated in the text, the $40,000,000+ investment in a major new life sciences and engineering research facility at Gateway Park will enable WPI to expand physically beyond the historic two-city-block core campus.

Even more important, the success of Gateway Park will place WPI in the ranks of those major research universities that have attracted new technologically-based industries and private research groups to a mixed-use R&D complex supported and driven by faculty research. Local and state officials are counting on Gateway Park to be a major asset in continuing job growth and economic competitiveness in central Massachusetts. We are committed to making Gateway Park a major success.

An area that will require close attention is the management of the flow of students and faculty to and from the Gateway Park research facility. It is critically important to keep healthy the undergraduate life sciences programs on the main campus, even though many (but not all) of the biology, chemistry, and biomedical engineering faculty will have their research laboratories at Gateway Park. To assist in this regard, Provost Simpson has provided funding for an associate department head for each of the affected departments. The principal role of these faculty is to develop and foster a strong interdisciplinary curriculum among the life sciences departments and to coordinate teaching laboratories as part of the renovations to Goddard Hall in summer 2007 – after the research facility at Gateway Park is occupied.

3**. Significantly strengthening WPI as a residential campus**. Currently, slightly less than half our undergraduates (and virtually none of our graduate students) live in WPI-operated residential halls. As housing prices continue to increase fairly rapidly in Massachusetts, increasingly our students must compete in the open market. To succeed with the growth in population and in quality for both groups of students, WPI recognizes we must move more aggressively in the next decade to improve residential facilities. As noted above, plans are underway for a new physical education and recreational facility, to replace the century-old Alumni Gym (which could then be repurposed.)

A ten-year plan for residence halls has been developed that includes the building of a new apartment-style residence for upper-class students to be opened in July of 2009; tearing down and replacing some of WPI's current housing stock; and renovating older WPI residences on a regular basis. An architect has been hired to begin work on the first new residence project. Plans are also being considered for graduate housing that include building an apartment-style residence in the Gateway complex.

At present, WPI is seriously considering a focused Self-Study in 2011 on the success of these initiatives.

APPENDIX: NEASC Accreditation Report
WPI Corporate and Professional Education's Response to Self Study Report.

Dean Stephen Flavin and his staff have gone through all eleven standards and below provide their response to how they are in compliance with all standards. Dean Flavin notes, in general, that their courses can be delivered on the WPI Worcester campus and at corporate designated locations. The Waltham campus was closed in July 2006, and WPI will not be offering courses at that location. No laboratory-based courses are offered off of the Worcester campus. The AV and physical needs of a classroom are available at all locations.

Standard One: Mission and Purposes

WPI Corporate and Professional Education Division provides education to both individuals and corporations throughout the world and in accordance with the institution's mission. This education includes the following: credit and non-credit based programs, delivered in a classroom setting and via distance learning, and directed at the graduate and the non-degree levels.

The WPI Corporate and Professional Education Division is comprised of three groups:

> Continuing Education (Cont Ed) for non-credit training and education to both individuals and corporate clients.
> Corporate Education (Corp Ed) for primarily credit-based education to corporate clients.
> Advanced Distance Learning Network (ADLN) for credit-based education to individuals.

Standard Two: Planning and Evaluation

WPI Corporate and Professional Education regularly engages in planning and evaluation within its own division and with the other divisions of the university to assure that it meets the mission and purpose intent of WPI.

Planning: The Dean of WPI Corporate and Professional Education sits on the President's Administrative Council. All financial reporting uses the same guidelines and procedures as the rest of the university.

Evaluation: Over 90% of administrative duties are conducted by full-time employees of WPI who use all evaluation methods available to WPI employees. All faculty in ADLN and Corporate Education are either full-time or adjunct faculty of WPI and fall under normal university procedures. Continuing Education uses both internal and external instructors who regularly communicate with the Director.

Standard Three: Organization and Governance

WPI Corporate and Professional Education is under the governance of the WPI Board of Trustees and is not under an organizational structure separate from the rest of the university. The Dean of WPI Corporate and Professional Education reports to the Provost.

Standard Four: The Academic Program

The purpose of WPI Corporate and Professional Education is to extend quality educational opportunities to the continuous learners of the world so they can pursue educational opportunities while maintaining their professional and personal lives. WPI partners with its corporate clients and professional students to determine how to best deliver quality education that meets their needs, while maintaining the quality standards established by WPI.

Note that all credit-based courses taught by the WPI Corporate and Professional Education division are on the graduate level.

Advanced Distance Learning Network (ADLN) All degree and certificate programs offered through ADLN are identical to the programs offered on the campus. Additionally, students are not identified as ADLN (distance students) but are admitted into their program through WPI's Office of Graduate Studies & Enrollment and then may choose the delivery system by which they take each course. Depending upon the course, this delivery might be face-to-face instruction on campus or online delivery. The only exception is that the Social Sciences & Policy Studies department offers graduate level courses in System Dynamics which can lead to a certificate in System Dynamics and are only offered online.

ADLN currently offers the following graduate level certificates and degrees — Certificate in Management; MBA; Certificate, Advanced Certificate, and Master of Science in Fire Protection Engineering; Certificate, Advanced Certificate, and Master of Science in Environmental Engineering; Certificate in System Dynamics.

In the academic year 2004-2005, 1,514 credit hours were delivered through 39 courses via ADLN. FY05 survey data reveals that approximately 70% of ADLN students are over the age of 30 with 85% being male. Over 60% are enrolled in one course per semester, which reflects the demanding professional and personal schedules of distance students, and approximately 70% of ADLN students indicated that they would not be enrolled at WPI if they could not take their course work via our distance learning network.

Members of Academic Affairs (Director of Graduate Admissions, Provost's Office and participating academic department heads) and the ADLN staff work closely together to assure quality course content and faculty services. The ADLN staff also works very closely with the staff of the Academic Technology Center to ensure that development of distance programs is aligned with university goals for technology-mediated learning support of campus-based programs. Each faculty member teaching an ADLN course is assigned a technology coordinator to ensure the effective and optimal use of available teaching technologies.

Corporate Education – Corporate Education offers standard certificates and degrees identical to those offered on the WPI campus and interdisciplinary certificates and degrees that are approved by WPI's Committee on Graduate Studies & Research (CGSR). All courses are approved by the WPI faculty. The mission of Corporate Education is to meet the educational needs of the corporate customer and their employees by providing quality courses delivered by WPI full-time and adjunct faculty.

Regulations: All credit-based courses and programs offered through WPI Corporate and Professional Education meet exactly the same standards as courses and programs offered through the main part of the university.   These courses adhere to all academic policies as stated in the WPI catalog, and students are referred to the WPI catalog as the document containing the policies and procedures that apply to them.

Admissions: All students in WPI Corporate and Professional Education credit-based programs are admitted into their programs through the Office of Graduate Studies & Enrollment.

Faculty: Only WPI full-time faculty or faculty approved by the relevant, academic department head teach credit-based courses. The academic department heads in which the certificate or degrees have courses and/or CGSR must approve all credit-based certificate and degree programs offered through WPI Corporate and Professional Education.

Assessment: Students in credit-based courses offered through WPI Corporate and Professional Education demonstrate their knowledge through means similar to those used in the campus classroom. In most courses, including distance courses, the faculty employ the same assessment for an WPI Corporate and Professional Education course as they do for a campus course. At the graduate level, assessment normally consists of cases, projects and essays that reflect the knowledge of each specific student. All credit-based courses use the same course evaluation process that is conducted on the main campus.

Semester Length: The vast majority of credit courses offered through WPI Corporate and Professional Education are not taught in an abbreviated semester. The semester either matches the campus semester or spans a longer, rather than shorter, semester due to the professional demands of the corporate student. WPI Corporate and Professional Education is willing to offer shorter, non-traditional semesters if the corporate client requests it, and will do so only with full agreement of the WPI faculty.

Class Size: Class sizes are similar to those in campus classes whether the class is taught in a classroom or by distance.

Distance Technologies: WPI's distance courses are delivered over the Internet. In most cases, faculty employ the course management features of myWPI, a learning and information portal powered by Blackboard ™, to manage class communications, make announcements, and deliver content including streaming videos, audio files, PowerPoint slides, text-based materials, simulations, and interactive files. Students and faculty also have unlimited use of synchronous communication tools, including real-time chat and a shared whiteboard. ADLN courses may be received in a fully interactive mode (i.e. two-way audio/video), if the sites have video conferencing equipment (room-based or desktop) which is H.320 compatible. Students and faculty maintain contact through myWPI, e-mail, and telephone. We strive to create an environment where a faculty-student relationship can be formed by encouraging frequent e-mailing and other collaboration tools such as threaded discussion boards and virtual chat.

Undergraduate Courses: WPI Corporate and Professional Education does not offer undergraduate degree programs or undergraduate courses for credit, but does offer non-credit undergraduate courses identical in content to current credit-based WPI courses. A faculty and administrative committee is currently evaluating whether or not to offer these courses for credit.

Continuing Education: WPI full-time staff monitors all non-credit courses and programs offered through Continuing Education, and the course attendees (and clients) evaluate each offering. For evaluation and quality control purposes, a member of the Continuing Education staff attends all courses when taught by a new instructor, as well as all new courses.

Standard Five: Faculty

All credit-based courses offered through WPI Corporate and Professional Education are either taught by WPI full-time faculty or by faculty approved by the academic department head; therefore the qualifications of these faculty are identical to those who teach exclusively on campus.

Faculty compensation for WPI Corporate and Professional Education classes varies by faculty member and the course delivery method. Corporate Education classes are normally taught as an overload and the faculty are compensated directly for this work.

Standard Six: Students

Advanced Distance Learning Network. Students are not identified as ADLN (distance students) but are admitted into their program through the WPI Office of Graduate Studies & Enrollment (GSE) and then may choose the delivery system by which they take each course. Depending upon the course this delivery might be face-to-face instruction on campus or online delivery.

Corporate Education students are admitted through GSE according to their standard procedures. If a student wishes to apply credits from a Corporate Education certificate toward a campus-based degree program, the student must apply for admission and course transfer using standard procedures.

Continuing Education students are enrolled in non-credit based courses and do not apply through the WPI Admissions Offices.

ADLN retention and graduation rates are contained within WPI's overall retention and graduation rates. Corporate Education students are normally selected by their employer and then processed by GSE so retention is extremely high.

Student Services: WPI strives to offer the WPI Corporate and Professional Education student informational services comparable to those available on the Worcester campus. Maintaining contact through the Internet is now a common method of communication, whether a student is local or at a distance. Alterations are made only when necessary due to geographical constraints. Students are serviced either through the appropriate administrative office that currently exists on campus or through the WPI Corporate and Professional Education office which is readily available via e-mail or telephone. Most students use e-mail as their method of conversing with the offices and these e-mails are reviewed several times per day. The listings below indicate how easily available student services are for the distance student.

Books. Students can order text books online or by calling the campus bookstore at a toll-free number. Textbooks and materials in stock are shipped within 24 hours.

Career Development Center. Almost all WPI Corporate and Professional Education students are currently working professionals. They usually do not require the services of the Career Development Center, but the Center is accessible by telephone and through their website for career assistance.

Academic Advising. Part-time graduate students are assigned an advisor at the time of their admission to degree-seeking status. Students communicate regularly via e-mail and telephone with their faculty advisor.

Registration. Students can register for classes either on-line or by mailing a registration form which can be obtained from the WPI website or by contacting the Registrar's office. Academic course listings are available on-line.

Tuition Payment. Students can pay all fees online through credit card, by wire transfer, or check. Also, many students are corporate sponsored so payment is made by the company.

Applying for Admission. Applications can be completed online or by downloading a paper application from the web site.

Standard Seven: Library and Other Information Resources

All WPI Corporate and Professional Education students registered for credit-based courses have WPI computer accounts, access to WPI computing hardware and software resources through university servers, and online access to the vast majority of the resources of the Gordon Library. ADLN students are required to have access to PC based equipment with specific, minimum technical specifications.

myWPI. This online information and learning portal provides a customized interface to course content, campus organizations, and WPI's web of information. Faculty and on-campus and distance students use myWPI widely for both academic and nonacademic purposes, thus providing a seamless transition to WPI for the distance learner.

Computing Services. A CCC UNIX account provides students with access to a wide variety of information resources. Students taking courses through WPI Corporate and Professional Education may obtain an account by applying online. The WPI Help Desk which assists students with all software and hardware questions is available via e-mail or telephone.

Library. Students have access to a variety of services and resources comparable to those available at WPI's Worcester campus. Students may register for a library card and request books and journal articles from the Gordon Library or from other libraries via e-mail, mail and fax, or by filling out online forms. Items may be renewed via the same avenues. The library's website offers all students access to the online catalog, tutorials on using the various electronic resources, and a collection of librarian-selected Web sites.

Continuing Education students are currently not assigned WPI computer accounts.

Standard Eight: Physical and Technological Resources

WPI Corporate and Professional Education offers classes in classrooms located on the WPI Worcester campus, and at corporate designated locations such as corporate offices or other locations convenient for their employees. No laboratory-based courses are offered off of the Worcester campus. The AV and physical needs of a classroom are available at all locations.

Standard Nine: Financial Resources

The Continuing and Corporate units of the WPI Corporate and Professional Education Division operate as a profit and loss center with an annual net return to the University. The Dean of WPI Corporate and Professional Education manages the gross income and expenses so that 1) quality education can be provided and 2) net return is realized.

Standard Ten: Public Disclosure

The WPI Corporate and Professional Education Division follows the university's standard Public Disclosure Policies. Its credit-based courses follow the same standards and policies as campus courses and thus are covered under University disclosure.

Standard Eleven: Integrity

The WPI Corporate and Professional Education Division's employees, publications, web sites, and operating procedures are closely integrated with the university and are held to the same standards as the rest of the university.