Worcester Polytechnic Institute

Interim Report to the

Commission on Higher Education,

New England Association of Schools and Colleges

October 15, 2016

100 Institute Road, Worcester, Massachusetts

Contents

1 Introduction

The formal work to prepare this report began when President Leshin formed and charged the Steering Committee in June 2015. The steering committee was co-chaired by Vice President for Student Affairs Philip Clay and Dean of Undergraduate Studies Art Heinricher. Representatives from all areas of the university, including Faculty Governance, Academic Affairs, Student Affairs, Finance, Advancement, and Enrollment Management, have participated in and contributed to this interim report.

Table 1: NEASC Steering Committee

- Philip Clay, Student Affairs
- Emily Perlow, Student Affairs
- Bonnie Walker, Multicultural Affairs
- Melissa Leahy, Enrollment Management
- Stephanie Pasha, President's Office
- Judith Trainor, Finance
- Judith Jaeger, Advancement
- Art Heinricher, Academic Affairs
- Kent Rissmiller, Outcomes Assessment
- Kris Sullivan, Academic Affairs
- Mark Richman, Secretary of the Faculty
- Terri Camesano, Dean of Graduate Studies
- Diane Vanacore, Communications
- Michael Dorsey, Communications

The committee received additional input from many more faculty and staff and much that is included in this report was either reviewed or written by them.

Over the last five years, we have used the 2011 comprehensive self-study, the review provided by the visiting team, and the concerns raised from the Commission to guide our work at WPI. For example, the faculty governance committee charged with assessment of learning outcomes has used two of the areas of concern (student reported time-on-task and assessment of student learning in the signature projects) to focus its agenda each year since 2012. Work regarding "clear terms of appointment and promotion for non-tenure track faculty" made significant advances in the spring after the comprehensive review when the faculty approved policies and procedures for the Faculty Handbook. Enrollment growth at both the undergraduate and graduate level has continued, although it has slowed. Work to adapt to that growth is on-going.

There have been some significant changes in leadership since the comprehensive review. President Dennis Berkey announced that he would leave WPI in May 2013. After one year with an interim President, Dr. Laurie A. Leshin became WPI's 16th president in June 2014. President Leshin has recommitted WPI to its distinctive undergraduate program, emphasized the importance of the Global Projects Program, and challenged the community to elevate the impact of education and research. Building on the strong enrollment trends and solid financial position of the university, President Leshin launched a comprehensive strategic planning process in her first year. The resulting plan, *Elevate Impact: A Strategic Plan for WPI 2015-2018*, will be discussed in detail throughout this interim report. Finally, Dr. Bruce Bursten was named as WPI's new Provost and Senior Vice President, and Professor of Chemistry and Biochemistry, in June 2015. As former President of the American Chemical Society, Provost Bursten brings an external view, broad perspectives, and high standards to his role as WPI's senior academic officer.

2 Institutional Overview

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: real-life project experiences both synthesize *and* motivate classroom learning. The "Two Towers" tradition of academic achievement and practical application is reflected in WPI's motto "Lehr und Kunst" or "Theory and Practice." 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 more than 40 master's degree programs and more than 20 doctoral programs. The most recent additions at the doctoral level are multidisciplinary programs in Robotics Engineering and Data Science.

In 1970 WPI adopted a revolutionary new undergraduate program known as the *WPI Plan*. The Plan replaced the traditional rigidly-prescribed curriculum — typical of conventional engineering education — with a flexible, exciting, and academically challenging program aimed at helping students to learn *how to learn*. The Plan continues the "Two Tower" tradition by synthesizing classroom experience in projects that solve real-world problems. The WPI project program prepares graduates for their future professional lives by helping them learn how to identify, investigate and report on open-ended problems. The undergraduate program was recognized by the National Academy of Engineering with the 2016 Gordon Prize for Innovation in Engineering Education.

The current student body of over 6,000 men and women includes about 1,900 full and part-time graduate students. Currently, students attend WPI from almost every state and over 70 foreign nations. The most recent changes to the undergraduate program have been the introduction of a new major in Architectural Engineering (reviewed and accredited by ABET in 2014) as well as several new minors.

In 2015, WPI celebrated its sesquicentennial anniversary. As part of a yearlong celebration of our first 150 years, we commissioned the publication of a sequel to our centennial publication *Two Towers*. *True to Plan* analyzes the people and events that shaped WPI between 1965 and 2015 and centers on the creation and evolution of the WPI Plan. We also commissioned a biography of Bill Grogan, the man often referred to as the father of the WPI Plan, who passed away in 2015 at the age of 90. The biography, *The Presiding Genius of the Place,* was published in 2016.

3 Areas of Special Emphasis

Introduction. The Commission identified five areas for special emphasis after the comprehensive review in 2012:

1. Addressing the impact of undergraduate and graduate enrollment growth on faculty workload, advising, and student services;
2. Developing clear terms of appointment and promotion for non-tenure track faculty and provisions for their meaningful participation in governance, to include updating the Faculty Handbook to reflect the status of non-tenure track faculty and the new decanal structure;
3. Revising the student course report to accurately estimate time-on-task;
4. Systematically using the Great Problems Seminars and Major Qualifying Project to assess student achievement and using the results to improve academic programming;
5. Achieving its goals for the recruitment and retention of faculty, staff, and students of color.

A detailed discussion of the areas of special emphasis follows.

3.1 Impact of Enrollment Growth

Growth in enrollment, both the positive impacts of growth and the challenges associated with growth, was a theme running through the comprehensive self-study in 2011. At that time, we had reached a target growth for the undergraduate population and indicated that WPI planned to focus on continued growth in the graduate programs only. Growth has continued in both the undergraduate and graduate programs. When the self-study was completed in 2011, we reported the following enrollment data.

Table 2: Enrollment Data from the 2011 Self-Study (headcount including part-time students)

	AY 2007-08	***AY 2008-09***	***AY 2009-10***	***AY 2010-11***	***AY 2011-12***
Baccalaureate	3,009	3,160	3,391	3,537	3,759
Master's	676	700	847	1079	1221
Doctorate	178	205	219	212	222

At the time of the last self-study, the enrollment data for AY2011-12 was a projection. Table 3 records actual student enrollment (headcount, including part-time students) over the last five years. Note that the *rate of growth* has decreased slightly; the average increase in the undergraduate population was just over 5.5% per year between 2008 and 2012. The average increase per year was about 2.7% per year between 2012 and 2016. For the Master's programs, the average increase between 2012 and 2016 has been about 5.5% while the Doctoral programs have grown at an average of 9.2% per year.

Table 3: Enrollment data for the past five years (headcount, including part-time students)

	AY 2011-12	***AY 2012-13***	***AY 2013-14***	***AY 2014-15***	***AY 2015-16***
Baccalaureate	3,746	3,841	4,012	4,123	4,177
Master's	1261	1,408	1,463	1,503	1,560
Doctorate	241	271	324	336	340

We continue to evaluate and adapt to the needs created by this growth. The average class size (number of students per lecture) has remained roughly constant at about 32 students per lecture with more than 50% of undergraduate classes enrolling fewer than 25 students.

The credits delivered by the faculty grew from almost 143,000 in AY 2011-12 to more than 173,000 in AY 2015-16. During the same period, the number of tenured and tenure track faculty grew from 230 to 248. The total number of FTE faculty, including tenured, tenure-track, full-time non-tenure-track, and part-time (adjunct) faculty increased from 335 in AY2011-12 to 411 in AY2015-16.

Table 4: Growth in the Faculty

FACULTY	***AY 2011-12***	***AY 2012-13***	***AY 2013-14***	***AY 2014-15***	***AY 2015-16***
T-TT Faculty	230	237	243	243	248
FT NTT Faculty	60	68	88	93	111
PT NTT Faculty	135	157	147	149	155
FTE Faculty	***335***	***357.33***	***380***	***386***	***411***

The following table records the average number of credits delivered by faculty, separating faculty who are tenured or tenure-track, full-time non-tenure-track, and part-time non-tenure-track (adjunct). For tenured and tenure track, the ratio has decreased even though enrollment has increased.

Table 5: Credits per FTE Faculty

RATIOS	***AY 2011-12***	***AY 2012-13***	***AY 2013-14***	***AY 2014-15***	***AY 2015-16***
CR/T-TT	397.67	377.30	356.92	359.00	343.62
CR/FT NTT	598.75	644.10	591.11	555.43	569.60
CR/PT NTT	222.99	183.72	211.31	230.54	185.74
CR/FTE	***470.13***	***453.54***	***446.88***	***449.20***	***431.57***

The fraction of credits delivered by tenured and tenure-track faculty decreased from just under 60% to 50.4% in AY2015-16. The increase in the fraction of credits delivered by non-tenure-track faculty has been the focus of discussions in faculty governance for the past two years and it will be a central theme in the next comprehensive review in 2021.

Student Services. In response to both undergraduate and graduate growth, at the time of the 2011 report, student services staffing levels and programs had not yet reached an equilibrium commensurate with growth in student enrollments. In response over the last five years, WPI has invested substantially in creating additional positions (16.25 FTE staff in total) in key student services areas including academic advising, counseling, health services, disability services, and career services.

As these human resource investments were made, many departments were also reorganized to support more specialized service delivery and to fill programming gaps. For example, the Student Development and Counseling Center staff each specialize their programming efforts in one area of mental health and wellness such as substance abuse, sexual violence, and suicide prevention. In that same vein, to better serve the growing graduate residential population (up from approximately 75 in 2010 to 175 in 2016), Residential Services restructured to allow a staff member to focus on the graduate housing experience.

The goal at the time of the 2011 report was to stabilize enrollment growth. However, since that time, growth of graduate and undergraduate populations has continued, as recorded in Table 3. While the addition of staff members in several student services departments has helped maintain and improve service delivery, some functional areas have experienced an increase in students served that surpasses capacity and has resulted in greater strains in staffing.

Utilization rates continue to climb, particularly in high-touch areas such as academic advising, counseling, disability services, and health services. For example, since 2012, the Student Development and Counseling Center has seen increased utilization rates of more than 60%, Disability Services has seen increased utilization by more than 70%, and Health Services has seen rates climb to 50% more than 2012 levels. This is due in part to increased efforts to outreach and advertise services to students. Additionally, WPI has begun to reach out to first year or transfer students prior to their arrival at WPI who disclose a need for support services in the admission process to connect these students with support resources as soon as possible. Student Services have responded creatively to meet increasing demand. To best provide immediate service delivery needs in the health areas, WPI hires per diem staff in health services and counseling during high traffic times to minimize appointment wait times. Many departments have also begun to offer online appointment scheduling and walk-in hours to increase accessibility and improve responsiveness. Several departments have begun to train peer educators to deliver important educational messages or coach students. For example, in Disability Services, EDGE mentors, who are upper-class peer mentors, help coach and mentor students.

The academic quality metrics (for example, class rank, GPA, and SAT scores) for the entering class have improved as we have grown the undergraduate population, but so too has the number and percentage of students who seek support services outside the classroom. More students are choosing to request accommodations through Disability Services. Our programs are challenging and we find that more students, especially first generation and/or students coming from under-

resourced high schools, will require stronger academic support and advising services. In response to these needs, WPI hired staff in academic advising whose positions focus specifically on the first and second year experience.

As the graduate population has increased, the Dean for Graduate Studies, Terri Camesano, has led efforts to make graduate orientation more robust so that graduate students are more aware of campus support services. In 2015, the Student Training and Readiness Sessions (STARS) program was launched. This workshop series is designed for graduate students and postdoctoral fellows and provides academic and non-academic training to help them chart a path through graduate school and into their professional career. Topics include understanding team dynamics, mentoring, and working a career fair. Residential Services has also increased programming targeted at graduate students with excellent attendance. In the next year, WPI plans to create an onboarding website targeted specifically for incoming graduate students to help them know how to navigate campus processes as they acclimate to the campus.

WPI continues to prioritize student satisfaction. Every two years, WPI administers the Noel-Levitz Student Satisfaction Inventory, which measures satisfaction on a 7-point Likert scale. Despite growth that has strained resources, since 2010, student satisfaction has remained fairly stable in service delivery areas. In the 2014 survey, one area of concern was a decrease in satisfaction in areas related to academic advising. In response, WPI shifted resources to improve advising including the implementation of a sophomore success series, hiring a pre-health advisor, and implementing a professional advising model where each student is assigned a specific academic advisor in Academic Advising in addition to their faculty advisor. The next Student Satisfaction Inventory will be implemented in November 2016.

In the next five years, WPI will respond to continued trends in student satisfaction, continue to grow support service staffing commensurate with enrollment, explore creative delivery methods to continue serving students effectively, and to develop stronger support structures for the graduate population.

3.2 Roles and Recognition for Non-Tenure Track Faculty

Significant progress has been made regarding integrating the full-time non-tenure-track faculty into the governance structure, but work continues in this area.

The faculty approved new policies and procedures for promotion in rank for non-tenure track faculty in March of 2012. The Faculty Handbook now recognizes three categories of (full-time) Continuing Non-Tenure-Track Faculty. In particular, the faculty approved the following addition to the Handbook regarding evaluation and promotion for Teaching Professors:

> ***Evaluations***: After the initial appointment, the Assistant, Associate, or (full) Teaching Professors will have established a record of teaching at WPI. Continuing evaluation of teaching performance, based on course evaluations, project evaluations, and other relevant feedback, will be made by the Department Head and/or Program Director, the appropriate Dean, and the Provost on a year-by-year basis. Annual performance evaluations will also take into consideration any other activities described in the official letter of appointment from the Provost. These annual evaluations will include a written evaluation to be kept on file.

> ***Promotions***: Recommendations for promotion to the Associate and (full) Teaching Professors level will be made by the Department Head and/or Program Director (with input from departmental and/or program faculty members) and the appropriate Dean, reviewed by COAP, and then passed to the Provost for action. The standards used to grant these promotions should be identical (with respect to teaching performance and credentials) as those used in the corresponding promotions of the tenured faculty (see Section 7F).

The Committee on Appointments and Promotions (COAP), the faculty governance committee that performs the review for promotion in rank for tenured faculty, also completes the review of non-tenure track faculty nominated for promotion in rank. COAP participates in New Faculty Orientation (NFO) which includes both tenure-track and non-tenure-track faculty. The committee also holds at least two open meetings each year to discuss the promotion criteria and the promotion process.

At this time, the committee has three years of experience in reviewing promotion files for non-tenure-track faculty. It has made changes in its internal processes, and how it communicates with the candidates and the department heads. The committee is also acting on data collected in the COACHE Survey on Faculty Job Satisfaction showing low satisfaction with the promotion process. That work may lead to revisions in the promotion criteria and may have an impact on both tenure-track and non-tenure-track faculty.

Progress regarding the meaningful participating in governance for continuing non-tenure-track faculty has not been fully addressed. There has been progress at the department level, where continuing NTT faculty serve on departmental committees, including committees focused on academic operations (such as curriculum committees) and program review committees as well as search committees for both TT and NTT faculty. One standard exception is the department tenure or personnel committee. This is not standard across departments and there are departments in which continuing NTT faculty do not participate in departmental committees.

At the university level, continuing non-tenure-track faculty cannot serve on faculty governance committees. They do participate in meetings of the faculty but do not vote.

The Committee on Governance did form a task force to review the Faculty Handbook, but the report from that task force has not been reviewed at this time.

3.3 Student Course Report Data Regarding Time-on-Task

The federally-mandated definition of the credit hour specifies that one credit hour requires the equivalent of 1 hour in class plus 2 hours out of class each week for 15 weeks. WPI does not use the standard credit hour or seat time as a measure of student learning. The following is the standard expectation stated in the Undergraduate Catalog for courses and projects:

Course Credit
Unless otherwise indicated, WPI courses usually carry credit of 1/3 unit. This level of activity suggests at least 15-17 hours of work per week, including work outside the classroom, as well as scheduled class and laboratory time. The usual workload per term is 1 unit.

The standard definition of a credit hour translates to the following statement: being a full-time student is a full-time job. A student enrolled in five 3-credit courses in a traditional semester system is expected to spend 15 hours in class and 30 hours outside of class, for a total of 45 hours per week. At WPI, students are expected to average 12 hours in class and 36 outside of class for a total of 48 hours per week.

Communication about these expectations begins each year in New Faculty Orientation when new faculty are introduced to the structure and philosophy of the WPI Plan. Setting the expectation for student work outside of scheduled class time is one of the core messages at several points during New Student Orientation (including a session for parents) and again in the semester-long Insight Advising Program. The consistent message is that academic work is your full time job.

WPI's graduate programs use the standard semester schedule and the standard measure for credit. (A 3-credit graduate course meets 3 hours each week and expects an average of 6 hours per week outside of class.)

At the time of the 2011 Self-Study, the only source of data regarding student time-on-task was a single question on the standard student course report. Surveys of students indicated that about 1/3 of students interpreted the question to mean only time outside of scheduled class/lab/conference meetings, and so the data obtained underestimated the actual time spent on classwork at WPI. Starting in 2013, the standard survey split the question regarding time-on-task. The first question asks for a report of time spent in scheduled meetings (lecture, conference, and lab). The second question asks specifically about time spent outside of scheduled meetings:

On average, what were the total hours spent in each 7-day week OUTSIDE of formally scheduled class time in work related to this course (including studying, reading, writing, homework, rehearsal, etc.)?

0 hr/wk 1-5 hr/wk 6-10 hr/wk 11-15 hr/wk 16-20 hr/wk 21 hr/wk or more

These data are collected at the end of each course and the results summarized and shared with the instructor, the department heads and deans, and the Undergraduate Outcomes Assessment Committee. Each department sees how their data compare with other departments. Each department head sees how each of his or her faculty compare on this question.

There are patterns in the data that require further analysis. First, there is a stable pattern of decreased reported time-on task in B term and D term over the past three years. (The average response is highest for A term, decreased in B term, increases again for C term and then decreases to its lowest value in D term.) This could be some indicator of student fatigue or it could reflect patterns in course registration. The data also show that students spend, on average,

less time outside of class for introductory courses while reported time increases as the students move through the curriculum into more advanced courses in their major. All of this data is shared with the faculty through the Undergraduate Outcomes Assessment Committee.

WPI also uses data from national surveys regarding time-on-task. For example, all engineering programs at WPI use the Engineering Exit Survey (administered by EBI, recently renamed Skyfactor). The data show that WPI students consistently spend significantly more time on their studies outside of class each week than students at our AITU[1] peer institutions. For example, in the most recent survey, 54% of WPI students reported studying at least 21 hours per week outside of class while only 31% of students at peer institutions reported working this many hours. WPI also participates in the National Survey of Student Engagement (NSSE) and our 2016 NSSE data shows the same favorable comparison between WPI and peers: 51% of WPI students reported spending at least 21 hours in academic work outside of class, compared with 24% for our comparison group, the New England Private Colleges. In the most recent Princeton Review Survey, WPI was ranked #19 for "Happiest Students" and has also been ranked in the top 20 for "Students who study the most."

3.4 Assessment of Student Learning Outcomes

WPI's Undergraduate Outcomes Assessment Committee (UOAC) is responsible for monitoring the achievement of the University's learning outcomes and making recommendations regarding academic policies to address perceived needs. UOAC has used the issues raised in NEASC's letter of November 15, 2012 to focus its agenda each year since then.

When the faculty adopted learning outcomes for the undergraduate program (all majors) in 2004, it also adopted institute-wide learning outcomes for each of the required projects, the junior year IQP and the senior year MQP. The majority of the evidence for achievement of WPI's undergraduate learning outcomes is in student performance on the IQP and the MQP, but we were not using that data in a systematic way at the time of the 2011 self-study.

The faculty, led by UOAC has made significant additions to the assessment plan for project work at WPI:

1. Student Report on Progress toward IQP and MQP Learning Outcomes
2. Advisor Report on Student Achievement of IQP and MQP Learning Outcomes
3. Faculty Peer Review of IQP and MQP Reports

Each student now completes a survey recording their *progress* toward each of the learning outcomes when they submit the final report for each project. These data have been collected, reviewed by UOAC, and shared with the faculty since 2013. For example, Table 6 reports the results for MQPs completed in each of the last three years.

[1] Association of Independent Technological Universities

Table 6: Student Report on MQP Learning Outcomes

MQP LO	***Survey Question***	***Average 2013-14 (n=875)***	***Average 2014-15 (n=957)***	***Average 2015-16 (n=895)***
#1	Applying fundamental and disciplinary concepts and methods specific to my major	4.33	4.27	4.35
#2	Demonstrating skill and knowledge of current technological tools and techniques relevant to my major	4.32	4.29	4.37
#3	Developing skill in written communication	4.19	4.17	4.18
#3	Developing skill in oral expression and public speaking	4.07	3.99	3.98
#3	Developing skill in visual communication (i.e., use of images and graphics to convey information, data, and ideas)	4.24	4.16	4.20
#4	Identifying, analyzing, and solving problems creatively through sustained critical investigation	4.38	4.32	4.39
#5	Finding, critically evaluating, and integrating information and ideas from multiple sources.	4.32	4.22	4.22
#6	Understanding and applying ethical standards in my field (for example, human and animal rights in research, respect for intellectual property, social and environmental responsibility, honest reporting of data, sensitivity to conflict of interest)	3.77	3.66	3.71
#7	Taking responsibility for my own learning and project direction	4.49	4.39	4.48
Hours	On average, how many hours per week did you spend on this project	20.25	20.44	19.71

UOAC has shared these data, and the same data for the IQP, with faculty governance and the academic departments. Note that the response rates are over 90% each year and student assessment of their own progress in each area is high (the scale is 1 to 5, with 5 being "Significant Progress"). UOAC has also separated the MQP data by major and used that data to start discussions among the faculty regarding "best practices' in project advising. For example, there are some majors for which the student responses for outcome #6 regarding ethical standards were significantly better than the average. UOAC organized an open session in which faculty from those majors described some of the ways they bring a focus on ethics into their major projects. The assessment data for MQP Learning Outcomes will be discussed further in Section 5.2.1.

The Advisor Report on Student Achievement of Learning Outcomes asks the faculty advisor to report on each individual student. The questions are the same as those asked of students, but the advisor is asked to report on *achievement*, not *progress*. This survey is completed just before the faculty submits the final project grade, encouraging faculty to connect the learning outcomes to the grading criteria for the projects. The first full year of data was collected in 2014-15 and the UOAC has just begun to review the results. For example, preliminary results show that faculty assessment of student writing skills is not as positive as student assessment of their own skills, but advisors still report that almost 90% of students are able to write at an acceptable level.

The third source of data regarding learning outcomes is a peer review of project reports completed each summer. UOAC has developed and monitors a schedule which requires a review at least every three years for each academic program. The committee also created a "common core" of questions related to the institute-wide learning outcomes to make comparison across departments possible for the first time. The first set of participating departments were the engineering programs who used the review as part of their preparation for the 6-year accreditation visit from ABET in 2014.

The 2011 visiting committee also noted the need to improve assessment of the impact of WPI's first year seminar courses, the Great Problems Seminars (GPS). The Associate Dean of Undergraduate Studies worked with the faculty teaching in the GPS to develop and assess learning outcomes. In each of the last two years, the Associate Dean has reported on the achievement of the learning outcomes for the GPS. UOAC was very favorably impressed with the record of student achievement in these seminars.

Finally, UOAC has made considerable progress in re-writing and updating its *Assessment Plan for Undergraduate Learning Outcomes*. This document identifies each of the learning outcomes and the data sources relevant to them. It had grown considerably out of date with changes to AITU and NESSE instruments and the new tools that we adopted at WPI to measure our progress. With these new tools, the updated plan and our new staff support, WPI is in a good position to systematically assess our students' learning and identify areas for programmatic improvement.

3.5 Recruiting and Retaining Faculty, Staff, and Students of Color

Faculty and Staff. Increasing the gender and ethnic diversity of our faculty and staff remains one of our steadfast goals as an institution, and also one of our most significant challenges. Table 7 presents the demographic information of the New Faculty Hired (both Non-Tenure Track and Tenure Track) during each of the last four calendar years.

Table 7: Demographics of New Faculty Hired (NTT and TT) between 2012 and 2015

	2012		2013		2014		2015	
Race/Ethnicity	**NTT**	**TT**	**NTT**	**TT**	**NTT**	**TT**	**NTT**	**TT**
Asian		2	2	3	2		2	3
Black or African American	1							
Hispanic or Latino	2							
Non-Resident Alien	8	2	5	4	7	7	7	2
White	22	13	15	8	12	4	20	7
Two or more							1	
Total	33	17	22	15	21	11	30	12
Gender	**NTT**	**TT**	**NTT**	**TT**	**NTT**	**TT**	**NTT**	**TT**
Male	20	15	14	11	14	8	20	7
Female	13	2	8	4	7	3	10	5
Overall Total for Year	**50**		**37**		**32**		**42**	

In 2015, domestic underrepresented minorities represented 6.45% of the total Faculty population as shown in Table 8. It is important to note that in both Tables 7 and 8, faculty only appear in a single demographic category regarding their race/ethnicity. As a result, the racial diversity of the faculty members in the category of "Non-Resident Alien" is not included in the other categories.

Table 8: Demographics of Tenured and Tenure-Track Faculty in 2015

Tenured and Tenure-Track Faculty	**As of November 1, 2015**	
Race/Ethnicity	**Total Number**	**Percentage of Total**
Asian	33	13.31%
Black or African American	2	.81%
Hispanic or Latino	10	4.03%
American Indian	2	.81%
Native Hawaiian or Pacific Islander	2	.81%
Non-Resident Alien	25	10.08%
White	168	67.74%
Two or more	1	.40%
Unknown	5	2.02%
Gender		
Male	186	75%
Female	62	25%
Total number of Tenured and Tenure-Track Faculty	**248**	

While progress has been slow, a few significant developments have taken place in the last two years to assist in our efforts to increase the diversity of faculty and staff going forward.

In the summer of 2015, Karen Oates, Dean of Arts and Sciences, created a new STEM Faculty Launch[2] program at WPI designed to provide support and encouragement for graduate students and post-doctoral researchers seeking tenure-track positions. Recruitment for participation in the program was concentrated at Historically Black Colleges and Universities (HBCU) and women and underrepresented minority candidates were encouraged to apply. All invited participants received funding to cover travel expenses to and from WPI as well as lodging and meals during the workshop. Participants attended a variety of interactive sessions, presented their research to expert faculty, and gained exposure to project-based learning, a hallmark of WPI education. The workshop also included critical topics for new and aspiring faculty, including: preparing your teaching statement with evidence-based teaching practice; designing an effective research statement; preparing for the on-campus interview; writing successful grants; and negotiating for a tenure-track position. In 2015, there were 26 participants in the program, including 21 women and 5 men. In 2016, there were 34 participants in the program, including 24 women and 10 men. Response to this new initiative has been very positive. In addition to developing the STEM

[2] Fall 2016 Edition of Diversity in Action: http://www.myvirtualpaper.com/doc/diversity-in-action/dia2016fallspecial/2016100301/#66

pipeline, it is our hope that the STEM Faculty Launch program will increase awareness of WPI as a potential place of employment for aspiring STEM faculty from underrepresented groups.

Not long after his arrival in 2015, one of Provost Bursten's first initiatives was to put greater focus on building more diverse pools of faculty candidates. He worked in partnership with Human Resources to designate a Diversity Advocate for each Faculty search. The role of the Diversity Advocate is to assure that the search committee has sought candidates from a wide variety of sources and to ensure that the committee avoids unconscious or implicit bias in its choices for interviews and finalist. The Diversity Advocates were first utilized in AY2015-16 academic year for new faculty hires for the AY2016-17, and led to good success especially with respect to gender diversity: Seven of the 17 new tenured or tenure-track hires are women, including one Hispanic, and one black male.

In the fall of 2015, with the departure of the long serving Vice President for Human Resources, the decision was made to recast this critical position for the university with a greater focus on diversity. This decision was an outgrowth of the strategic planning process undertaken by the university during which diversity and inclusion emerged as one of the critical areas of focus for the university's long-term growth and success. Michelle Jones-Johnson was named as Vice President for Talent Development and Chief Diversity Officer and began work in July 2016. In this new role as WPI's inaugural Chief Diversity Officer, Vice President Jones-Johnson will be strategically focused on identifying opportunities for creating a more diverse and inclusive campus community.

At the senior leadership level, we have had several important milestones. Dr. Laurie A. Leshin is first female president in WPI's 150-year history. Michelle Jones-Johnson serves as the first African-American female vice president. Finally, Winston Oluwole Soboyejo joined the WPI community on September 1, 2016 as the Bernard M. Gordon Dean of Engineering and Professor of Mechanical Engineering and of Biomedical Engineering. Prior to coming to WPI, he was a professor of mechanical and aerospace engineering at Princeton University and former president and provost of the African University of Science and Technology.

As Michelle Jones-Johnson settles into her role as Chief Diversity Officer, she will partner with the Provost to establish goals and develop specific strategies to increase faculty and staff diversity. At the same time, she will work in partnership with the director of multicultural affairs to champion our continued efforts to create an inclusive campus climate for all community members. Finally, while we have only been through one cycle of Faculty searches, the new role of Diversity Advocate has been well received and will be refined and expanded in the future. We will continue to monitor the effectiveness of this new initiative to increase the diversity of the faculty.

Students. Since the time of the last report, WPI continues to recruit an increasing number of underrepresented minority and women students along with nonresident aliens as shown by the undergraduate enrollments in Table 8 and graduate enrollments in Table 9. At both the graduate and undergraduate level, the percentage of underrepresented minority students and women has increased. From 2010, women's enrollment increased by 88%, underrepresented minority students increased by 172% and enrollment of underrepresented women increased by 274%.

Table 9: Enrollment of Undergraduate Women and Underrepresented Minority Students

	URM Minority	Percentage of total	Women	Percentage of total	Nonresident Alien	Percentage of total
2011-2012	428	11.8%	1134	31.3%	418	11.5%
2012-2013	436	11.7%	1185	31.8%	439	11.8%
2013-2014	459	11.8%	1280	32.9%	494	12.7%
2014-2015	492	12.2%	1309	32.5%	524	13.0%
2015-2016	514	12.6%	1370	33.5%	491	12.0%

Table 10: Enrollment of Graduate Women and Underrepresented Minority Students

	URM Minority	Percentage of total	Women	Percentage of total	Nonresident Alien	Percentage of total
2011-2012	65	4.2%	414	26.6%	549	35.3%
2012-2013	75	4.3%	482	27.8%	651	37.5%
2013-2014	102	5.3%	538	28.1%	718	37.5%
2014-2015	106	5.5%	557	28.8%	774	40.0%
2015-2016	137	7.0%	571	29.1%	819	41.7%

In order to both recruit and retain women and underrepresented minorities, the institution continues to invest in need-based and merit-based aid to underrepresented and women students. Since the time of the last report, WPI has significantly increased scholarships and aid for underrepresented students and women as seen in Table 11.

Table 11: Increase in Scholarship Monies for Women & Underrepresented Minority Students from 2010 to 2015

	All Women	Underrepresented Minority Women	Underrepresented Students
2010-2011			
Total monies offered	$ 30,682,500	$ 4,593,709	$ 14,210,839
Number of scholarship offers	1,539	166	569
2015-2016			
Total monies offered	$ 48,520,191	$ 10,278,340	$ 23,244,369
Number of scholarship offers	2,222	312	916
Total percent increase in scholarship monies offered	58%	87.9%	63.6%
Percent increase in number of scholarships offered	44%	123%	61%

In addition to any financial aid increases, WPI has continued to invest heavily in pipeline programs, many of which target young women and underrepresented minority students. For these groups, waiting until they arrive as applicants and then giving them solid funding is insufficient.

Our programs are designed to get these students excited about STEM and WPI early on so that they take the correct classes and stay academically focused.

According to the most recent IPEDs reported data on graduation rates, WPI's overall 6-year graduation rate is 85.1% for the cohort entering in 2008. Nearly 91% of women in that cohort graduated in six years and 88.7% of nonresident aliens earned a bachelor's degree by 2014. For underrepresented minority students, the 6-year graduation rate stands at 77.9%. While this on par with underrepresented minority graduation rates among schools in the Northeast Louis Stokes Alliance of Minority Participation (LSAMP) cohort, WPI recognizes that we have more work to do to support underrepresented students in their college journey.

Campus climate: Since the time of the last report, WPI underwent a strategic planning initiative. One of the core components of WPI's vision is ensuring WPI is an inclusive institution that values "the diversity of thought, culture, and perspective that our students, faculty, alumni and partners bring to our shared goals and mission." (The full WPI Strategic Plan is available online and summarized in Section 6.) Clearly articulated in that vision is a statement of inclusion: "We are a strong, inclusive community that enjoys working and learning together and celebrating success." In an effort to build inclusive community and enhance the climate for students of color and women, WPI took several steps in the interim period to retain and support underrepresented students and women. Specifically, the Office of Multicultural Affairs underwent a restructure and rebranding to better support student programmatic needs. The department now has a director of multicultural affairs, a coordinator for women's programs and a coordinator for diversity programs. The attention of staff in this department was often divided between K-12 pipeline programs, current undergraduate and graduate support, and support for the recruitment and retention of diverse faculty and staff. These functions have been divided, with Admissions overseeing pipeline recruitment programs, and a newly hired Chief Diversity Office and Vice President for Talent Management overseeing recruitment and retention of faculty and staff. This has allowed the Office of Multicultural Affairs staff to focus their efforts on student support and retention.

WPI offers numerous programs for women students including an annual women's breakfast during New Student Orientation, a women's leadership series, alumnae panels, mentoring nights, a health and wellness programming series, and a women's reception for graduating women seniors. Perhaps most impactful to the climate for women, since the time of our last report, WPI welcomed our first woman president, Dr. Laurie Leshin. President Leshin's leadership, approachability, and visibility as a woman in STEM has contributed substantially to the sense of inclusion for women on campus.

Connections is a pre-orientation program that seeks to increase access to educational opportunities at WPI for first-generation college students and underrepresented students of African, Latino, and American Indian descent. Connections empowers students by helping them make a smooth transition from high school to college, increasing their potential for college success. As part of the restructure, the Connections program was redesigned to target more first generation students and to better align with student academic needs by incorporating more self-

efficacy building activities as part of the pre-orientation program along with more support building activities throughout the undergraduate experience.

WPI continues to participate in the Louis Stokes Alliances for Minority Participation (LSAMP) program. As part of our participation, WPI has focused specifically on increasing the enrollment of transfer students and graduate students to LSAMP programs and activities. Additionally, the institution offers numerous programs and events throughout the year including heritage month events, leadership development programming, current event discussions, and support groups for men and women of color. Additionally, the institution supports several student organizations to support underrepresented students of color including the Brothers and Sisters United, Society of Hispanic Professional Engineers, National Society of Black Engineers, Hispanic and Caribbean Association, and more.

Overall students of color report comparable levels of satisfaction compared to majority peers. As shown in Figure 1, derived from the 2014 Noel-Levitz Student Satisfaction Inventory, underrepresented students generally report they are made to feel welcome and feel a sense of pride about the campus at a level comparable to their White peers. In all cases, Latino students report satisfaction levels higher than White students.

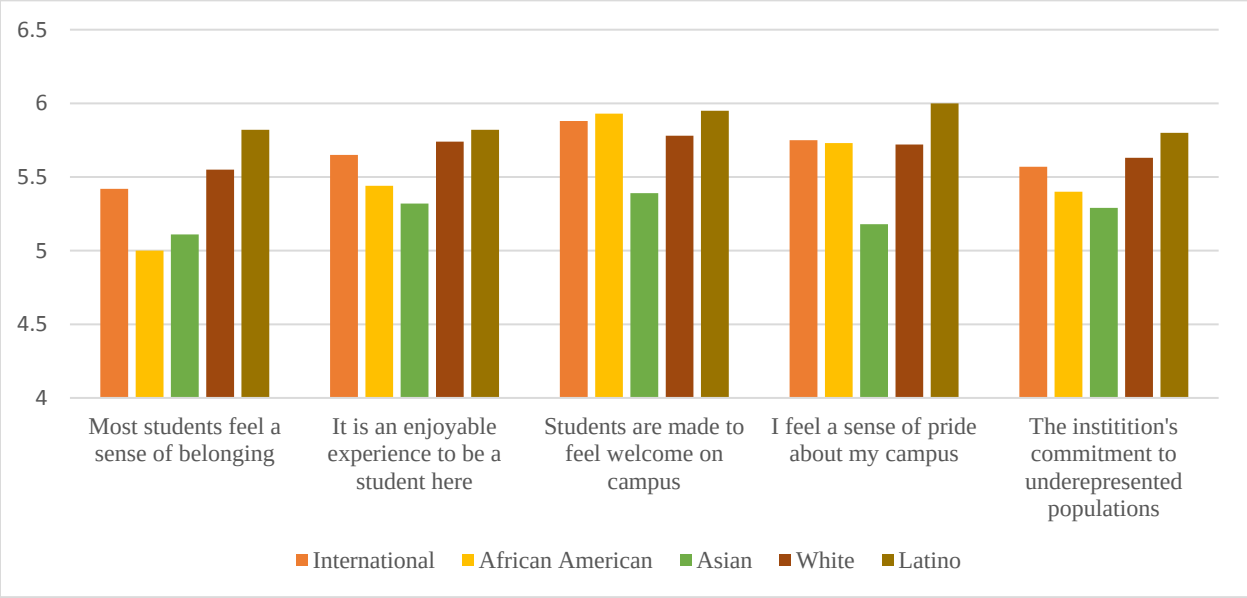


Figure 1: Student Satisfaction by Race, 2014

In spring of 2015, the institution implemented a campus climate survey specifically targeted at better understanding the climate around diversity and inclusion. Once these data have been fully analyzed and compared with the 2016 Noel-Levitz Student Satisfaction Inventory, the institution will identify additional steps to improve campus climate.

With the current state of multicultural tensions in the US, it is abundantly clear that the importance of multicultural understanding and acceptance cannot be understated. It is against this backdrop that WPI makes emphasis on inclusion an important priority. In the next five years,

WPI will respond to continued trends in student satisfaction and campus climate, continue to increase scholarships and aid to underrepresented minority and women students, implement gender-neutral housing on campus, and focus on developing programming that demonstrates improved retention of underrepresented minority students.

4 Standards Narrative

4.1 Mission and Purposes

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.)

Strategic planning has refocused the WPI mission on its distinctive undergraduate program as well as an ambition for an increased emphasis on active research programs. The official mission statement has not been reviewed since 1987, but part of the most recent strategic plan work has asked the community to discuss updating this statement.

In her inauguration in 2014, President Leshin charged WPI to take the next step beyond the Two Towers Tradition of *Theory and Practice* and add a third tower: *Impact*. She committed WPI to making a global project experience accessible to all undergraduate students.

As part of the current strategic planning process, one of the goals under *Major and a Mission* is to add the concept of "Global Competency" as one of the fundamental learning outcomes for the undergraduate program. This initiative has been discussed by the Undergraduate Outcomes Assessment Committee (UOAC), and has been forwarded to the Faculty Committee on Academic Policy (CAP) for their agenda. Once defined and adopted as a learning outcome, we will map the outcome against the undergraduate curriculum to determine how achievement of the outcome will be measured.

4.2 Planning and Evaluations

In 2014, President Leshin launched a new strategic planning process for the university. The process began with listening sessions with faculty, staff, and students to identify WPI's strengths, areas in need of improvement, and aspirations for the future. These ideas were studied and shaped by a planning committee over a period of six months. In late spring of 2015, a series of community engagement sessions were held for faculty, staff, students, and trustees to further refine the emerging priorities and strategic goals. By the end of a highly participatory process, more than 1,000 faculty and staff members, students, alumni, trustees, and partners took part in developing the strategic plan. The shared vision that emerged was crystalized into an exciting blue print for our future: *Elevate Impact: A Strategic Plan for WPI, 2015-2018*. The strategic plan, which was launched in December of 2015, consists of three major goals:

- Extend the success of our distinctive undergraduate education;
- Expand transformative research and graduate education;
- Enhance WPI's reputation and visibility.

Each of the three goal areas has three major initiatives which include specific three-year goals. The plan also consists of six key elements of success that cut-across all of the initiatives: diversity and inclusion; partnerships, local and global; technology and systems; faculty and staff development; data-driven decision-making; and sustainability. *Elevate Impact* will be discussed in greater detail in the Section 6 of this report.

One of the institutional priorities which arose from both the strategic planning and budget development process was to expand WPI's institutional research function. To that end, we hired our first full-time director of institutional research in the fall of 2016. The director provides senior leadership with strategic information that can be used to shape institutional planning, policy formation, and decision-making in support of the university's goals. Additional personnel will be added to the office in the next budget cycle. The office serves as a resource for WPI's academic and administrative decision-makers to enhance the quality of the university's programs, services, operations and processes. Finally, the director oversees data collection, coordination, access, analysis and reporting, and will work closely with colleagues across campus in support of institutional effectiveness.

Departments and programs use a number of mechanisms for evaluating the effectiveness of their curricula. Many of our departments are accredited by professional organizations on a regular schedule. All of our engineering departments undergo a regular review by ABET; our management degrees are reviewed by the AACSB, and our chemistry degree by the ACS. Each of these accrediting bodies uses samples of student work, reviews of syllabi, and course assessments in their evaluation of the programs. Departments respond to the feedback with additions of courses, changes in distribution requirements, etc. For example, the Chemistry and Biochemistry department has added a component of polymer chemistry to a course in response to the recent ACS accreditation review. Aerospace engineering added a lab component to their program as a consequence of their ABET visit.

Less frequently, departments undergo external reviews, where faculty leaders from the equivalent department at other institutions are invited to review the department's self-study and visit campus, talking to faculty, students and staff. The feedback and recommendations they provide can affect, for example, faculty hiring (in new areas or in strengthening others), or adding or eliminating courses. External advisory boards assembled by department heads and divisional deans also provide advice and input for programmatic improvement.

At an institutional level, there is a standing faculty governance committee charged with outcomes assessment. UOAC (Undergraduate Outcomes Assessment Committee) is composed of five faculty members, a student representative, the director of Institutional Research, the director of the Morgan Teaching and Learning Center and the Dean of Undergraduate Studies. This committee is responsible for continuous improvement efforts at the university level. They support departments in evaluating student progress on departmental learning outcomes through assessment of capstone project reports. They have implemented evaluations of both faculty and student performance on required projects. Currently, the committee is reviewing the university mission statement and learning outcomes to determine if they are still appropriate and sufficient.

In addition, WPI has used the Noel-Levitz Student Satisfaction Inventory on a biennial basis since 2006 to monitor student satisfaction with their experiences at the university both inside and outside of the classroom. With 10 years of comparative data, we can look at trends of both expectations and satisfaction for undergraduate and graduate students. WPI also participates in two more nationally benchmarked surveys. Every engineering program participates in the Engineering Exit Survey each year. The National Survey of Student Engagement is administered on a three-year cycle, synchronized with the participation of the Association of Independent Technological Universities. Both of these surveys include questions measuring student satisfaction as well as questions used to assess student achievement of WPI's student learning outcomes.

4.3 Organization and Governance

Governing Board. The Board of Trustees of WPI has seen several major transitions during the period 2011 – 2016, both in terms of leadership and structure. The leadership of the Board changed in 2013 in conjunction with the presidential transition. Philip B. Ryan stepped out of his role as Chairman of the Board to assume the Interim President role. Vice-Chair Warner Fletcher was elected Chairman for the period of time needed to bring on a new president. Mr. Ryan returned to the Chairman role in 2014, until his term expired in June of 2016. At that time, John T. Mollen was elected as the new Chairman, effective July 1, 2016.

Structurally, the most innovative change came in May, 2012 when the Board agreed to establish voting roles for two faculty members on each of five standing committees. The nominees are presented as a slate of faculty-elected candidates to the President, who then makes a recommendation to the Committee on Nominations and Governance which makes a motion to the Board for approval. The faculty appointees are voting members on Academic Planning, Budget and Finance, Facilities and Campus Infrastructure, Marketing, and Student Affairs committees. Each appointee serves for three years. This is a fairly unique model, and the WPI Board and Administration is very proud of this shared governance success. Another unique feature of the Board structure is the inclusion of the presidents of the undergraduate and graduate student governments. While the students do not have voting rights, they do make formal presentations at the Student Affairs committee meeting, and also attend other meetings.

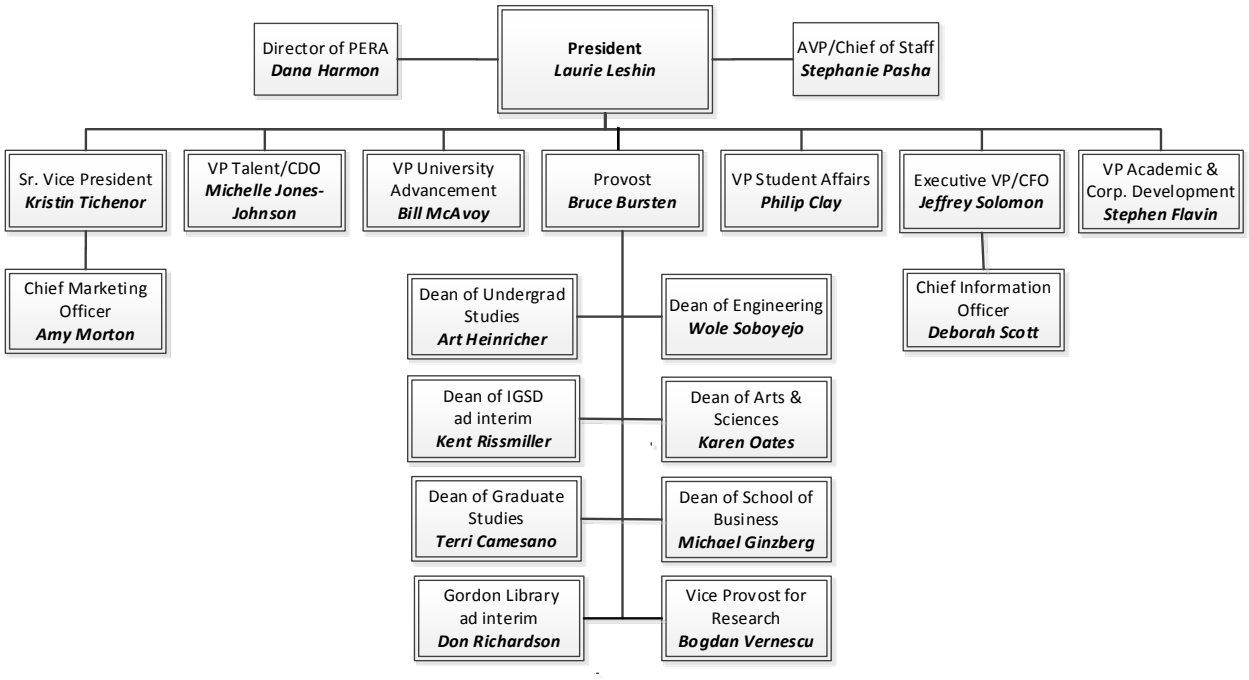
The Board was very active in the Presidential search process from June 2013 – January 2014, with a number of trustees and trustees emeritus serving on the search committee. We also had the unique experience of having a Board Chairman who had served as President then helping to on-board the new President. His unique understanding of that role was an asset for both parties, as outlined in an article written by President Laurie Leshin that was published in the Association of Governing Boards newsletter[3].

[3] Available online at agb.org/newsletter/ceo/2015/winter/leading-transition-by-defying-convention .

For the coming year, the Board has outlined a plan of redefining standing committee missions and outcomes to align with the goals of the WPI strategic plan, *Elevate Impact*, (online at wp.wpi.edu/strategicplan/). The Board has also established two new task forces in areas of focus for the institution: one focused on technology and one on public affairs. These task forces will include trustees, members of the administration, and faculty members, and will be charged with looking at these areas through the lens of risks and opportunities to ensure that WPI is prepared and responsive to developments in these two areas.

Internal Governance. Not long after President Leshin arrived in the summer of 2014, she re-evaluated the structure of the senior leadership team and re-organized the group into a more broad-based and inclusive Management Council. The Management Council consists of all of the division heads of the university (7 vice presidents, chief marketing officer, and chief information officer), the director of physical education, recreation, and athletics, the assistant vice president/chief of staff, and the vice provost for research. In a shared leadership model, the group meets weekly to discuss issues, plan the strategic direction of WPI, and to ensure effective communication and partnership across the university.

Organizational Chart for Management Council



Since 2011, there have been several changes in administrative leadership at the university. In addition to President Leshin and Provost Bursten, the following individuals are also new to their roles: Michelle Jones-Johnson, VP for talent development and chief diversity officer; Philip Clay, VP of student affairs and dean of students; Terri Camesano, dean of graduate studies; Michael Ginzberg, dean of Foisie school of business; Wole Soboyejo, dean of engineering; and

Bogdan Vernescu, vice provost for research. Professor Kent Rissmiller is currently serving as the dean of IGSD ad interim, and Don Richardson is serving as the acting director of the Gordon Library. The search for a new university librarian is currently underway.

The full senior leadership team has been actively involved in the development and implementation of the strategic plan. In addition, all members participate in the *annual planning and budgeting process* (APBP), planning retreats, and the Board of Trustees meetings. To promote open communication and dialogue within the community, President Leshin has continued the tradition of holding "town meetings" throughout each academic year. These meetings are used to provide updates on important issues as well as solicit feedback and questions from those in attendance. President Leshin holds student office hours each term as a means of connecting with students and listening to their ideas and concerns. Rather than hold these office hours in her office, she holds them in places that students frequent like the Campus Center or outside dining halls. Students appreciate her accessibility, receptiveness to feedback, and willingness to pose with them for a selfie. Members of the student affairs staff serve as the advisors to the undergraduate and graduate student government associations and meet regularly with the students to provide support, guidance, and address issues that are of concern to students. The faculty governance system continues to have student representation on several committees including the Committee on Academic Policy, Committee on Graduate Studies and Research, Undergraduate Outcomes Assessment Committee, and Committee on Advising and Student Life. Finally, Provost Bursten established a formal student advisory council that meets regularly to share information and discuss student concerns regarding their academic experiences.

The revised administrative structures appear to be working well, but will continue to evolve in order to be responsive to the changing needs of the campus community.

4.4 Academic Programs

> *The WPI graduate of the future must have an understanding of a sector of science and technology and a mature understanding of himself and the needs of the people around him. While an undergraduate, he must demonstrate that he can learn and translate his learning into worthwhile action. He must learn to teach himself those things that are needed to make his actions socially significant. A WPI education should develop a strong degree of self-confidence, an eagerness to contribute to the community beyond oneself, and an intellectual restlessness, a spur to continual learning.*
> *—From the Goal Statement for the WPI Plan, approved by the Faculty in December 1969*

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 build a foundation for lifelong renewal of knowledge; to develop a mature understanding of themselves; and to form a deep appreciation of the interrelationships among basic knowledge, technological advance, and human need.

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. This principle is at the heart of the academic programs and is used to guide assessment for continued educational improvement and innovation.

The WPI faculty are organized into 13 academic departments and offer 30 undergraduate majors, with 28 Bachelor of Science Degrees (including a BS in Humanities and Arts and the option for an individually-designed BS) and 2 Bachelor of Arts degrees. There are 48 different master degree programs, including Master of Science, Master of Engineering, and Master of Business Administration. The academic departments offer 23 different doctoral programs.

Interdisciplinary programs such as Robotics Engineering and Interactive Media and Game Development have designated program directors and much of the same administrative staffing support as the academic departments. These programs engage faculty from multiple departments and while faculty may have a collaborative appointment in the interdisciplinary program, each retains a primary appointment in one of the 13 academic departments.

Approximately two-thirds of undergraduates major in an engineering discipline. For many years, Mechanical Engineering has supported the largest numbers of majors, but, for the first time in 2016, Computer Science was the largest declared major in the first-year class. The fastest growing undergraduate program has been the interdisciplinary Robotics Engineering Program.

All planning for courses and programs originates with the faculty in the relevant academic departments. When a department votes to make change to the curriculum, the proposal is sent to the appropriate faculty governance committee, either the Committee on Academic Operations or the Committee on Graduate Studies and Research. The committee discusses issues such as impact on other programs, adherence to university-wide policies, and the impact on resource allocation. If the committee approves the proposal, it is then forwarded to the full faculty for review and approval.

Proposals for completely new degree programs originate, once again, with the faculty in the associated departments. The Committee on Academic Policy is responsible for reviewing proposals for new undergraduate degree programs or changes to policies that will have an impact on degree programs. The Committee on Graduate Studies and Research reviews proposals for new graduate programs. Once again, if the relevant committee approves the proposal, it is forwarded to the full faculty for review and approval.

When the faculty approves a change to an existing program, the WPI practice is to make the change binding on the first set of students that enters under the new description in the next published catalog. Students currently enrolled when the change is made have the option to apply either the new or existing policies.

4.4.1 Capstone Project Work

Project work is at the heart of the WPI Plan and three capstone projects define (and assess) the primary learning goals for our students.

Disciplinary Capstone: Major Qualifying Project (MQP). This is a professional-level project, requiring about a quarter of the senior year (9 credits), where students demonstrate mastery of fundamental disciplinary content while also demonstrating the ability to extend and apply that knowledge to open-ended challenges. Many of these projects are performed in conjunction with industrial sponsors, off-campus research organizations, or ongoing faculty interests. All project

students (working individually or, more typically, in teams) submit formal written reports that are reviewed by the faculty advisors and then, typically, are available for public review. The exceptions are projects where the external sponsor requires confidentiality or, in some cases, the students are in the process of applying for a patent.

In AY2015-16, almost 900 students completed an MQP, advised by 198 different faculty. The advisor of record must have an appointment in the academic department associated with the major discipline. Each April, classes are canceled and a campus-wide Project Presentation Day is held during which nearly every MQP student makes a formal public presentation of his or her work to faculty, students, project sponsors, and visitors.

Departments regularly review student project reports as part of outcomes assessment for both program-level and institution-wide assessment. Assessment of learning outcomes for the MQP was discussed in Section 3.4 and will be discussed further in Section 0 on *Educational Effectiveness*.

Interdisciplinary Capstone: Interactive Qualifying Project (IQP). This project focuses on a problem at the intersection of science and technology with human need. Involving about a quarter of a year (9 credits), this powerful project experience is essentially a research experience in which students, guided by one or more faculty advisors, explore solutions to a problem at the interface of science or technology on the one hand and human values or social concerns on the other.

Almost two-thirds of students now complete the IQP through the Global Perspective Program, which provides project opportunities around the world, including at residential project centers (staffed by WPI faculty) located in Europe, North America, Latin America, Asia, and Australia.

In 2015-16, more than 1,000 students completed IQPs, advised by 127 different faculty advisors. It is important to note that faculty from almost all academic departments were involved as project advisors. Some of the project ideas are based on faculty research interests; many more come from external organizations or build on previously completed projects. It is also common for students to propose a project in an area of their own interest and meet with faculty to develop the idea into an acceptable IQP. The Interdisciplinary and Global Studies Division maintains a website with a list of faculty project proposals.

Humanities and Arts Capstone: Inquiry Seminar *or* ***Practicum.*** This is the culmination of each student's individual plan of study in the Humanities and Arts. While about 90 percent of undergraduates major in engineering or science, 100 percent of WPI's undergraduates complete the equivalent of a minor in the Humanities and Arts.

The Inquiry Seminar is the capstone research project for students focused in areas such as history, literature, or philosophy. Students complete an original research paper under the guidance of a faculty member. The Practicum provides students with a production/performance experience. Samples of practicums in music include composing, arranging, or performing a solo recital. Drama/theatre students may choose to act in, direct, or design a campus production.

These three capstone projects define what we value in a WPI education, what we expect and will help students achieve. Completed projects are one of the primary resources used in assessing students learning. Since 2007, all completed MQPs and IQPs have been submitted to a searchable, online database, the eProjects website. In 2015 alone, the undergraduate projects database saw more than one million downloads.

4.4.2 Courses and Distribution Requirements

WPI does not use the standard unit of "credit-hour" in describing courses or graduation requirements. Instead, all courses carry 1/3 *unit* and the standard load for a term is three courses or 1 unit. We do translate between WPI units and credit hours for communication with external audiences:

1 WPI unit = 9 standard credit hours.

In standard credits, all bachelors degrees require the equivalent of 135 credits of academic work, with 21 credits in projects and 114 credits in courses. All master's degrees require 30 credits of advanced study (typically 10 courses) and the doctoral degrees require 60 additional credit hours of courses and research beyond the master's degree.

Of the 135 credits required for graduation, nine are designated as free electives. Of the 126 remaining credits, 54 are specified within the major (this includes the 9-credit Major Qualifying Project). The remaining 72 credits fall into six categories:

- Interactive Qualifying Project: 9 credits;
- Humanities and Arts: 18 credits;
- Mathematics and Science: 18 credits;
- Social Sciences: 6 credits;
- Physical Education: 3 credits (in four 3/4–credit courses);
- Distribution Requirements: 18 credits specified by major.

WPI does not use the term "general education" to describe any component of the program, but the first five in the list above, totaling 54 out of the required 135 credits for graduation, could be categorized as general education. Courses provide preparation for the three capstone projects, but there are several distinctive features of the undergraduate program in place to support the capstone project system described above.

First, the emphasis on project work requires a high level of teamwork and collaboration and the university has an unusual grading system designed to support this emphasis. The only grades assigned for classes and projects are A, B, C, or (if the work is not acceptable) NR. NR stands for "No Record" and it does literally mean that there is no record on the transcript that the student was enrolled in the course. WPI does not record "punitive" grades (Ds or Fs). The system was put in place primarily because the faculty wished to create a culture where peer teaching and learning would be supported to the fullest degree. Such a cooperative atmosphere is especially important in project work, where the majority of projects (IQPs and MQPs) involve 2 to 4 students.

Second, WPI divides the academic year into four seven-week terms (two in the fall and two in the spring) and a standard course schedule is three courses in each term. Every undergraduate

course carries 1/3 unit of credit (with few exceptions) and the undergraduate catalog specifies that 1/3 unit should involve 15 to 17 hours of work each week of time on task[4], regardless of the time in lecture or conference or lab. The same expectation is defined for project work, where there are almost no traditional "contact hours" and certainly no lectures. Students must learn to take responsibility for their own learning and we give them that responsibility in every course.

The term system was established specifically to facilitate project work and, in particular, off-campus project experiences. An IQP or MQP can be the full academic load for one term, enabling student to leave campus to complete these projects, from beginning to end, in one term of full-time immersion. The same option is available to students doing on-campus project work, although they chose this option infrequently. When a project extends over multiple terms, the standard schedule is two courses in addition to project work, so the project remains a significant focus for the students.

WPI collects student feedback on the quality of the academic experience through many channels. First, there are standard student course reports collected at the end of every course. The data from these reports is available to all students and faculty through the WPI web site. All engineering programs administer the Engineering Exit Survey every year. WPI participates in the National Survey of Student Engagement on a three-year cycle. Both of these surveys provide nationally-benchmarked data that is used for program assessment and improvement. In fact, data from NSSE helped motivate the introduction of the Great Problems Seminars for first-year students.

The following tables summarize student satisfaction data from the last three instances of the Noel-Levitz Student Satisfaction Inventory. We have clustered the questions in four areas to identify trends in different aspects of the student experience. Note that all responses are on a 7-point scale and the overall satisfaction is high, with a slight dip between 2012 and 2014.

Table 12: Student Satisfaction Questions Clustered by Area

	Average Satisfaction Rating		
Category	***Fall 2010***	***Fall 2012***	***Fall 2014***
Academic (24)	5.52	5.54	5.37
Operations (12)	5.20	5.34	5.16
Campus Life (27)	5.26	5.39	5.32
General (10)	5.64	5.69	5.57
WPI	***5.39***	***5.47***	***5.34***

When we pull out the 24 questions related to the academic program, there is only one area which has shown a decrease over this period: satisfaction with academic advising decreased with each administration of the survey.

[4] See the discussion of time-on-task in Section 3.3.

Table 13: Student Satisfaction in Academic Areas

	Average Satisfaction: Academic Areas		
Category	***Fall 2010***	***Fall 2012***	***Fall 2014***
Academic Program (5)	5.43	5.46	5.34
Academic Support (6)	5.61	5.74	5.57
Academic Advising (4)	5.37	5.27	5.11
Faculty (9)	5.56	5.57	5.36
Academic Average (24)	**5.52**	**5.54**	**5.37**
WPI	***5.39***	***5.47***	***5.34***

The faculty Committee on Advising and Student Life has develop and deployed an internal survey to help identify problems (and strengths) in the advising system. The issue is complicated because students have many different advisors during their time at WPI. Every student has an faculty academic advisor in their home department. They also work with professional staff in the Office of Academic Advising and in many cases that staff member may have as much or more influence than the faculty advisor. Finally, every student has a faculty advisor for both their junior year project (the IQP) and their senior year project (the MQP). One quarter of the academic credit in each of the last two years is this project advisor. When students answered the Noel-Levitz survey questions, it is not clear which "advisor" the students are they are evaluating.

4.5 Students

Admissions. WPI has seen steady growth in demand for its degree offerings over the last decade. Applications have increased by 84% and enrollments have increased by 39%. That trend has allowed for continued growth in diversity and quality over the last five years. Since 2012, undergraduate application numbers have increased from 7,582 to 10,468 and first year student enrollment has gone from 1,049 to 1,122 entering in the Fall of 2016. Note that total first year class size has leveled off in recent years, consistent with WPI's desire to stabilize enrollment while providing as many students as can reasonably be accommodated access to a high quality STEM education.

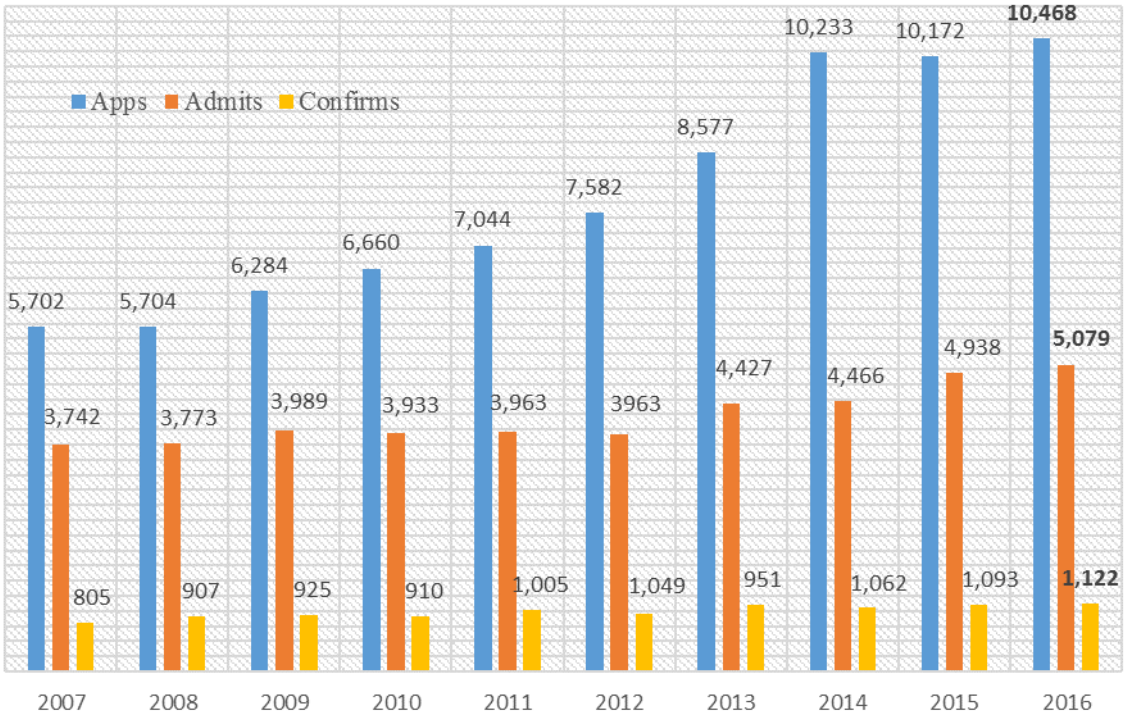


Figure 2: WPI Admissions Trend Data

Over the last five years, WPI has made significant gains in terms of student diversity. The number of women and underrepresented minority students are at historic highs: 390 women enrolled in the first year class, up 25% from five years ago; and 166 underrepresented minorities enrolled, up 46%. Academic quality for incoming students remains high, with a grade point average of 3.8, class rank in the top 90th percentile, and SAT scores ranging from 1220 to 1380.

Enrollment outcomes for WPI students are outstanding. WPI's first-year retention rate is among the highest in the nation, ranging from 95% to 97% over the last five years. These are record high levels for WPI and are especially impressive given the enrollment growth experienced during this same time frame. The four-year and six-year graduation rates are 82%, and 85% respectively, high water marks for WPI and well above national averages for STEM institutions.

After years of growth, graduate student enrollments and credit hours have leveled off but are still at record high levels. Graduate credit hours have increased by 29% in the last five years alone with significant growth in new graduate programs such as data science, robotics engineering, and aerospace engineering.

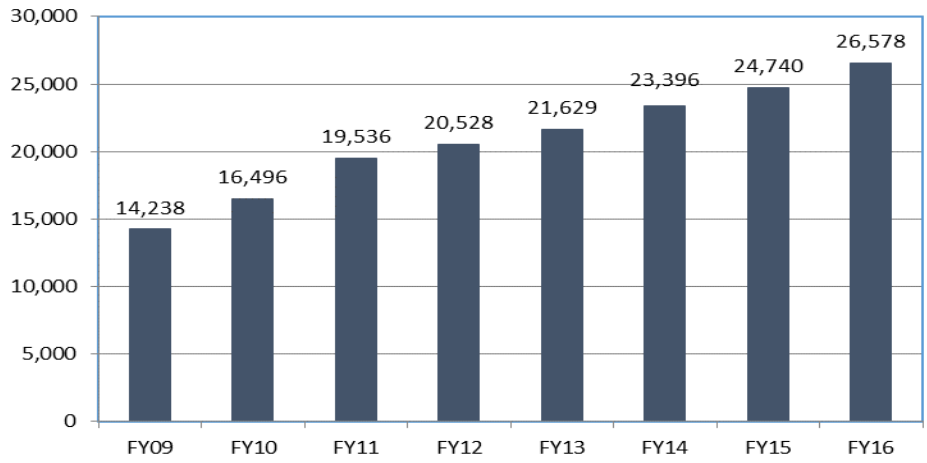


Figure 3: WPI Graduate Credit Hours

WPI has focused on attracting more PhD candidates in recent years and has made steady progress to date. The number of doctoral degrees awarded by WPI has doubled in the last five years, going from 21 in AY2010-11 to 42 in the AY2014-15. The Mechanical Engineering and Electrical & Computer Engineering departments lead the pack in terms of programs most likely to generate doctoral degrees.

Collaboration amongst faculty and staff has been key to WPI's recruitment and retention success. To ensure continued strategic collaboration and operational integration going forward, we did some internal restructuring and created a Dean of Admissions and Financial Aid position. Under the new Dean, we formalized WPI's longstanding commitment to pipeline programs by creating an Office of Pre-Collegiate Outreach Programs. This team oversees a wide range of summer and school year programs designed to encourage students in middle school through high school to pursue their interests in science and engineering with a heavy emphasis on outreach to young women, underrepresented minorities, and first generation students. At the same time, we have broadened the mission of the WPI Financial Aid Office to include financial literacy. The Office of Student Aid and Financial Literacy offers programming throughout the academic year to current undergraduate and graduate students, which consistently generates large turnouts and positive feedback. On a similar note, we have broadened the scope of our Graduate Admissions Office to encompass new student orientation, graduate enrollment tracking, graduate student policies and benefits, and work on the strategic plan as it relates to graduate students. Effective fall 2016, that office name has been changed to Graduate Enrollment Services to reflect its broader mission and scope.

Challenges for the next five years include ongoing efforts to enroll high quality students from a broad range of backgrounds for both the graduate and undergraduate degree programs. Ethnic, gender, and geographic diversity are priorities, as well as attracting and enrolling first generation students. The strategic plan includes several initiatives aimed at strengthening the undergraduate and graduate student experience. These initiatives build on existing strengths at the institution and should serve to attract talented degree candidates. Finally, we would like to raise graduation rates even higher through earlier and more systematic outreach to current students who may be

experiencing academic difficulty. We recognize that WPI is in an enviable position from an enrollment standpoint and want to do everything in our power to make this academic experience as productive and impactful as we possibly can for our students.

Student Services. WPI strives to provide services and programs that engage students physically, emotionally, academically, and socially to promote a well-rounded and successful curricular and co-curricular experience. As discussed in the areas for special emphasis section, in the last five years, staffing levels have increased in high need areas including academic advising (3 FTEs), disability services (2 FTEs), student activities (1 FTE), residence life (2 FTEs), student development and counseling (1 FTE), career services (4 FTEs), international house (.75 FTE), dean of students (1 FTE), and health services (1.5 FTEs). Additionally, several service areas have implemented technical solutions to improve service delivery, data management, and communication. For example, Residence Life has implemented an online housing selection process and Health Services offers a secure portal to allow for the upload of medical documentation.

Numerous efforts have been made to streamline student support structures and cross-departmental communication that affects students. One example, in addition to what is reported in Section 3.1, is the institution's behavioral intervention team, called CARE. The CARE team meets weekly to discuss students who may be struggling to succeed. By involving representatives from across the institution ranging from financial aid to the registrar's office to academic advising to residence life, the CARE team can holistically discuss strategies to best support individual students. The CARE team has recently recruited additional representatives, including athletics, undergraduate studies, and graduate programs to help better support students of concern and has also implemented a database solution that allows for all involved parties to know the status of a student's case in the days between meetings. As another example of student centered process management, since the last report, the institution also streamlined the process of withdrawal and readmission through improved communication between offices, thereby reducing barriers to returning for students. This collaborative communication allows WPI to best meet students' needs across their full student experience.

Division of Student Affairs Strategic Plan. In support of university wide strategic initiatives, the division of Student Affairs implemented a strategic plan in January 2016 with emphasis in six areas: (1) fostering health and safety; (2) increasing students' awareness of diversity; (3) improving the graduate student experience; (4) developing social justice programming; (5) encouraging greater resilience and self-advocacy among students; and (6) building a culture of reflection. As Student Affairs has operationalized these strategic goal areas, the division has implemented several new programs and services to better serve students. Some examples include: Health Services is currently focused on smoking cessation programming; Student Activities is implementing a reflection series for students participating in service learning; International Programs has formed a multicultural programming council to improve collaboration and diversity programming among culturally-based student organizations; and a division wide committee has convened to discuss ways to improve the graduate student experience.

WPI built a new 260-bed residence hall, Faraday Hall (2013), and has broken ground for another 140-bed residence hall in conjunction with the Foisie Innovation Studio. The addition of these housing options will help WPI move toward the goal of housing 70% of WPI undergraduate students in WPI-owned or affiliated properties.

At the time of last report, retaining students in housing after the first year was at times a challenge. Since that time, a comprehensive #LIVEWPI campaign has resulted in a more vibrant residential experience and greater interest in returning to housing. This has resulted in a substantial waitlist for upper-class housing. In response, WPI has adjusted housing occupancies in several locations to meet demand. Over the last several years, several rooms have transitioned from double occupancy to triple occupancy. Student satisfaction data has shown that student satisfaction is the same or higher with the increase in occupancy.

Student Satisfaction Trends. Overall, students report satisfaction with the co-curricular experience. As shown in Table 14 below, students remain satisfied with their experiences on campus, the number of involvement opportunities and weekend events, and their knowledge of campus happenings.

Table 14: Comparison of WPI Student Satisfaction Survey Results 2010-2014

	Satisfaction 2010	**Satisfaction 2012**	**Satisfaction 2014**
It is an enjoyable experience to be a student on this campus.	5.80	5.81	5.68
A variety of intramural activities are offered.	5.43	5.45	5.55
There are a sufficient number of weekend activities for students.	5.08	5.24	6.35
I can easily get involved in campus organizations.	5.89	5.78	5.87
The student center is a comfortable place for students to spend their leisure time.	5.56	5.69	5.62
I generally know what's happening on campus.	5.54	5.63	5.45
The student handbook provides helpful information about campus life.	5.02	5.34	5.16

The number of clubs and activities remains relatively stable since last report. Since the time of last report, Student Government Association has implemented new methods of communication to keep the campus community informed of important events and activities.

Dining satisfaction has also increased with a renovation to several dining areas including the introduction of several branded dining concepts in the Campus Center and a new grab-and-go dining space in Gateway Park. The hiring of a dietician has helped students with dietary preferences and needed accommodations better navigate the food offerings available on campus. Currently, WPI is part of the Food Allergy Research and Education (FARE) College Food Allergy Program that helps the institution implement best practices for students with food allergies.

In the next five years, as part of our collaborative emphasis, WPI plans to explore the conversion of the first floor of a campus residence hall into a one-stop-shop for enrollment, advising, and disability services. WPI also plans to hire staff dedicated to Title IX compliance and programming, build a stronger culture of entrepreneurship across the student experience, and implement a credentialing mechanism for students to integrate and capture their co-curricular experiences alongside their curricular experiences.

4.6 Teaching, Learning, and Scholarship

> *The tenured and tenure-track Faculty at WPI play the primary role in fulfilling the University's academic mission and in shaping and delivering WPI's academic programs. The tenured and tenure-track Faculty is distinct in that it shares in the governance of the University with the governing body and its appointed administrative officers.*
>
> *Continuing non-tenure track faculty members are full-time employees of the University who are hired with the expectation that they will have significant and continuing academic responsibilities at WPI. Such faculty members may have a focus in either teaching or research, but they make a range of contributions, including different forms of service to the University. They are an integral part of the fabric of the campus.*
>
> — *from the Faculty Constitution, approved by the Faculty in March, 2012*

4.6.1 Growth in Enrollment, Changes in Faculty, Added Support for Faculty

One of the most significant changes in the past five years has been the inclusion of continuing non-tenure track faculty in the Faculty Constitution, along with criteria for evaluation and professional advancement. This change was discussed in Section 3.2.

Another focus area discussed in Section 3 was the impact of enrollment growth on faculty workload. The increase in credits delivered was discussed, as well as the change in credits delivered per FTE faculty (see Table 5 and the Data First form for Standard 6: Faculty). We are also analyzing trends in course assignments. For example, in AY2015-16, 494 different faculty were involved in course delivery at WPI. Of these, 234 were tenured or tenure-track, 114 were full-time non-tenure-track faculty, and 146 were part-time or adjunct faculty. These 494 faculty delivered 1646 courses and the following table shows the total number of courses and the average number of courses per faculty by faculty type.

Table 15: Course Assignments by Faculty Type for AY2015-16

Faculty Type	*Count Faculty*	*% of Faculty*	*Count Courses*	*% of Courses*	*Courses per Faculty*	*Total Enrollment*	*Avg Enrollment*
Tenured	172	34.8%	596	36.2%	3.47	18605	31.22
Tenure-Track	62	12.6%	191	11.6%	3.08	5972	31.27
Full Time NTT	114	23.1%	537	32.6%	4.71	19369	36.07
Part Time	146	29.6%	322	19.6%	2.21	8176	25.39
Total	494	100%	1646	100%	3.33	52122	31.67

The average number of courses per faculty and the average enrollment in courses have been relatively stable since AY2012-13. On average, tenured and tenure-track faculty teach less than one course per term, but pre-tenure faculty usually have a reduced course responsibility (sometimes one or two courses) in the first year. Note also that these data do not include project (IQP and MQP) or thesis advising and the pre-tenure faculty do not normally advise projects in their first year.

The focus on project-based learning defined in the WPI Plan requires faculty with a special commitment to working closely with students. The most recent evidence of faculty commitment came in 2016 when the Wall Street Journal ranked WPI first in the nation for the category of "The Top Faculties; Schools that Do the Best in Combining Scholarly Research with Classroom Instruction."

Almost all faculty hold the terminal degree in their discipline. The few faculty (full- and part-time) who do not have terminal degrees all have experience appropriate for their teaching responsibilities. One of the continuing non-tenure-track titles is the *Professors of Practice*, with professional qualifications in addition to academic qualifications. For example, one Professor of Practice in the Interactive Media and Game Development program has 15 years of experience in the game industry, with credits at companies including Lucasfilm Games.

Faculty, tenure-track and non–tenure-track, also support special programs outside the traditional graduate and undergraduate classroom. Almost all courses offered by the Corporate and Professional Education Division are taught by full-time WPI faculty and those who are not full-time must be approved by the department head in the department awarding the credit for the course.

4.6.2 Support for Research

Research activity, along with the support needed for faculty research, has grown significantly since the last self-study. For example, the Office of Sponsored Programs (OSP) has grown from five to eight full time staff, and the Sponsored Programs Accounting (SPA) office has grown from three to four full time staff. At the same time the Intellectual Property and Innovation (IPI) office has added an associate director position.

These offices provide the infrastructure to support the recent research growth at WPI, and together with the Vice Provost for Research are developing the best operational strategies to continue to support WPI's ongoing successes in research funding. One first step, completed in the fall of 2016, is the adoption of an electronic Research Administration (eRA) software to eliminate duplication of data input, improve data integrity, accelerate administrative processes, and streamline compliance for Conflict of Interest submissions and Institutional Review Board approvals. A second step is the adoption of a research intelligence software (SciVal) to better assess the impact of research and help with benchmarking against peer institutions. The third and most significant step will be the launching of the Research Solutions Institute (described in Section 6.2 under the Strategic Plan). The RSI will be an agile research support structure that responds to identified needs and opportunities and assembles multidisciplinary faculty research

clusters from across the university to support the development of the strategic research initiatives.

Adequate professional pre- and post-award support, data driven decision making, and strategic recruiting efforts will positively impact the productivity and retention of our outstanding faculty. In particular, growing the research infrastructure to support the development of large, multi-faceted proposals is of critical importance.

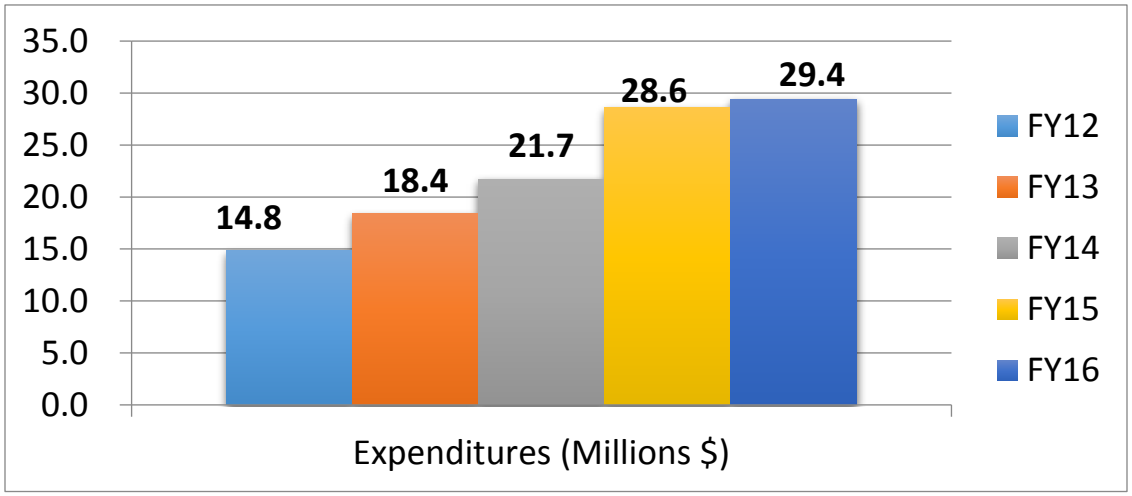


Figure 4: Growth in Research Expenditures

When compared to FY12, our annual expenditures on grants has doubled, with neither a significant increase in the number of faculty nor in the number of proposals submitted (340 to 385). This is an extraordinary success for WPI's faculty research efforts despite a very challenging funding environment.

4.6.3 Support for Teaching and Learning

The Morgan Teaching and Learning Center is a faculty-led unit that maintains and strengthens instructional effectiveness and student learning by offering programs, services, and resources in the areas of training, development, and funding to new and existing faculty and graduate students, including student teaching assistants. The director of the Morgan center designs and delivers the orientation program for new faculty and also manages a highly successful new faculty mentoring program; over 95% of new faculty participate in the program each year, partnering with at least one faculty mentor soon after their arrival at WPI.

The Morgan center manages a competitive grants program that supports innovations in teaching and project advising. It also organizes a regular “Food for Thought” lunch seminar series in which both internal and external experts present workshops on new pedagogies and educational research.

WPI has created a Center for Project-Based Learning as a resource for educators and researchers dedicated to increasing the effective use of project-based learning. The mission of the Center for Project-Based Learning is twofold: To support excellence in project-based learning at WPI and to help other colleges and universities advance work on project-based learning at their institutions.

The Center for Project-Based Learning supports development of expertise in project-based pedagogy on the WPI campus. It also provides support to faculty and administrators who seek to implement, improve, evaluate, or integrate project-based learning efforts for their campuses. The center offers a range of programs and services, including custom workshops and consultation visits to other institutions and the Institute on Project-Based Learning, a multi-day workshop on the WPI campus.

While the new center was officially established in January 2016 with funding from WPI's award of the Bernard M. Gordon Prize awarded to WPI by the National Academy of Engineering, work of the center began in June 2015 with the first offering of the *Institute on Project-Based Learning*. In June 2016, the second Institute was held, and another is planned for 2017. To date, 222 participants from 45 colleges and universities have participated in the Institutes. This includes universities from across the United States, plus universities in India, Russia, Saudi Arabia, and Thailand. In addition, the Center has delivered six additional workshops to approximately 60 faculty and administrators from other colleges and universities.

4.6.4 Faculty Satisfaction Survey

WPI joined the Collaborative on Academic Careers in Higher Education (COACHE) in 2013 for our first externally-benchmarked study of faculty job satisfaction. The WPI faculty, including tenured, tenure-track, and full-time non-tenure track, completed the COACHE in January 2014. When President Leshin joined WPI in June 2014, WPI had just received the results from the COACHE survey and one of her first official acts was to form a faculty task-force to analyze the COACHE data. She charged the task-force to:

1. Identify areas worthy of highlighting and celebration due to their strong positive results in the survey.
2. Determine the top areas in need of attention due to negative survey results, paying close attention to any issues highlighted by specific subsets of survey respondents (e.g., by rank, gender, etc.). Frame the issues raised in the survey. Recommend appropriate initial steps to either gain deeper understanding or begin action.

The task force reviewed the data and made several presentations to the full faculty and to the WPI community in "town meeting" events. The reports have also been presented to the Academic Planning Committee of the Board of Trustees, the committee responsible for oversight of the promotion and tenure processes at WPI.

The COACHE report identified 6 *areas of significant strength* for WPI among the 20 benchmarks in the study: WPI was ranked #1 against WPI's five select peers[5] and in the top 10% of all institutions in the national study.

Table 16: COACHE Survey: Areas of Strength and Concern

Area of Strength:	***Area of Concern:***
1. Tenure Policies 2. Tenure Clarity 3. Tenure Reasonableness 4. Nature of Work: Service 5. Nature of Work: Facilities 6. Interdisciplinary Work	1. Leadership: Senior 2. Leadership: Dean 3. Leadership: Department Head 4. Appreciation and Recognition 5. Promotion

Note that only pre-tenure faculty are asked questions regarding the tenure process, so there is no "survivor bias" in the results of the survey.

The COACHE report also identified five *areas of concern* for WPI among the 20 benchmarks. An area of concern is a benchmark where the WPI mean is ranked as fifth or sixth against WPI's select peers *and* is in the bottom 30% among all participating institutions. Three of these benchmarks pertained to academic *Leadership* (president and provost, academic deans, and academic department heads). *Appreciation and Recognition* (by senior leadership) was a fourth area of concern, and *Promotion* was the fifth area of concern.

Since the time of the COACHE survey, significant changes in leadership have occurred. (See Section 4.3 on Organization and Governance.) The faculty governance Committee on Appointments and Promotion formed a task force to review the data regarding promotion. That committee has drafted changes to the Faculty Constitution and held several open meetings with faculty to discuss the promotion process, the way we mentor post-tenure faculty toward promotion, and the criteria used for promotion to full professor.

WPI has re-joined the Collaborative for the 2017-2020 cycle and will be completing the new COACHE survey this year.

4.7 Institutional Resources

A significant focus in the last five years has been to augment our institutional resources to support growth, and also meet the needs of current and future students. In addition to the investment in human resources and personnel, WPI has continued to expand its physical resources. We have added several new buildings to the campus in the last 5 years in order to respond to the needs of our community. The Sports and Recreation Center opened in 2012 and features a state-of-the-art fitness center, competition swimming pool, four-court gymnasium, indoor running track, rowing tanks, racquetball and squash courts, and aerobic studios. The facility is heavily utilized by all segments of the campus and has contributed positively to the

[5] Virginia Tech, Purdue, Lehigh, University of Rochester, and the Rochester Institute of Technology

overall wellness of the community. As the Sports and Recreation Center opened, construction immediately began on a parking garage and rooftop field adjacent to the Recreation Center. Situated on top of a 534-car parking garage, WPI's rooftop field was the first playing field of its kind in Massachusetts. WPI's newest residence hall, Faraday Hall, opened in 2013 and houses 260 upper-class students in 1-person studios and 4-person suites. WPI partnered with the Worcester Business Development Corporation to construct the second building in the Gateway Park complex, Gateway II, which opened in 2013. Gateway II is home to WPI's Foisie School of Business, Corporate and Professional Education division, Office of Intellectual Property and Innovation, and the expanded Fire Protection Engineering Department and research laboratory.

In the fall of 2016, WPI broke ground for the Foisie Innovation Studio on the site of the former Alumni Gym. The new academic building will serve as the future hub of WPI's distinctive project-based approach to STEM higher education and will include a robotics lab, makerspace, and active-learning classrooms for the Great Problems Seminars. A Center for Innovation and Entrepreneurship will support the "practice" side of WPI's motto by helping students find paths to commercialization for their projects. The Global Impact Lab will house WPI's global projects and highlight student project teams working throughout the world. Finally, a 140-bed residence hall will occupy the top three floors and the building will open in the fall of 2018.

Despite the new buildings and construction projects, space on campus continues to be at a premium. A newly constituted Academic Space Planning committee was formed in 2015 to maximize the current use and assignment of space on campus. Jointly chaired by Provost Bruce Bursten and CFO Jeffrey Solomon, the committee began its work with an assessment of current space utilization on campus to document available resources. This assessment, coupled with a recently completed classroom utilization study, will allow the committee to begin to develop a plan to reorganize and reassign space. The group will also develop policies and protocols for assigning space in the future. The committee will work in parallel with the annual capital projects process, as well as the Physical Facilities Committee of the Board of Trustees, to identify renovation and construction needs to address growth and space needs. The process will also be guided by the most recent university master plan.

WPI closed the most ambitious fundraising campaign in its history, *if…the campaign to advance WPI*, on June 30, 2015, with just over $248 million—nearly 25 percent above a $200 million goal. The comprehensive campaign which was approved by the Board of Trustees in 2008, targeted student financial assistance, faculty and academic programs, campus life and facilities, and unrestricted support. The success of the campaign was built by the more than 17,000 alumni and friends, foundations and corporations, who donated in support of WPI's strategic initiatives in three key areas:

- Over $111 million was raised for **student financial assistance**. Most notably, Robert A. Foisie '56, made the largest individual commitment in the university's history. Prior to making this commitment, Mr. Foisie, a WPI trustee emeritus, was already WPI's largest single donor and had provided scholarships to some 580 students.
- Over $37 million was raised for **faculty and academic program support.** This includes the creation of five new endowed professorships, which not only support WPI

faculty in their research, but also help the university attract the best and brightest scholars and teachers.

- More than $52 million was raised for **campus facilities.**
- In addition, the campaign raised just over $16 million *in* ***unrestricted support.***

In parallel to the strategic planning process, a new annual planning and budget process (APBP) was introduced in the fall of 2015. The budget process was developed to create a shared vision of institutional priorities and challenges for the budget cycle, to create plans to address those priorities and risks, and to ensure that the resources of the University are being used effectively to do so. A key component of the new APBP process was to align the budgeting process with the strategic priorities identified in the nine initiatives of the strategic plan *Elevate Impact*. The APBP committee consists of both administrative leadership and representatives from faculty governance, resulting in a more inclusive and transparent budget development process.

In the fall of 2015, WPI identified the need for more robust business continuity plan to safeguard and restore university resources in the event of an emergency or catastrophic incident. A steering committee was formed and a consultant was hired to assist us in the business continuity planning process. Individual business units and departments have completed a Business Impact Analysis (BIA) and the results are currently being analyzed and prioritized. We will continue this work over the next several years until the Business Continuity Plan is complete.

Finally, the Information Technology Department has just launched a comprehensive strategic plan for 2016-2019. In addition to aligning with the goals of the university strategic plan, the plan articulates strategic goals to support academic technology, research and computing, and data integration and information security. The IT strategic plan will also provide a roadmap for the IT Enterprise Architecture and position the university for a next generation Enterprise Resource Planning (ERP) system.

4.8 Integrity, Transparency, and Public Disclosure

Over the past two years, WPI has undergone a complete redesign of the WPI web site. In August 2016, WPI launched the first phase of a new wpi.edu, changing its content management system (CMS) from a proprietary to an open source platform, positioning the university to be able to update features for years to come. The new information architecture transforms the site from one organized by “who owns the information” to one focused on “who needs the information.” From the main menu, accessible from any page on the site, a user can navigate to any section and/or access information as most users do—through the search function.

Launched after two years of community input and intensive content and technological development, the site’s guiding principles are to create accurate content once and make it easy to link to that information from anywhere on the site, improve the authoring experience, and assure an optimal user experience regardless of device. Built on a mobile-first platform, the new web site is responsive and will scale to the user’s device. Currently, more than 30% of users access wpi.edu on a mobile device and that number is expected to increase steadily.

With the focus of the redesign based on better organizing and structuring the information that people are seeking, the web page has been rebuilt with the user in mind. For example, every major, minor, advanced degree, and certificate has its own page which is highly desirable for prospective students. In addition, there is centralized management for facts and figures, policies, student profiles, dates, deadlines, and events from the university calendar.

We launched the new website with redeveloped content rather than migrating current content over to a new platform. As we have been working though the transition to the new web site, we have discovered some important content that was on the old web site that was not included on the new site. We have been working through these content issues as they arise to ensure that the information that it is essential for community members to have is readily available on the new site.

WPI annually provides a *Student Planner and Resource Guide* to students. This planner includes the WPI Code of Conduct and other university policies that affect students. The Code of Conduct also includes our Academic Integrity policy, and we have developed a series of complimentary publications for students and faculty (available on our web site) to educate the community about our expectations for academic honesty.

Sexual violence prevention, training, and legal compliance continued to be of high importance to the institution. In the last three years, WPI has created several resources in addition to the student planner to help educate and provide resources to students on gender based discrimination and sexual misconduct. These include a newly designed sexual violence prevention and resource website, resources about to whom to report incidents and the level of confidentiality of these resources, the student conduct process, and remediative actions available to those who report an incident.

Finally, the development and mobilization of the strategic plan has provided us with multiple opportunities to communicate our mission, values, and aspirations to both internal and external constituencies.

5 Educational Effectiveness

WPI uses the following primary measures for the effectiveness of our academic programs:

- Retention and graduation rates;
- Career placement;
- Student learning outcomes;
- Alumni perceptions of the impact of the educational program.

This section will review some of the data and provide an overview of the systems in place to collect and analyze and use lessons learned from the data.

5.1 Retention, Graduation, and Placement Data

The simplest measures of student success are retention and graduation rates. WPI has had exceptional first-to-second year retention rates, especially for a university that focuses on engineering and science. At the last comprehensive study, we had reported an increase from 93% to 95% in AY2011-12 with the goal of maintaining a 95% retention rate. WPI has maintained retention rates at or above 96% each of the past four years. (Data First Forms: Standard 8).

Graduation rates have also improved in the last five years. At the last comprehensive study, we reported that 4-year graduation rates were around 69% but had exceeded 70% for the first time in AY2010-11. For the current report, the 4-year graduation rates have increased each year and reached 80% in AY2015-16. Similarly, we have seen significant improvements in the 6-year graduation rates, reaching 85% in the most recent data.

The Career Development Center (CDC) guides and support students in key aspects of professional development. They engage first-year students in the first term of their first year and promote participation in the annual career fairs. Increasingly, companies who visit campus are looking for strong candidates for summer internships and co-op programs and do not wait to interview seniors near graduation. The CDC also collects and reports on placement data for all academic programs. These data are shared with the faculty in the center's annual report and the director presents this information to the trustees each year.

Key data points:

- The success rate (proportion of graduates employed, in graduate school, serving in the military or community service six months after graduation) was 91.7% for the class of 2015 (all degree levels). For bachelor's level graduates, the success rate was 88.6%.
- The success rate is based on a very high knowledge rate (the proportion of graduates for whom WPI has career outcomes data) of 85% (all degree levels) for the class of 2015. The knowledge rate for bachelor's level graduates was 90.4%.
- The average starting salary for bachelor's level graduates has increased nearly 10% over the past three reporting years, from $60,803 for the class of 2013 to $66,805 for the class of 2015, significantly higher than the average starting salary for bachelor's degree

graduates nationally ($50,651 for class of 2015, according to the National Association of Colleges and Employers survey).
- WPI was ranked in the top 20 schools nationally for educational return on investment (#16 in 2015) by Payscale.com. This fall (2016), Princeton Review ranked WPI in the top twenty nationally for the three career related categories: best career placement (#10), best career services (#14), and top internship opportunities (#19).

As part of the strategic plan, under the *More in Four* initiative (see Section 6.1), WPI is reestablishing cooperative education as a viable option for students. Cooperative education is a common feature of undergraduate education at many schools, but especially STEM oriented institutions where interaction between industry and academia is typically fostered.

Over time, as WPI's distinctive project-based curriculum evolved, the number of students pursuing co-op declined. In AY2014-15, 16 students participate in co-op (full-time, paid employment in their field of interest with a sponsoring company for 4-8 months). Last year, 25 students completed cooperative education assignments. These students have completed co-ops at companies such as Tesla, SpaceX, ExxonMobil, Boston Scientific, Intel and John Hancock to name a few.

WPI's strategic plan calls for the number of students participating in co-op to increase significantly to 150 or more annually. Companies are eager to sponsor co-ops, for example, nearly 600 posted such opportunities last year in WPI's on-line recruiting system. The CDC will continue cultivating co-op opportunities with various companies and collaborating with academic departments and other campus departments to create more obvious pathways for students to incorporate co-op into their programs of study.

This re-introduction of co-op as a viable option for students is in keeping with WPI's longstanding focus on theory and practice, further augmenting the project-based curriculum. In addition to aiding students in their career development, it will provide opportunities for students to increase their earnings while in school and offset some educational costs.

5.2 Assessment of Learning Outcomes

WPI has taken an outcomes assessment approach to evaluating its academic programs for almost 20 years. The initial motivation was provided by the shift by ABET, the organization responsible for engineering accreditation. In fact, WPI was one of the two schools used to pilot-test the new ABET accreditation approach in the mid 1990s.

WPI has articulated learning outcomes at several levels and has assessment plans in place for each set of outcomes:

- Undergraduate Learning Outcomes (2004)
- IQP Learning Outcomes (2007)
- Humanities and Arts Learning Outcomes (2004; updated 2007)
- MQP Learning Outcomes (2009)
- Great Problems Seminars (2012)

- Program Learning Outcomes (various dates from 1996 through 2010)

The first five are "university-wide" and involve all undergraduate students, regardless of major. The final set of outcomes is defined by the academic program or department and focus on what it means to be an expert in the particular discipline. In addition, programs will add outcomes for the MQP that are specific to the discipline (for example, engineering design is added by every engineering program). All of these learning outcomes are published in the *Undergraduate Catalog* and are available on the WPI web site.

The highest level of outcomes are the institute-wide Undergraduate Learning Outcomes. These are intended to define the qualities of every WPI graduate.

Table 17: Undergraduate Learning Outcomes

Every graduate of WPI will:

1. have a base of knowledge in mathematics, science, and humanistic studies.
2. have mastered fundamental concepts and methods in their principal areas of study.
3. understand and employ current technological tools.
4. be effective in oral, written and visual communication.
5. function effectively both individually and on teams.
6. be able to identify, analyze, and solve problems creatively through sustained critical investigation.
7. be able to make connections between disciplines and to integrate information from multiple sources.
8. be aware of how their decisions affect and are affected by other individuals separated by time, space, and culture.
9. be aware of personal, societal, and professional ethical standards.
10. have the skills, diligence, and commitment to excellence needed to engage in lifelong learning.

The Undergraduate Outcomes Assessment Committee is responsible for implementing the university's assessment plan and reporting to the faculty governance Committee on Academic Policy. For each outcome above, there are data sources, an office responsible, and a schedule of assessment. In some cases, the assessment is very simple: If students have completed the humanities and arts requirement, then they have achieved the required "base knowledge in … humanistic studies." In other cases, there are multiple sources of data, ranging from faculty reviews of student project reports (MQPs and IQPs) to benchmark data from national surveys such as NSSE and the Engineering Exit Survey.

The faculty also adopted an *Assessment Plan for Undergraduate Learning Outcomes*. This assessment plan identified data sources, individuals responsible, and schedules for collection and review of data.

One of the main lessons learned in the more than 10 years of assessment work is that it is time to review the learning outcomes and update the data sources. For example, the data collected for

the first outcome regarding a "base knowledge in mathematics, science, and humanistic studies" have always been the completion of courses in the appropriate areas. The simple fact that a student has met the Humanities and Arts Requirement (five courses plus an Inquiry Seminar or Practicum in their chosen focus area) is a check-box. These data provide no information that can be used for program improvement. UOAC has begun discussions of updating the outcomes to make the assessment more meaningful.

Other standards, such as the fourth standard regarding effective communication, has good data from multiple sources, specifically the review of student-completed projects. The new student surveys and advisor surveys completed at the end of each project provide information, at the individual student level, regarding this standard. For example, in the first full year of advisor surveys, almost 90% of students were rated as "meets expectations" or "exceeds expectations" with regard to written communications.

5.2.1 Learning Outcomes for the Major Qualifying Project

By completing their MQP, WPI students will achieve the following learning outcomes at a level at least equivalent to that of an entry level professional or graduate student.

Students who complete a Major Qualifying Project will:

1. apply fundamental and disciplinary concepts and methods in ways appropriate to their principal areas of study. (1,2)
2. demonstrate skill and knowledge of current information and technological tools and techniques specific to the professional field of study. (3)
3. use effectively oral, written and visual communication. (4)
4. identify, analyze, and solve problems creatively through sustained critical investigation. (6)
5. integrate information from multiple sources. (7)
6. demonstrate an awareness and application of appropriate personal, societal, and professional ethical standards. (9)
7. practice the skills, diligence, and commitment to excellence needed to engage in lifelong learning. (10)

Note that each of the MQP learning outcomes supports (or is identical with) one or more of the Undergraduate Learning Outcomes, as indicated in the parentheses following each outcome. Two of the Undergraduate Learning Outcomes are not included in the MQP Learning Outcomes: Outcome 5 regarding teamwork is not included because, in many disciplines, teamwork is not standard for the MQP; outcome 8 regarding societal impact is also not supported by all MQPs.

We now regularly collect three sets of data measuring student achievement of the MQP learning outcomes. Every student responds to a survey at the completion of their project and is asked to report their personal progress toward the outcome. Every faculty advisor completes an advisor survey in which he or she reports each individual student's achievement or each learning outcome. Finally, each major program is scheduled to complete a peer review of MQP reports

on a three-year cycle. Funding for these reviews is provided by the external fees paid for externally sponsored projects.

The fact that each discipline tailors the MQP outcomes to its specific needs is appropriate and important. It has also been a challenge for institute-wide assessment. UOAC has made very significant progress over the past three years in developing a common core of questions for students reports on MQP learning, faculty advisor reports on student achievement of MQP learning outcomes, and developing a common core of questions (with a common scale) used by all departments in summer peer reviews of student project reports.

The table on the following page presents the partial results of the Student Report on MQP Learning Outcomes for a sample of engineering programs. Cells are shaded yellow if the average is more than 0.1 *below* the university mean for the question. They are shaded green if the program's mean is more than 0.1 *above* the university mean for the question. These data are reviewed by UOAC and shared with the academic programs. They are used to start discussions and the sharing of best practices by programs. For example, students in the Biomedical Engineering (BE) program report significantly higher progress for all of the learning outcomes (while Aerospace Engineering, AE, has less positive responses from its majors).

Note that the average time spent per week on the project meets or exceeds the requirement set in WPI's expectation of 15-17 hours per week for a course or project (see the discussion in Section 3.3 regarding time on task). It is interesting and perhaps not surprising that the students who report spending the most time working on their project also report higher progress toward the learning outcomes.

Table 18: Student report for MQP Learning Outcomes by Engineering Program

	Program	***AE***	***BE***	***CM***	***ECE***	***EV***	***ME***	***Engineering***	***WPI***
Learning Outcome	***N***	***33***	***79***	***75***	***92***	***17***	***195***	***588***	***892***
#1	Applying fundamental and disciplinary concepts and methods specific to my major	3.64	4.51	4.36	4.40	4.35	4.26	4.33	4.35
#2	Demonstrating skill and knowledge of current technological tools and techniques relevant to my major	3.70	4.56	4.44	4.47	4.41	4.24	4.36	4.37
#3	Developing skill in written communication	3.42	4.49	4.53	4.20	4.00	4.08	4.19	4.18
#3	Developing skill in oral expression and public speaking	4.21	4.54	4.21	3.95	3.59	3.85	4.02	3.97
#3	Developing skill in visual communication (i.e., use of images and graphics to convey information, data, and ideas)	3.82	4.48	4.45	4.29	3.82	4.18	4.23	4.20
#4	Identifying, analyzing, and solving problems creatively through sustained critical investigation	4.24	4.49	4.63	4.40	4.18	4.39	4.42	4.39
#6	Understanding and applying ethical standards in my field (for example, human and animal rights in research, respect for intellectual property, social and environmental responsibility, honest reporting of data, sensitivity to conflict of interest)	3.00	4.05	4.17	3.70	3.53	3.61	3.77	3.71
#7	Taking responsibility for my own learning and project direction	4.15	4.65	4.67	4.50	4.18	4.39	4.49	4.48
	My progress in working with others as a member of a team was (Leave blank if not applicable.)	4.18	4.62	4.60	4.23	4.29	4.33	4.37	4.28
	The intellectual challenge presented by the project was	4.09	4.65	4.48	4.40	4.35	4.29	4.41	4.40
	The project's overall value as an educational experience was	4.24	4.62	4.69	4.35	4.47	4.29	4.41	4.41
	Overall, my level of effort on this project was	4.18	4.85	4.79	4.39	4.59	4.58	4.60	4.59
	Overall, I rate my learning from this project as	4.06	4.63	4.64	4.30	4.35	4.27	4.38	4.39
Hours	On average, how many hours per week did you spend on this project	15.33	21.33	20.17	20.58	18.82	19.07	19.76	19.72

Notes:

For the questions related to Learning Outcomes, the scale is 1 = No Progress at All, 3 = Some Progress, 5 = Substantial Progress

For the remaining questions, the scale is: 1 = Very Poor, 3 = Average, 5 = Excellent

5.2.2 Learning Outcomes for the Interactive Qualifying Project

The faculty has also adopted institute-wide learning outcomes for the IQP. This is a 9-credit project completed by all majors, advised by faculty from all departments and disciplines.

Table 19: IQP Learning Outcomes

Students who complete an Interactive Qualifying Project will…

1. demonstrate an understanding of the project's technical, social, and humanistic context. (1, 7, 8)
2. define clear, achievable goals and objectives for the project. (6)
3. critically identify, utilize, and properly cite information sources, and integrate information from multiple sources to identify appropriate approaches to addressing the project goals. (7, 10)
4. select and implement a sound approach to solving an interdisciplinary problem. (7, 10)
5. analyze and synthesize results from social, ethical, humanistic, technical, or other perspectives, as appropriate. (8, 9)
6. maintain effective working relationships within the project team and with the project advisor(s), recognizing and resolving problems that may arise. (5)
7. demonstrate the ability to write clearly, critically, and persuasively. (4)
8. demonstrate strong oral communication skills, using appropriate, effective visual aids. (4)
9. demonstrate an awareness of the ethical dimensions of their project work. (9)

Once again, each of the IQP Learning Outcomes is mapped to one or more of the Undergraduate Learning Outcomes. Also note that the IQP Learning Outcomes support all of the Undergraduate Learning Outcomes except #2 and #3, which refer to disciplinary learning.

More than half of WPI students complete the IQP at an off-campus project site through our Global Projects Program. WPI has more than Project Centers around the world, ranging from Bangkok to Capetown to Venice to Santa Fe, New Mexico. The following table displays data from the student survey of IQP Learning Outcomes. The Undergraduate Outcomes Assessment Committee is currently reviewing this and other data for the IQP.

Table 20: Student Report on IQP Learning Outcomes: On-Campus versus Off-Campus

		2013/14			2014/15			2015/16		
Learning Outcome	***Survey Question***	***On Campus (n=385)***	***Off Campus (n=579)***	***WPI (n=964)***	***On Campus (n=318)***	***Off Campus (n=630)***	***WPI (n=948)***	***On Campus (n=310)***	***Off Campus (n=730)***	***WPI (n=1040)***
#2	Learning how to set and meet goals for research and projects	4.28	4.42	4.36	4.26	4.39	4.34	4.24	4.34	4.31
#3	Learning how to find and use information resources	4.20	4.30	4.26	4.19	4.27	4.24	4.28	4.18	4.21
#3	Learning to analyze and critically evaluate ideas and information	4.29	4.37	4.34	4.27	4.34	4.32	4.26	4.26	4.26
#8	Developing skill in expressing oneself in writing	4.13	4.26	4.21	4.10	4.18	4.16	4.17	4.19	4.18
#8	Developing skill in expressing oneself orally	3.92	4.34	4.18	3.82	4.31	4.15	3.94	4.25	4.15
#6	Acquiring skill in working with others as a member of a team (if applicable)	4.22	4.41	4.33	4.09	4.40	4.30	4.22	4.41	4.35
	The project's overall value as an educational experience was	4.40	4.71	4.58	4.32	4.64	4.54	4.39	4.60	4.54

Notes: *All responses are on a 5-point scale, with 1 = Very Poor to 5 = Excellent*

The Undergraduate Outcomes Assessment Committee has begun to review the results from these surveys. The first observation is that there is a slight downward trend for all except Outcome #6 regarding skill in working on a team. AY2015-16 is the first year in which student assessment of progress on any learning outcome was higher on-campus than off-campus. This agrees with past reviews of IQP reports completed by the Interdisciplinary and Global Studies Division, showing that the quality of projects completed through the Global Projects Program is superior that of the on-campus projects in many areas.

5.2.3 Learning Outcomes for the Great Problems Seminars

The Great Problems Seminars faculty have created and periodically revised a shared set of learning outcomes for the courses in the program. In addition, each course develops 2-3 unique learning outcomes specific to the content of the course. The current shared learning outcomes are below.

Table 21: Learning Outcomes for the Great Problems Seminars

1. TEAM WORK: Collaborate effectively on a team;
2. RESEARCH: Find varied, credible sources, assess their claims and relevance, and use them appropriately;
3. WRITING: Produce clear, effective, evidence-based writing;
4. PRESENTING: Prepare and confidently deliver engaging and effective presentations;
5. APPROACH TO PROBLEMS: When working on complex, open-ended problems, be able to identify answerable questions, and select and evaluate suitable solutions through the application of multiple perspectives and disciplines;
6. CULTURAL AWARENESS: Understand and articulate the differences in experiences of the "great problem" for people from different cultures/regions/gender/economic status;
7. VALUES: Describe your values and those of others as they relate to addressing the great problem.

The faculty use several assessments of student progress toward learning outcomes. These include student reports on perceived progress toward the learning outcomes, external evaluations of student poster presentations, and more recently, reviews of student-generated project reports. This last is the newest assessment and the faculty have spent more than a year creating and revising an appropriate rubric for the assessment of these reports. The GPS faculty review the assessment data together in an end-of-year workshop and share mechanisms from classes that have seen the most progress on individual learning outcomes.

As a result of an annual review of these data, the GPS faculty this year undertook an experiment to include a new activity that would reveal differences in students' level of privilege. This was followed by asking for a series of reflections, one immediately after the activity and the subsequent reflections as topics in the courses related to social issues of the great problem at the center of the seminar. This course of action was taken because the learning outcomes data showed that the outcome that had the least reported progress was cultural awareness. It was

clear that more emphasis was needed on this topic to help students become more aware of the differences in how issues affect people depending on their identity and geography.

5.3 Alumni Study

WPI completed its first major survey of graduates of the WPI Plan in 2013. An external research group surveyed a sample of WPI alumni (classes of 1974 to 2011) regarding the impacts of their formal project work at WPI. Alumni were asked to rate the extent to which their project work contributed to 39 professional skills and abilities, world views, and personal attributes. Survey prompts were based on WPI's learning outcomes and input from WPI stakeholders.

Respondents reported high levels of project impact in the following areas:

- ***Professional abilities:*** Taking responsibility for their learning, developing ideas, integrating information, solving problems, understanding ethical responsibilities, using current technology.
- ***Interpersonal and communication skills:*** Teamwork, project management, effective leadership, written communication, spoken communication, management of interpersonal dynamics, effective professional interactions.
- ***Professional advancement:*** Succeeding in business or industry, having opportunities that students at other universities did not have, gaining knowledge to inform future plans.
- ***World views:*** Understanding connections between technology and society, awareness of how their decisions impact others, awareness of global issues, understanding of other cultures.
- ***Personal impacts:*** Developing a stronger personal character, achieving work/life balance, feeling connected to the WPI community, having their lives enriched in non-academic ways.

The data revealed differences between certain groups:

- ***Alumni who completed at least one project off-campus*** reported more positive impacts than alumni who did not in 33 of 39 areas, with notable differences in interpersonal and communication skills, world views, and personal impacts.
- ***Female alumni*** reported more positive impacts of project work than males in 36 of 39 areas, again with notable differences in interpersonal and communication skills, world views, and personal impacts.
- ***Engineering alumni*** reported more positive impacts in 29 of 39 areas than alumni of other fields, including all 24 items related to professional abilities and advancement, interpersonal skills, and communication skills.

The results of the alumni study have been presented at national meetings of the American Society of Engineering Education and the Association of American Colleges and Universities. The results of the survey provided the primary motivation for the creation of the Center for Project Based Learning described in Section 4.6.3 and Section 6.3.

6 Institutional Plans

Elevate Impact: A Strategic Plan for WPI 2015-2018 was launched in December of 2015. After using the spring of 2016 to organize and mobilize the strategic plan, AY2016-17 represents the first full academic year in which priorities and initiatives are governed by the plan. *Elevate Impact* has three major goals which focus on undergraduate education, research and graduate education, and reputation and visibility. Each goal area has three main initiative areas, with specific goals and metrics for each.

6.1 Extend the Success of our Distinctive Undergraduate Education

More in Four. The growing cost of higher education, especially relative to family and personal income levels, is a national concern. Knowing that the hands-on, project-based aspects of WPI's distinctive education are expensive to deliver, we are endeavoring to find ways to lower the cost of a WPI education through the *More in Four* initiative. With the expansion of AP courses available (49% of the Class of 2019 came in with some AP credit), today's students have more capacity than ever to receive a WPI education for lower cost by either accelerating through the curriculum and finishing sooner, or by completing additional credentials (i.e., a master's degree) and/or earning money to offset the cost of attendance through highly valuable co-op experiences. By 2018, our goal is to provide up to 200 students per year the opportunity to participate in a co-op program allowing them to have valuable professional experiences while offsetting tuition costs and while completing their BS in four years. We know these accelerated paths are possible because our students already find them. Our goal is to offer a four-year BS/MS degree that will allow WPI students to accelerate through a dual degree program at lower cost, and graduate with a competitive edge. At the same time, we recognize that this accelerated path is not desirable for every student, and we expect to have 50 students per year pursuing the four-year BS/MS.

Major and a Mission. The *Major and a Mission* initiative is designed to help students leverage their passions, interests, and strengths to make connections between their academic coursework and co-curricular pursuits. Through this initiative, the institution is focusing on programming for sophomores to help them "identify their strengths, values, passions, and professional aspirations and connect them deliberately with the academic skills and experiences that will enable them to pursue and realize these aspirations effectively and meaningfully in their professional life." This will be achieved through the development of a credentialing program that incorporates curricular and co-curricular components around a central theme or topic such as sustainability or innovation, the creation of a course targeted at sophomores to help them better explore their mission, and the offering of an e-portfolio that will allow students to meaningfully reflect upon and record their learning throughout their college career. Another aspect of this initiative is to define Global Competency as a fundamental learning outcome for all WPI students and create opportunities for them to connect their learning in classrooms and through projects to their world. WPI also seeks to graduate more National Academy of Engineering Grand Challenge Scholars than any other university, and create a Grand Challenge Scholars Program for non-engineering students at WPI. Additionally, through the support of nearly $2M in funding from

the Kern Family Foundation, WPI is working to infuse pathways toward entrepreneurial mindset learning across the curriculum and through workshops and conferences.

Global Projects for All. WPI is a world leader in project-based learning, and our project centers provide signature experiences for our graduates. Based on data from an extensive study of our graduates conducted by the University of Massachusetts Donahue Institute, we know that the experience our students have during their project work is life changing, and we know it matters to employers. To make sure that every student has the opportunity to take part in this signature WPI program, we will expand the number of global projects available to students, adding an optimal mix of domestic and international opportunities and working creatively to engage qualified, committed alumni in project center activities worldwide. To remove financial barriers that prevent students from participating, we will also launch a targeted fundraising effort for scholarships and project center endowment funds, and seek to defray other costs of student participation. Moreover, we will explore opportunities for PhD students to participate in the Global Projects Program. Finally, as part of the program for Foisie Innovation Studio, we will establish a Global Impact Lab to document and disseminate the impact of global projects, and to catalog all project work at WPI in alignment with a list of WPI Grand Challenge Themes.

6.2 Expand Transformative Research and Graduate Education

Research Enterprise. WPI has long been a source of new ideas and discoveries that have shaped the progress of engineering, science, and technology. WPI faculty and graduate students working together have contributed new knowledge and produced effective solutions to some of the world's most compelling challenges. We know that the most innovative thinkers, makers, and problem solvers are attracted by and flourish in an environment that supports and rewards rigorous, cross-disciplinary work at the cutting edge of discovery. Building on the university's current and historical strengths and seizing emerging opportunities in some of the most currently important multidisciplinary areas, we will emphasize five strategic research themes where WPI can have an important impact:

- Health and Biotechnology
- Robotics and Cyberphysical Systems
- Advanced Materials, Manufacturing, and Mobility
- Cyber, Data, and Security Science and Engineering
- Learning Sciences and Technology

We will elevate the visibility of and support for our research enterprise by launching the WPI Research Solutions Institute (RSI), an agile and nimble research structure able to respond to identified needs and opportunities of scientific and engineering importance. We will accomplish this by assembling multidisciplinary faculty research clusters, supporting the strategic research initiatives, and developing funding opportunities and engaging in translational activities with industry.

WPI PhD Plan. As our graduate programs have grown, so too has WPI's commitment to making them distinctive. Our PhD programs can produce leaders who are prepared to make an impact in a diverse array of career paths. Just as WPI revolutionized undergraduate STEM

education with the WPI Plan, the WPI PhD Plan will elevate and make more distinctive our university's doctoral programs. The PhD Plan will get under way with a pilot program that extends a competitive advantage to our graduate students by providing a host of opportunities to further the impact of their work with us. As part of the PhD plan, we will establish Individual Development Plans (IDP) for all students which are reflective of their chosen career path. We will also launch a Center for Graduate Student Professional Development that will offer professional and career-enhancing opportunities across all disciplines. We also have the opportunity to be creative and innovative in developing new online learning opportunities for graduate students, which will promote flexible and real-world learning. Finally, we will be seeking ways to provide PhD students the opportunity to participate in global and industrial experiences as part of their graduate experience.

Competency-Based Online Education. To extend WPI's leadership in innovative STEM education and reach a wider range of professional and lifelong learners, we must embrace the critical role disruptive curricular models and technologies are playing in higher education. Not only will doing so continue WPI's history of leading change in higher education, it will enable us to truly embrace the concept of lifelong learning, engaging professionals, alumni, and others in new and important ways in the learning taking place at WPI. The emerging model of competency-based online education will be key to expanding our reach in this area. Competency-based education (CBE) is a student-centric paradigm for individualized education that was first implemented and tested in the early years of the WPI Plan. We will apply and enhance this mode of education within the context of online courses and exploit the full capabilities of contemporary computational and communications to create an exemplar for student-driven education. Within the new programs, students will be able to learn what they want when they want to, and be evaluated when they are ready. They will have the opportunity to learn at their own pace and will progress when they demonstrate competency. To launch this initiative, we are currently piloting a competency-based online course in Systems Engineering. A future goal is to offer a competency-based certificate program for systems thinking designed for students in non-engineering fields.

6.3 Enhance WPI's Reputation and Visibility

Center for Project-Based Learning. Since the launch of the WPI Plan, other universities across the United States have attempted to provide students with project-based learning experiences with varying degrees of success. WPI's Center for Project-Based Learning will enable us to share best practices honed over more than 40 years and establish WPI as the recognized thought leader in the field of project-based education. The Center for Project-Based Learning was formally established in 2016, and we have held two summer Institutes on Project-Based Learning. During this multi-day workshop, WPI faculty experts introduce teams from universities around the world to project-based learning through seminars, workshops, and a team coaching model unique to WPI. To date, teams from 44 domestic and international universities have participated in the summer institutes. As part of this initiative, we will also hold "Away Workshops" and provide consulting services in which WPI will take the work of the center on

the road, bringing customized content to other institutions that desire a more hands-on and extended approach to engaging with WPI on project-based learning.

Global Partnerships. WPI has a remarkably rich global presence. Our project centers are located in 25 countries. Presently, nearly 900 of our students undertake off-campus projects each year. We have a strong and loyal alumni base that spans the world, which has helped us develop a global network of academic and corporate partners. As part of our Strategic Plan, we will more effectively and intentionally harness the power of all of this activity and influence in a way that will maximize opportunities for our students, faculty, and alumni to make an impact. Our strategic focus will be on three regions of the world: China, Central Europe, and Latin America. These are regions where we already have established alumni bases and nascent partnerships that offer maximum potential for growth. Our primary goals are to develop and nurture robust relationships with our alumni and partners that increase substantially the already strong global impact of WPI. We will use a combination of strategies and tactics that will allow us to reach more of the globe more effectively, creating new and lasting international partnerships. As part of this initiative, we have established global alumni chapters, and provided "WPI Email for Life" to facilitate ongoing connection with our international alumni. Finally, we will execute a memorandum of understanding (MOU) with academic partners in each of the three regions and develop concrete action plans to deliver on the MOUs.

Foisie Innovation Studio. The design and construction of the Foisie Innovation Studio (FIS) will allow us to realize our academic ambitions. The FIS will provide a place to showcase WPI's distinctive academic programs and give students and faculty members the tools they need to pursue their ideas to the fullest. Students will use the FIS to plan and carry out their GPSs, IQPs, and MQPs and utilize the Maker Space to assist in the execution of these projects. The Global Impact Lab and the Innovation & Entrepreneurship Center will support faculty in developing courses and projects that identify genuine needs and enable students to design solutions with real value. Students will use the Innovation & Entrepreneurship Center on the path to forming new ventures—a business, social enterprise, or not-for-profit—extending their previous project work. The Global Impact Lab will enable students to communicate high-impact WPI research through a variety of media and to distribute these communications beyond WPI. Finally, NGOs-in-residence will work with faculty and students to develop high-impact projects that meet the needs of and create value for the communities served by these and similar NGOs. As part of the construction project, Messenger Hall will provide 140 student beds in a residence hall that will be constructed above the FIS. Currently under construction, The Foisie Innovation Studio and Messenger Residence Hall are scheduled to open in the fall of 2018.

As part of the implementation of *Elevate Impact*, we have established one, two, and three year goals and metrics. With the plan now underway, the steering committee and implementation leads meet quarterly to review metrics and ensure progress.

7 Appendices

- ***Affirmation of Compliance Form***
- ***Most recent audited financial statement***
- ***Auditor's management letter***
- ***Data First Forms***
- ***E-Series Forms***

Appendix 7.1

Affirmation of Compliance Form

NEW ENGLAND ASSOCIATION OF SCHOOLS AND COLLEGES
COMMISSION ON INSTITUTIONS OF HIGHER EDUCATION
209 Burlington Road, Bedford, MA 01730
Voice: (781) 271-0022 Fax: (781) 271-0950 Web: http://cihe.neasc.org

AFFIRMATION OF COMPLIANCE WITH FEDERAL REGULATIONS RELATING TO TITLE IV

Periodically, member institutions are asked to affirm their compliance with federal requirements relating to Title IV program participation, including relevant requirements of the Higher Education Opportunity Act.

1. **Credit Hour:** Federal regulation defines a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutional established equivalence that reasonably approximates not less than: (1) One hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours. (CIHE Policy 111. See also *Standards for Accreditation* 4.34.)

URL	web.wpi.edu/academics/catalogs/ugrad.html
Print Publications	Undergraduate Catalog (page 121)

2. **Credit Transfer Policies.** The institution's policy on transfer of credit is publicly disclosed through its website and other relevant publications. The institution includes a statement of its criteria for transfer of credit earned at another institution of higher education along with a list of institutions with which it has articulation agreements. (CIHE Policy 95. See also *Standards for Accreditation* 4.44 and 10.5.)

URL	web.wpi.edu/academics/catalogs/ugrad.html
Print Publications	Undergraduate Catalog (page 198); Graduate Catalog (page 12)

3. **Student Complaints.** "Policies on student rights and responsibilities, including grievance procedures, are clearly stated, well publicized and readily available, and fairly and consistently administered." (*Standards for Accreditation* 6.18, 10.5, and 11.8.)

URL	Ombuds Office: www.wpi.edu/offices/ombudsperson Student Code of Conduct: www.wpi.edu/+codeofconduct
Print Publications	Student Planner (delivered to all students and faculty each year)

4. **Distance and Correspondence Education: Verification of Student Identity:** If the institution offers distance education or correspondence education, it has processes in place to establish that the student who registers in a distance education or correspondence education course or program is the same student who participates in and completes the program and receives the academic credit. . . .The institution protects student privacy and notifies students at the time of registration or enrollment of any projected additional student charges associated with the verification of student identity. (CIHE Policy 95. See also *Standards for Accreditation* 4.42.)

Method(s) used for verification	All distance education academic work is done through the university's content management system, myWPI. Each student has a password protected login to the online course site for all courses in which they are enrolled.

Chief Executive Officer: _____ Date: 10/12/16

Appendix 7.2

Most recent audited financial statement

Appendix 7.3

Auditor's management letter

Appendix 7.4

Data First Forms

INTERIM REPORT FORMS
GENERAL INFORMATION

		Annual Audit	
		Certified:	Qualified
Financial Results for Year Ending:	06/30/2015	Yes/No	Unqualified
Most Recent Year	2016	Yes	Unqualified
1 Year Prior	2015	Yes	Unqualified
2 Years Prior	2014	Yes	Unqualified

Institution Name:	Worcester Polytechnic Institute	
OPE ID:	00223300	
Fiscal Year Ends on:	6/30	(month/day)
Budget / Plans		
Current Year	2017	
Next Year	2018	
Contact Person:	Arthur C Heinricher	
Title:	Dean of Undergraduate Studies	
Telephone No:	508-831-5397	
E-mail address	heinrich@wpi.edu	

Standard 1: Mission and Purposes

Attach a copy of the current mission statement.

Document	Website Location	Date Approved by the Governing Board
Institutional Mission Statement	https://www.wpi.edu/about/mission.html	05/22/1987

Standard 2: Planning and Evaluation

PLANNING	Year approved by governing board	Effective Dates	Website location
Strategic Plans			
Immediately prior Strategic Plan	2007	2007-2015	https://www.wpi.edu/about/leadership/trustees/stategicplan
Current Strategic Plan	2015	2015-2018	http://wp.wpi.edu/strategicplan/
Next Strategic Plan			

	Year completed	Effective Dates	Website location
Other institution-wide plans*			
Master plan	2003	2004-present	http://www.wpi.edu/Master/
Academic plan			
Financial plan			
Technology plan			
Enrollment plan			
Development plan			
Plans for major units (e.g., departments, library)*			

EVALUATION	Website location
Academic program review	
Program review system (colleges and departments). System last updated:	MQP review schedule updated August 2012
Program review schedule (e.g., every 5 years)	MQP peer review every 3 years
	IQP external review every 3 years
	School of Business every 5 years (AACSB)
	Arts & Sciences external review of 2 programs each year
	Engineering progrmas every 6 years (ABET)

Standard 3: Organization and Governance (Board and Internal Governance)

Please attach to this form:

1) A copy of the institution's organization chart(s).

If there is a "sponsoring entity," such as a church or religious congregation, a state system, or a corporation, describe and document the relationship with the accredited institution.

Name of the sponsoring entity	
Website location of documentation of relationship	

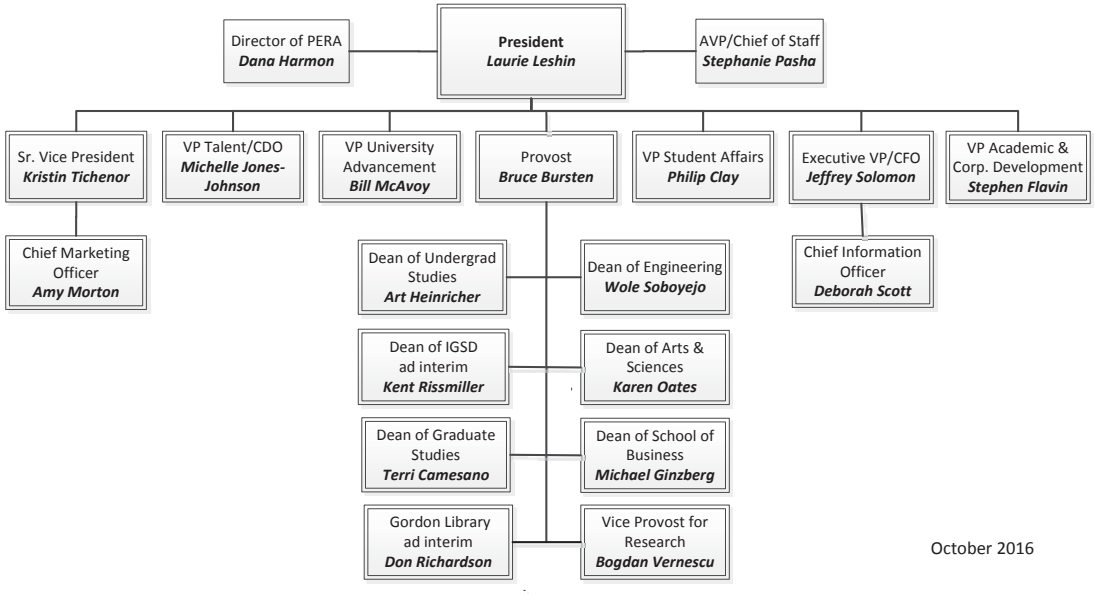
Governing Board	**Website location**
By-laws	https://www.wpi.edu/offices/trustees/bylaws.html
Board members' names and affiliations	https://www.wpi.edu/offices/trustees/current.html

Mission Statement

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.

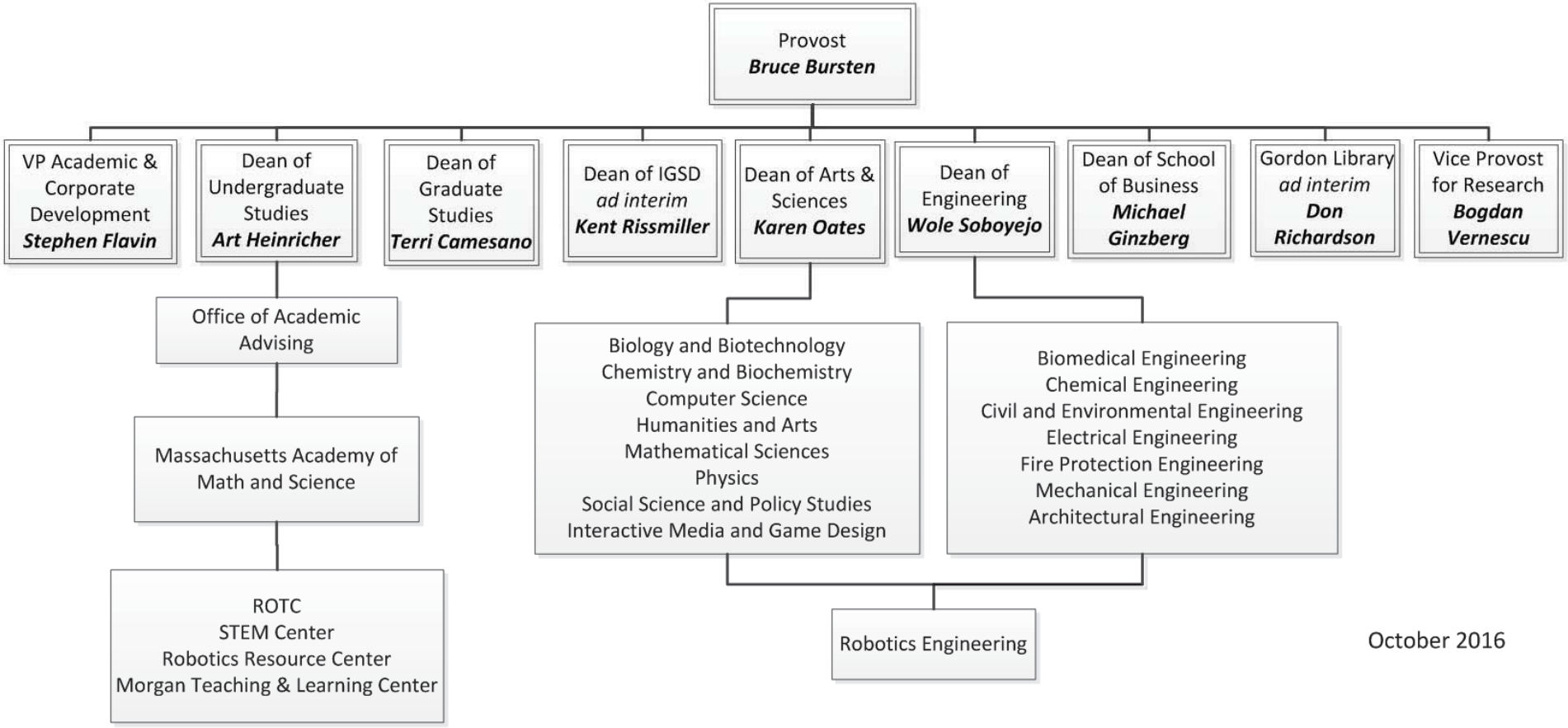
Adopted by the Board of Trustees, May 22, 1987

Management Council



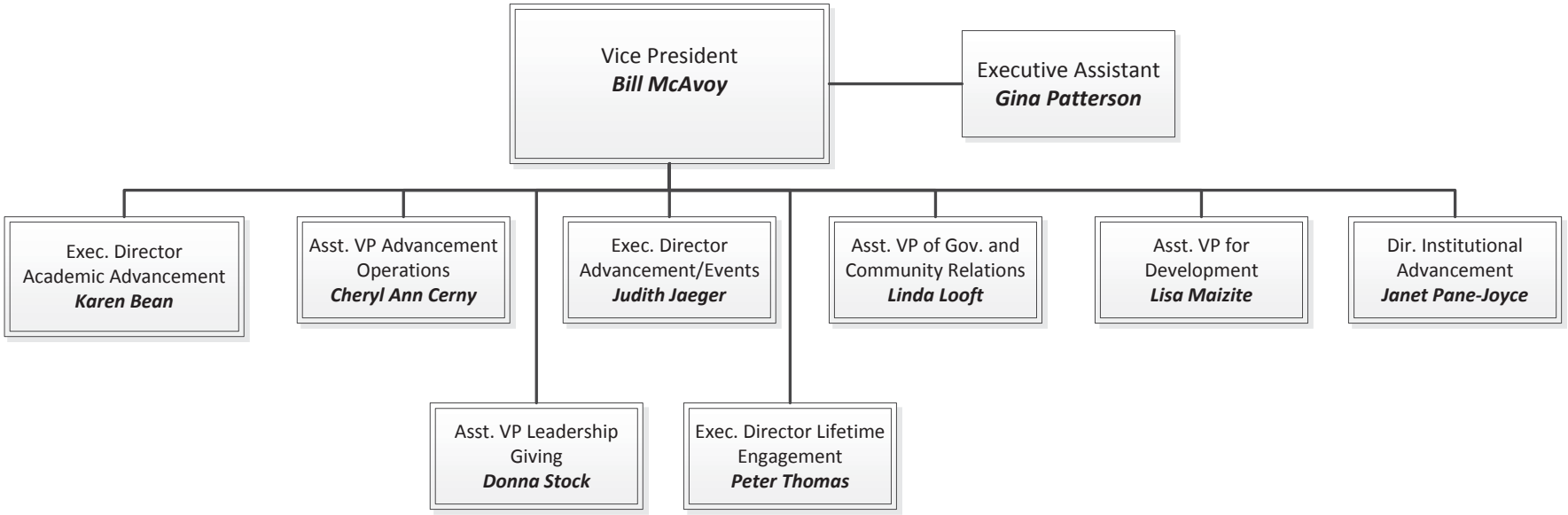
October 2016

Academic Affairs



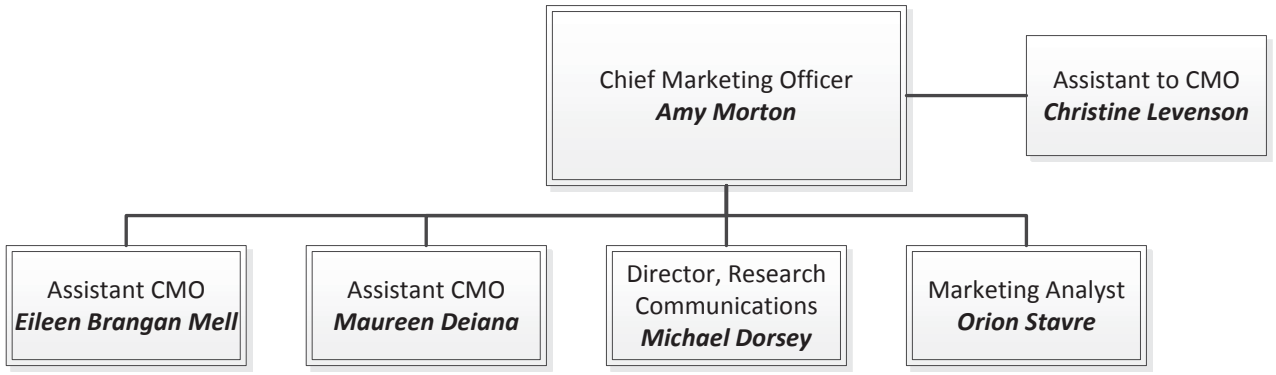
October 2016

University Advancement



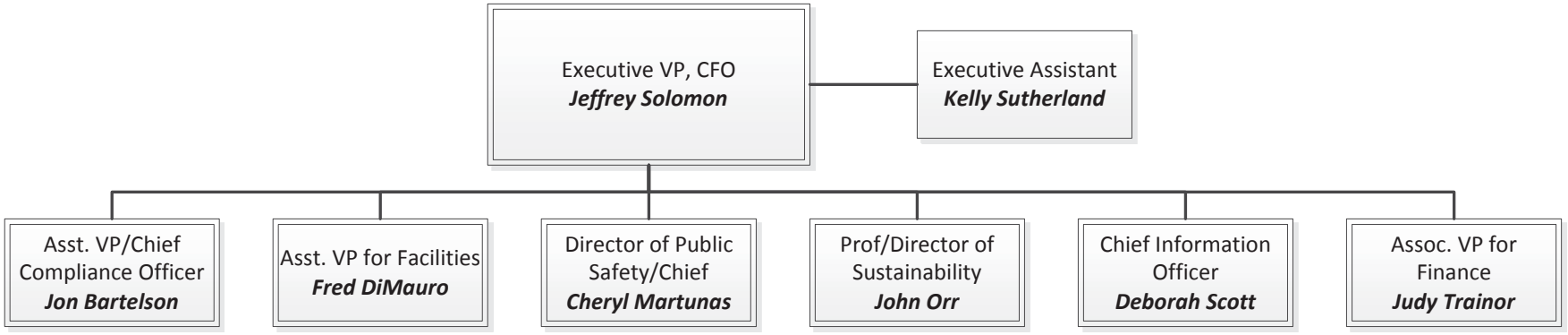
October 2016

Marketing and Communications



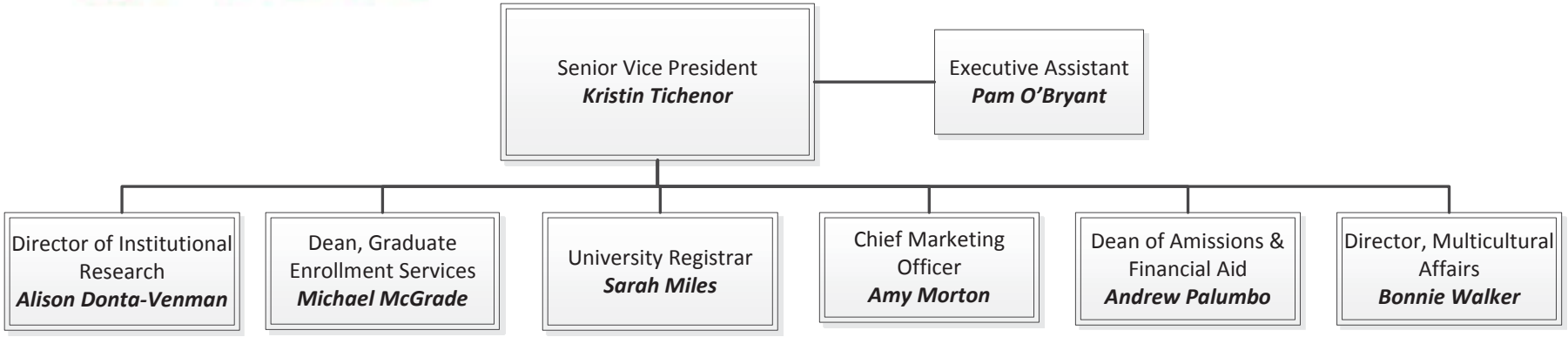
October 2016

Finance and Operations



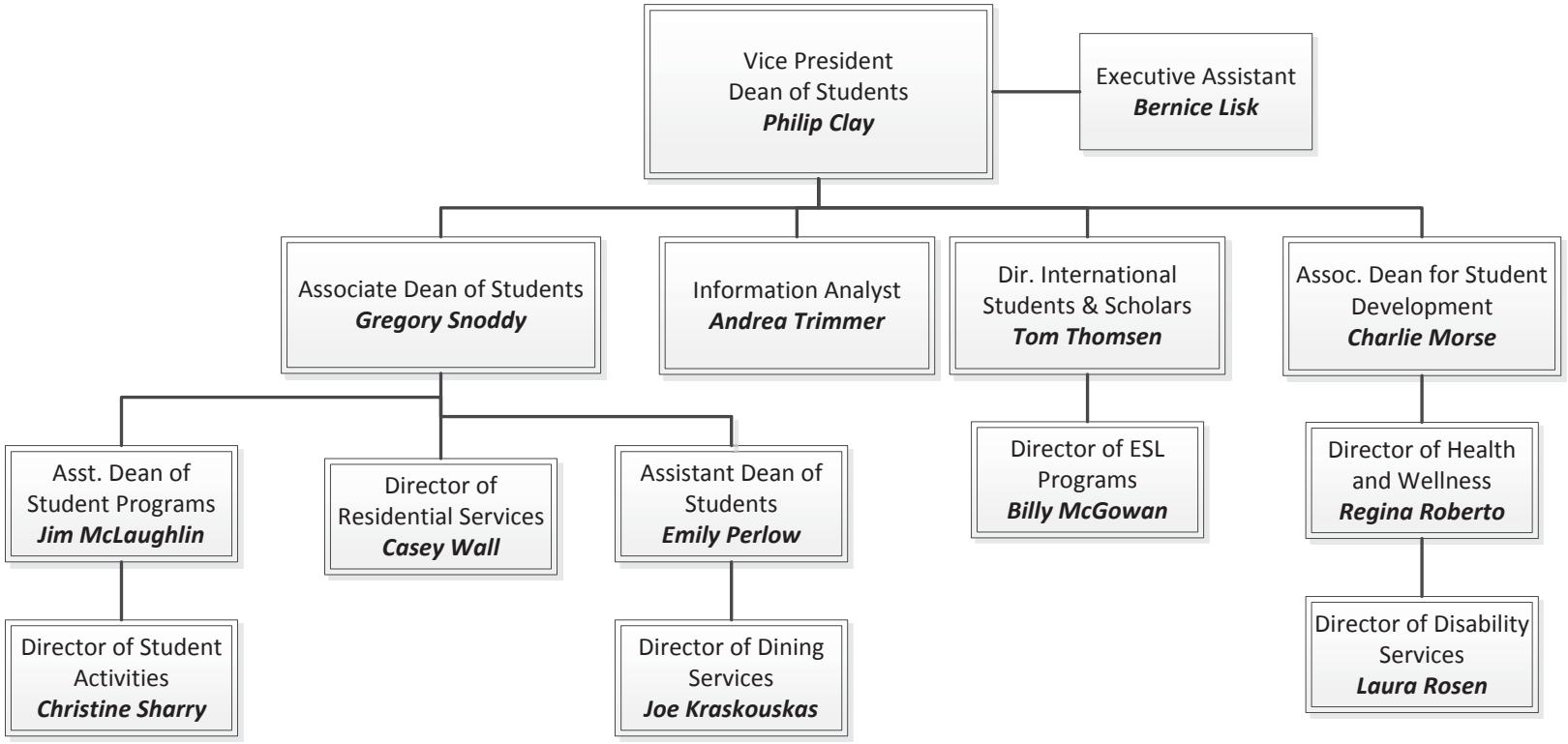
October 2016

Enrollment Management



October 2016

Student Affairs and Campus Life



October 2016

Standard 3: Organization and Governance
(Locations and Modalities)

Campuses, Branches and Locations Currently in Operation (See definitions in comment boxes)

(Insert additional rows as appropriate.)

	Location (City, State/Country)	Date Initiated	Enrollment* 2 years prior (FY2014)	1 year prior (FY 2015)	Current year (FY 2016)
Main campus	Worcester, MA, USA	05/10/1865	5,928	6,057	6,139
Other principal campuses					
Branch campuses (US)					
Other instructional locations (US)					
Branch campuses (overseas)					
Other instructional locations (overseas)					

Educational modalities

	Number of programs	Date First Initiated	Enrollment* 2 years prior (FY2014)	1 year prior (FY 2015)	Current year (FY 2016)
Distance Learning Programs					
Programs 50-99% on-line	7	8/15/00	569	598	666
Programs 100% on-line	5	8/15/00	304	297	234
Correspondence Education	0				
Low-Residency Programs	0				
Competency-based Programs	0				
Dual Enrollment Programs	0				
Contractual Arrangements involving the award of credit	0				

*Enter the annual unduplicated headcount for each of the years specified below.

Please enter any explanatory notes in the box below

Note: WPI has offered distance courses since 1979, but the modality shifted entirely to an e-learning mode in the Fall of 2000. The 12 distance learning programs listed are graduate programs leading to a Master's degree.

Standard 4: The Academic Program
(Summary - Degree-Seeking Enrollment and Degrees)

Fall Enrollment* by location and modality, as of Census Date

Degree Level/ Location & Modality	Associate's	Bachelor's	Master's	Clinical doctorates (e.g., Pharm.D., DPT, DNP)	Professional doctorates (e.g., Ed.D., Psy.D., D.B.A.)	M.D., J.D., DDS	Ph.D.	Total Degree-Seeking
Main Campus FT		4,085	549				251	4,885
Main Campus PT		92	482				83	657
Other Principal Campus FT								0
Other Principal Campus PT								0
Branch campuses FT								0
Branch campuses PT								0
Other Locations FT			1					1
Other Locations PT			239					239
Overseas Locations FT								0
Overseas Locations FT								0
Distance education FT			8					8
Distance education PT			281				6	287
Correspondence FT								0
Correspondence PT								0
Low-Residency FT								0
Low-Residency PT								0
Unduplicated Headcount Total	0	4,177	1,560	0	0	0	340	6,077
Total FTE		4,121.00	941.00				285.00	5,347.00
Enter FTE definition:		UG=FT+(0.392857)*PT	GR=FT+(0.382059)*PT				GR=FT+(0.382059)*PT	
Degrees Awarded, Most Recent Year		958	681				42	1,681

Notes:

1) Enrollment numbers should include all students in the named categories, including students in continuing education and students enrolled through any contractual relationship.

2) Each student should be recorded in only one category, e.g., students enrolled in low-residency programs housed on the main campus should be recorded only in the category "low-residency programs."

3) Please refer to form 3.2, "Locations and Modalities," for definitions of locations and instructional modalities.

* For programs not taught in the fall, report an analogous term's enrollment as of its Census Date.

Please enter any explanatory notes in the box below

Enrollment at "Other Locations" refers to special programs offered at corporate sites through contract with WPI's Academic and Corporate Engagement Division. These are not permanent locations owned or operated by WPI.

Standard 4: The Academic Program
(Summary - Non-degree seeking Enrollment and Awards)

Fall Enrollment* by location and modality, as of Census Date

Degree Level/ Location & Modality	Title IV-Eligible Certificates: Students Seeking Certificates	Non-Matriculated Students	Visiting Students	Total Non-degree-Seeking	Total degree-seeking (from previous page)	Grand total
Main Campus FT		49	24	73	4,885	4,958
Main Campus PT		53	41	94	657	751
Other Principal Campus FT				0	0	0
Other Principal Campus PT				0	0	0
Branch campuses FT				0	0	0
Branch campuses PT				0	0	0
Other Locations FT				0	1	1
Other Locations PT		175		175	239	414
Overseas Locations FT				0	0	0
Overseas Locations FT				0	0	0
Distance education FT				0	8	8
Distance education PT		92		92	287	379
Correspondence FT				0	0	0
Correspondence PT				0	0	0
Low-Residency FT				0	0	0
Low-Residency PT				0	0	0
Unduplicated Headcount Total	0	369	65	434	6,077	6,511
Total FTE		171.00	40.00	211	5,347.00	5,558.00
Enter FTE definition:		UG=FT+(0.392857)*PT;	GR=FT+(0.382059)*PT			
Certificates Awarded, Most Recent Year						

Notes:

1) Enrollment numbers should include all students in the named categories, including students in continuing education and students enrolled through any contractual relationship.

2) Each student should be recorded in only one category, e.g., students enrolled in low-residency programs housed on the main campus should be recorded only in the category "low-residency programs."

3) Please refer to form 3.2, "Locations and Modalities," for definitions of locations and instructional modalities.

* For programs not taught in the fall, report an analogous term's enrollment as of its Census Date.

Please enter any explanatory notes in the box below

The 49 students reported as non-matriculated/on-campus are seniors enrolled at the Massachusetts Academy of Mathematics and Science at WPI. This is a public high school of excellence where seniors enroll in first-year courses at WPI while completing their senior year in high school.

Standard 4: The Academic Program
(Headcount by UNDERGRADUATE Program Type)

For Fall Term, as of Census Date	3 Years Prior (Fall 2012)	2 Years Prior (Fall 2013)	1 Year Prior (Fall 2014)	Current Year (Fall 2015)	Next Year Forward (goal) (Fall 2016)
Certificate					
Associate					
Baccalaureate	3,841	4,012	4,123	4,177	4,232
Total Undergraduate	3,841	4,012	4,123	4,177	4,232

Standard 4: The Academic Program
(Headcount by GRADUATE Program Type)

For Fall Term, as of Census Date	3 Years Prior (Fall 2012)	2 Years Prior (Fall 2013)	1 Year Prior (Fall 2014)	Current Year (Fall 2015)	Next Year Forward (goal) (Fall 2016)
Master's	1,408	1,463	1,500	1,560	1615
Doctorate	271	324	336	340	350
First Professional					
Other	55	129	98	62	86
Total Graduate	1,734	1,916	1,934	1,962	2,051

Standard 4: The Academic Program
(Credit Hours Generated at the Undergraduate and Graduate Levels)

	3 Years Prior (Fall 2012)	2 Years Prior (Fall 2013)	1 Year Prior (Fall 2014)	Current Year (Fall 2015)	Next Year Forward (goal) (Fall 2016)
Undergraduate	140272	145848	149342	151199	154223
Graduate	22242	23966	23910	26035	27337
Total	162,514	169,814	173,252	177,234	181,560

Standard 4: The Academic Program
(Information Literacy sessions)

Main campus					
Sessions embedded in a class	48	41	46	62	65
Free-standing sessions					
Branch/other locations					
Sessions embedded in a class					
Free-standing sessions					
Online sessions					
URL of Information Literacy Reports					

Please enter any explanatory notes in the box below

Goal figures calculated using: Bach-last year's % increase; Mast & PhD - 2-yr avg increase; Other (grad certificates)-4-yr avg number.
Credit Hours Goal for Undergraduates: 2% increase; Goal for Graduate: 5% increase
Information Literacy sessions are associated with GPS courses (FY 1100 and FY 1101) and ID 2050 courses; Goal: 5% increase

Standard 5: Students

(Admissions, Fall Term)

Complete this form for each distinct student body identified by the institution (see Standard 5.1)

Credit Seeking Students Only - Including Continuing Education

	3 Years Prior (FY 2013)	2 Years Prior (FY 2014)	1 Year Prior (FY 2015)	Current Year (FY 2016)	Goal (specify year) (FY 2017)
Freshmen - Undergraduate					
Completed Applications	7,585	8,578	10,233	10,172	10,468
Applications Accepted	3,986	4,425	4,480	4,938	5,071
Applicants Enrolled	951	1,103	1,056	1,093	1,133
% Accepted of Applied	52.6%	51.6%	43.8%	48.5%	48.4%
% Enrolled of Accepted	23.9%	24.9%	23.6%	22.1%	22.3%
Percent Change Year over Year					
Completed Applications	na	13.1%	19.3%	-0.6%	2.9%
Applications Accepted	na	11.0%	1.2%	10.2%	2.7%
Applicants Enrolled	na	16.0%	-4.3%	3.5%	3.7%
Average of statistical indicator of aptitude of enrollees: (define below)					
HS GPA	3.8	3.9	3.8	3.8	3.8
Transfers - Undergraduate					
Completed Applications	252	247	290	267	263
Applications Accepted	112	95	94	88	73
Applications Enrolled	55	44	42	39	32
% Accepted of Applied	44.4%	38.5%	32.4%	33.0%	27.8%
% Enrolled of Accepted	49.1%	46.3%	44.7%	44.3%	43.8%
Master's Degree					
Completed Applications	3,544	3,515	3,459	3,578	3,757
Applications Accepted	1,325	1,505	1,534	1,546	1,623
Applications Enrolled	517	557	535	631	663
% Accepted of Applied	37.4%	42.8%	44.3%	43.2%	43.2%
% Enrolled of Accepted	39.0%	37.0%	34.9%	40.8%	40.8%
First Professional Degree					
Completed Applications					
Applications Accepted					
Applications Enrolled					
% Accepted of Applied	-	-	-	-	-
% Enrolled of Accepted	-	-	-	-	-
Doctoral Degree					
Completed Applications	633	643	600	555	583
Applications Accepted	259	274	240	181	190
Applications Enrolled	68	94	84	64	67
% Accepted of Applied	40.9%	42.6%	40.0%	32.6%	32.6%
% Enrolled of Accepted	26.3%	34.3%	35.0%	35.4%	35.4%

Please enter any explanatory notes in the box below

Fall 2016 UG admissions figures are actual as of 8/1/16 (not final).
Goal for Master's and Doctoral Degrees calculated using 5% increase

Standard 5: Students
(Enrollment, Fall Term)

Complete this form for each distinct student body identified by the institution (see Standard 5.1)

Credit-Seeking Students Only - Including Continuing Education

		3 Years Prior (FY 2013)	2 Years Prior (FY 2014)	1 Year Prior (FY 2015)	Current Year (FY 2016)	Goal (specify year) (FY 2017)
UNDERGRADUATE						
First Year	Full-Time Headcount	948	1,103	1,054	1,093	1,125
	Part-Time Headcount					
	Total Headcount	948	1,103	1,054	1,093	1,125
	Total FTE	948	1,103	1,054	1,093	1,125
Second Year	Full-Time Headcount	963	904	1,063	1,007	1,044
	Part-Time Headcount	6	5	6	4	5
	Total Headcount	969	909	1,069	1,011	1,049
	Total FTE	965	906	1,065	1,009	1,046
Third Year	Full-Time Headcount	806	911	851	1,007	955
	Part-Time Headcount	16	17	11	16	15
	Total Headcount	822	928	862	1,023	970
	Total FTE	812	918	855	1,013	961
Fourth Year	Full-Time Headcount	821	799	906	838	981
	Part-Time Headcount	70	81	63	61	70
	Total Headcount	891	880	969	899	1,051
	Total FTE	849	831	931	862	1,008
Unclassified	Full-Time Headcount	192	176	157	140	140
	Part-Time Headcount	19	16	12	11	11
	Total Headcount	211	192	169	151	151
	Total FTE	200	182	162	144	144
Total Undergraduate Students						
	Full-Time Headcount	3,730	3,893	4,031	4,085	4,245
	Part-Time Headcount	111	119	92	92	101
	Total Headcount	3,841	4,012	4,123	4,177	4,346
	Total FTE	3,774	3,940	4,067	4,121	4,284
% Change FTE Undergraduate		na	4.4%	3.2%	1.3%	4.0%
GRADUATE						
	Full-Time Headcount	654	757	755	809	809
	Part-Time Headcount	1,080	1,159	1,179	1,153	1,153
	Total Headcount	1,734	1,916	1,934	1,962	1,962
	Total FTE	1,067	1,200	1,205	1,250	1,250
% Change FTE Graduate		na	12.5%	0.4%	3.7%	0.0%
GRAND TOTAL						
Grand Total Headcount		5,575	5,928	6,057	6,139	6,308
Grand Total FTE		4,841	5,140	5,272	5,371	5,534
% Change Grand Total FTE		na	6.2%	2.6%	1.9%	3.0%

Please enter any explanatory notes in the box below

Goal figures for UG's calculated using the 3-yr average retention rates and average breakout of PT to FT students. Unclassified was left level. GR figures were left level.

Standard 5: Students
(Financial Aid, Debt, Developmental Courses)

Complete this form for each distinct student body identified by the institution (see Standard 5.1)

Where does the institution describe the students it seeks to serve?

https://www.wpi.edu/about

	(FY 2011)	(FY 2012)	(FY 2013)
Three-year Cohort Default Rate	3.70%	2.20%	1.90%
Three-year Loan repayment rate (from College Scorecard)	96%	97%	98%

	3 Years Prior	2 Years Prior	Most Recently Completed Year	Current Year	Goal (specify year)
	(FY 2013)	(FY 2014)	(FY 2015)	(FY 2016)	(FY 2017)
Student Financial Aid					
Total Federal Aid	$23,536	$23,683	$23,587	$23,277	$24,620
Grants	$2,963	$3,034	$3,014	$2,916	$3,000
Loans	$20,027	$20,117	$20,116	$19,841	$21,100
Work Study	$546	$532	$457	$520	$520
Total State Aid	$1,369	$1,349	$1,344	$804	$1,340
Total Institutional Aid	$64,684	$69,257	$73,212	$77,461	$81,200
Grants	$62,586	$67,345	$71,573	$75,776	$79,500
Loans	$2,097	$1,912	$1,639	$1,684	$1,700
Total Private Aid	$19,056	$20,759	$20,428	$14,870	$19,400
Grants	$6,448	$8,025	$7,906	$6,992	$7,000
Loans	$12,608	$12,733	$12,522	$7,878	$12,400
Student Debt					
Percent of students graduating with debt (include all students who graduated in this calculation)					
Undergraduates	70%	69%	68%	69%	69%
Graduates	13%	15%	9%	13%	13%
First professional students					
For students with debt:					
Average amount of debt for students leaving the institution with a degree					
Undergraduates	$27	$26	$26	$27	$28
Graduates	$28	$23	$28	$30	$30
First professional students					
Average amount of debt for students leaving the institution without a degree					
Undergraduates	$18	$19	$18	$19	$19
Graduate Students	$20	$45	$29	$30	$30
First professional students					
Percent of First-year students in Developmental Courses (courses for which no credit toward a degree is granted)					
English as a Second/Other Language	0%	0%	0%	0%	0
English (reading, writing, communication skills)	0%	0%	0%	0%	0
Math	0%	0%	0%	0%	0
Other	0%	0%	0%	0%	0

Please enter any explanatory notes in the box below

This table contains data for Undergraduates and Graduate Students combined; Dollar amounts in thousands (000)
The most recent available data for the 3 year default rate and repayment rate are from 2011-2013

Standard 6: Teaching, Learning, and Scholarship
(Faculty by Category and Rank; Academic Staff by Category, Fall Term)

	3 Years Prior (FY 2013)	2 Years Prior (FY 2014)	1 Year Prior (FY 2015)	Current Year (FY 2016)
Number of Faculty by category				
Full-time	304	331	336	359
Part-time	157	147	149	155
Adjunct				
Clinical				
Research				
Visiting				
Other; specify below:				
Total	461	478	485	514
Percentage of CREDITS taught by full-time faculty				
	57.00%	52.20%	50.40%	49.50%
Number of Faculty by rank, if applicable				
Professor	96	98	107	113
Associate	91	94	87	93
Assistant	62	64	65	60
Other; specify below:				
Teaching Professor	1	3	4	6
Associate Teaching	2	7	21	23
Assistant Teaching	32	47	35	51
Professor of Practice	10	12	14	14
Instructor	56	54	60	61
Adjunct	100	95	85	87
Other Non Tenure Track	11	4	7	6
Total	461	478	485	514
Number of Academic Staff by category				
Librarians	10	15	17	15
Advisors	5	6	6	7
Instructional Designers	0	0	0	1
Other; specify below:				
Total	15	21	23	23

Please enter any explanatory notes in the box below

Note: We have reported percentage of CREDITS and not percentage of COURSES in Line 21;
Note: Post Doctoral Scholars are included in Assistant Teaching Professor; Other Non Tenure Track includes: Visiting and Research Professors; Librarians includes Librarians and Professional Staff;

Standard 6: Teaching, Learning, and Scholarship
(Appointments, Tenure, Departures, Retirements, Teaching Load Full Academic Year)

	3 Years Prior (FY 2013)		2 Years Prior (FY 2014)		1 Year Prior (FY 2015)		Current Year (FY 2016)	
	FT	PT	FT	PT	FT	PT	FT	PT
Number of Faculty Appointed								
Professor	2		2		1		3	
Associate	1		1		2		1	
Assistant	14		12		8		8	
Instructor								
No rank								
Other	9	24	12	10	9	12	19	11
Total	26	24	27	10	20	12	31	11
Number of Faculty in Tenured Positions								
Professor	87	1	90		95		99	
Associate	78		88		82		86	
Assistant	1				1			
Instructor								
No rank								
Other								
Total	166	1	178	0	178	0	185	0
Number of Faculty Departing								
Professor	1	2	1		4	1	2	
Associate	1		2		5		3	
Assistant	3	2	1	2	9		8	
Instructor								
No rank								
Other	1		2		10	1	1	2
Total	6	4	6	2	28	2	14	2
Number of Faculty Retiring								
Professor	2		2		2		4	
Associate								
Assistant								
Instructor								
No rank								
Other								
Total	2	0	2	0	2	0	4	0

Please enter any explanatory notes in the box below

Standard 7: Institutional Resources
(Headcount of Employees by Occupational Category)

For each of the occupational categories below, enter the data reported on the IPEDS Human Resources Survey (Parts B and D1) for each of the years listed.
If your institution does not submit IPEDS, visit this link for information about how to complete this form:
https://surveys.nces.ed.gov/IPEDS/Downloads/Forms/package_1_43.pdf

	3 Years Prior			2 Years Prior			1 Year Prior			Current Year		
	(FY 2013)			(FY 2014)			(FY 2015)			(FY 2016)		
	FT	PT	Total	FT	PT	Total	FT	PT	Total	FT	PT	Total
Instructional Staff	332	116	448	336	121	457	359	155	514	368	166	534
Research Staff	16	8	24	28		28	41		41	41		41
Public Service Staff			0			0			0			0
Librarians	9	1	10	14	1	15	14	3	17	15		15
Library Technicians			0			0			0			0
Archivists, Curators, Museum staff			0			0			0			0
Student and Academic Affairs		1	1	0		0	0		0			0
Management Occupations	251		251	158	2	160	85		85	169		169
Business and Financial Operations	9		9	98	1	99	120		120	142		142
Computer, Engineering and Science	34		34	84	2	86	93	1	94	84		84
Community, Social Service, Legal, Arts, Design, Entertainment, Sports, and Media	18		18	45	1	46	86	2	88	90		90
Healthcare Practitioners and Technical	1		1	5		5	3		3	4		4
Service Occupations	89		89	103		103	93		93	99		99
Sales and Related Occupations	7		7	7		7	8		8	7		7
Office and Administrative Support	107	2	109	130		130	134	5	139	144		144
Natural Resources, Construction, Maintenance			0	2		2	17		17			0
Production, Transportation, Material Moving			0			0			0			0
Total	873	128	1,001	1,010	128	1,138	1,053	166	1,219	1,163	166	1,329

Please enter any explanatory notes in the box below

WPI did some reorganization of position classifications therefore the individual job categories may have different numbers from year to year. The change in codes was based on updated crosswalk information. We have not submitted our 2016 IPEDS report, therefore the "Current Year" numbers are estimates.

Standard 7: Institutional Resources
(Statement of Financial Position/Statement of Net Assets)

Fiscal Year ends - month & day: (06/30)	2 Years Prior (FY 2014)	1 Year Prior (FY 2015)	Most Recent Year UNAUDITED	Percent Change 2 yrs-1 yr prior	Percent Change 1 yr-most recent
ASSETS (in 000s)					
Cash and Short Term Investments	$18,099	$23,722	$84,131	31.1%	254.7%
Cash held by State Treasurer				-	-
Deposits held by State Treasurer				-	-
Accounts Receivable, Net	$7,580	$10,120	$7,369	33.5%	-27.2%
Contributions Receivable, Net	$7,364	$8,767	$13,857	19.1%	58.1%
Inventory and Prepaid Expenses	$8,483	$9,349	$9,708	10.2%	3.8%
Long-Term Investments	$462,816	$463,447	$490,388	0.1%	5.8%
Loans to Students	$23,107	$22,116	$21,284	-4.3%	-3.8%
Funds held under bond agreement	$3,670	$3,794	$1,871	3.4%	-50.7%
Property, plants, and equipment, net	$307,916	$305,038	$308,919	-0.9%	1.3%
Other Assets	$24,500	$26,483	$18,293	8.1%	-30.9%
Total Assets	**$863,535**	**$872,836**	**$955,820**	1.1%	9.5%
LIABILITIES (in 000s)					
Accounts payable and accrued liabilities	$21,914	$24,829	$26,977	13.3%	8.7%
Deferred revenue & refundable advances	$9,987	$10,351	$8,161	3.6%	-21.2%
Due to state				-	-
Due to affiliates				-	-
Annuity and life income obligations	$10,515	$9,774	$8,748	-7.0%	-10.5%
Amounts held on behalf of others	$3,746	$3,881	$3,841	3.6%	-1.0%
Long-term investments	$236,812	$236,131	$286,317	-0.3%	21.3%
Refundable government advances	$8,942	$9,015	$9,261	0.8%	2.7%
Other long-term liabilities	$11,020	$11,973	$14,358	8.6%	19.9%
Total Liabilities	**$302,936**	**$305,954**	**$357,663**	1.0%	16.9%
NET ASSETS (in 000s)					
Unrestricted net assets					
Institutional	**$280,059**	**$276,043**	**$271,993**	-1.4%	-1.5%
Foundation				-	-
Total	**$280,059**	**$276,043**	**$271,993**	-1.4%	-1.5%
Temporarily restricted net assets					
Institutional	**$121,771**	**$118,775**	**$113,487**	-2.5%	-4.5%
Foundation				-	-
Total	**$121,771**	**$118,775**	**$113,487**	-2.5%	-4.5%
Permanently restricted net assets					
Institutional	**$158,769**	**$172,064**	**$212,677**	8.4%	23.6%
Foundation				-	-
Total	**$158,769**	**$172,064**	**$212,677**	8.4%	23.6%
Total Net Assets	**$560,599**	**$566,882**	**$598,157**	1.1%	5.5%
TOTAL LIABILITIES and NET ASSETS	**$863,535**	**$872,836**	**$955,820**	1.1%	9.5%

Please enter any explanatory notes in the box below

Standard 7: Institutional Resources
(Statement of Revenues and Expenses)

Fiscal Year ends - month& day: (06/30)	3 Years Prior (FY2013)	2 Years Prior (FY2014)	Most Recently Completed Year (FY 2015)	Current Year (FY 2016) UNAUDITED	Next Year Forward (FY 2017)
OPERATING REVENUES (in 000s)					
Tuition and fees	$188,847	$204,611	$217,181	$231,223	$245,100
Room and board					
Less: Financial aid	-$64,218	-$68,978	-$73,046	-$76,236	-$80,800
Net student fees	$124,629	$135,633	$144,135	$154,987	$164,300
Government grants and contracts	$23,714	$26,847	$34,247	$33,868	$34,900
Private gifts, grants and contracts	$9,392	$6,128	$10,916	$7,110	$7,300
Other auxiliary enterprises	$22,076	$26,204	$27,212	$27,857	$28,700
Endowment income used in operations	$18,844	$19,092	$19,789	$21,733	$22,400
Other revenue (specify): Other educational activities	$2,085	$1,996	$2,594	$2,459	$2,500
Other revenue (specify):	$2,227	$2,635	$2,853	$3,141	$3,200
Net assets released from restrictions					
Total Operating Revenues	**$202,967**	**$218,535**	**$241,746**	**$251,155**	**$263,300**
OPERATING EXPENSES (in 000s)					
Instruction	$91,608	$97,053	$101,335	$106,640	$109,800
Research	$18,873	$21,295	$27,957	$29,646	$30,500
Public Service					
Academic Support	$39,242	$39,225	$45,661	$44,094	$45,400
Student Services	$18,363	$21,023	$22,980	$22,769	$23,500
Institutional Support					
Fundraising and alumni relations	$9,806	$9,863	$9,735	$10,737	$11,100
Operation, maintenance of plant (if not allocated)					
Scholarships and fellowships (cash refunded by public institution)					
Auxiliary enterprises	$19,601	$24,713	$26,821	$26,571	$27,400
Depreciation (if not allocated)					
Other expenses (specify):					
Other expenses (specify):					
Total operating expenditures	**$197,493**	**$213,172**	**$234,489**	**$240,457**	**$247,700**
Change in net assets from operations	**$5,474**	**$5,363**	**$7,257**	**$10,698**	**$15,600**
NON OPERATING REVENUES (in 000s)					
State appropriations (net)					
Investment return	**$35,728**	**$55,380**	**$1,305**	**-$4,620**	$24,500
Interest expense (public institutions)					
Gifts, bequests and contributions not used in operations	**$8,781**	**$6,726**	**$14,349**	**$49,049**	$5,000
Other (specify): Net realized gains on endow for oper	**-$14,155**	**-$14,494**	**-$15,170**	**-$16,534**	-$17,000
Other (specify): Benficial interest in trusts	**$1,180**	**$1,863**	**$1,236**	**-$1,416**	$900
Other (specify): Change in split-interest agreements	**-$595**	**-$592**	**-$236**	**-$71**	$0
Other (specify): Interest rate agreements	**$2,276**	**-$1,776**	**-$2,458**	**-$4,195**	$0
Other (specify): Loss on extinguishment of debt				**-$1,636**	
Net non-operating revenues	**$33,215**	**$47,107**	**-$974**	**$20,577**	**$13,400**
Income before other revenues, expenses, gains, or losses	**$38,689**	**$52,470**	**$6,283**	**$31,275**	**$29,000**
Capital appropriations (public institutions)					
Other (specify):					
TOTAL INCREASE/DECREASE IN NET ASSETS	**$38,689**	**$52,470**	**$6,283**	**$31,275**	**$29,000**

Standard 7: Institutional Resources
(Statement of Debt)

FISCAL YEAR ENDS month & day (06/30)	3 Years Prior (FY2013)	2 Years Prior (FY2014)	Most Recently Completed Year (FY 2015)	Current Year (FY 2016) UNAUDITED	Next Year Forward (FY 2017)
Debt					
Beginning balance	$199,803	$240,598	$236,812	$236,131	$286,317
Additions	$44,464	$1,277	$4,558	$109,769	$1,400
Reductions	($3,669)	($5,063)	($5,239)	($59,583)	($5,772)
Ending balance	**$240,598**	**$236,812**	**$236,131**	**$286,317**	**$281,945**
Interest paid during fiscal year	$7,807	$8,705	$8,624	$8,660	$8,765
Current Portion	$4,814	$5,018	$5,678	$5,772	$4,991
Bond Rating	A1 /A+	A1 /A+	A1 /A+	A1 / A	A1 / A

Debt Covenants: (1) Describe interest rate, schedule, and structure of payments; and (2) indicate whether the debt covenants are being met.

Financial covenants require the university maintain minimum expendable net assets to debt of at least 0.65 and minimum long term credit rating of A3/A-. These covenants have been met.

Line(s) of Credit: List the institutions line(s) of credit and their uses.

The university has a $25,000,000 bank revolving line of credit. The line of credit bears interest at LIBOR plus 0.95% per annum on outstanding amounts. There were no amounts outstanding at June 30, 2016, 2015, 2014 and 2013.

Future borrowing plans (please describe)

The univeristy has no current plans to borrow additional funds however may refinance approximately $20M in debt to take advantage of lower interest rates.

Please enter any explanatory notes in the box below

Standard 7: Institutional Resources
(Supplemental Data)

FISCAL YEAR ENDS month & day (06/30)	3 Years Prior (FY2013)	2 Years Prior (FY2014)	Most Recently Completed Year (FY 2015)	Current Year (FY 2016) UNAUDITED	Next Year Forward (FY 2017)
NET ASSETS					
Net assets beginning of year	$469,440	$508,129	$560,599	$566,882	$598,157
Total increase/decrease in net assets	$38,689	$52,470	$6,283	$31,275	$29,000
Net assets end of year	**$508,129**	**$560,599**	**$566,882**	**$598,157**	**$627,157**
FINANCIAL AID					
Source of funds					
Unrestricted institutional	$64,218	$68,978	$73,046	$76,236	$78,500
Federal, state and private grants	**$0**	**$0**	**$0**	**$0**	**$0**
Restricted funds	**$0**	**$0**	**$0**	**$0**	**$0**
Total	**$64,218**	**$68,978**	**$73,046**	**$76,236**	**$78,500**
% Discount of tuition and fees	34.0%	33.7%	33.6%	33.0%	32.0%
% Unrestricted discount	34.0%	33.7%	33.6%	33.0%	32.0%
FEDERAL FINANCIAL RESPONSIBILITY COMPOSITE SCORE	3.0	3.0			

Please indicate your institution's endowment spending policy:

The university observes a spending rule with respect to total return (interest, dividends, and appreciation) on investments of the endowment and similar funds. Under the spending rule, the university appropriated 4.9% of its endowment and similar funds' average unit fair value for the previous twelve quarters, one year removed, for the years ended June 30, 2016 and 2015. For FY 2017 the rate will be 4.8%.

Please enter any explanatory notes in the box below

Standard 8: Educational Effectiveness
(Undergraduate Retention and Graduation Rates)

Student Success Measures/ Prior Performance and Goals	3 Years Prior	2 Years Prior	1 Year Prior	Current Year	Next Year Forward (goal)
	(FY 2013)	(FY2014)	(FY 2015)	(FY 2016)	(FY 2017)
IPEDS Retention Data					
Associate degree students					
Bachelors degree students	96%	96%	97%	96%	97%
IPEDS Graduation Data (150% of time)					
Associate degree students					
Bachelors degree students	76%	84%	81%	85%	86%
IPEDS Outcomes Measures Data					
First-time, full time students					
Awarded a degree within six years					
Awarded a degree within eight years					
Not awarded within eight years but still enrolled					
First-time, part-time students					
Awarded a degree within six years					
Awarded a degree within eight years					
Not awarded within eight years but still enrolled					
Non-first-time, full-time students					
Awarded a degree within six years					
Awarded a degree within eight years					
Not awarded within eight years but still enrolled					
Non-first-time, part-time students					
Awarded a degree within six years					
Awarded a degree within eight years					
Not awarded within eight years but still enrolled					
Other Undergraduate Retention/Persistence Rates (Add definitions/methodology in #1 below)					
1					
2					
3					
4					
5					
Other Undergraduate Graduation Rates (Add definitions/methodology in # 2 below)					
1 Four Year Graduation Rate	74%	76%	80%	82%	82%
2					
3					
4					
5					

Definition and Methodology Explanations

1	Note: The six-year graduation rate for the current year (2013 reported in line 9 above) referst to the class who entereed in 2009. The four-year graduation rate for 2013 reported in Line 34 refers to the students who entered in 2011.
2	

Note: complete this form for each distinct student body identified by the institution (See Standard 8.1)

Standard 8: Educational Effectiveness
(Student Success and Progress Rates and Other Measures of Student Success)

Category of Student/Outcome Measure	Bachelor Cohort Entering		Associate Cohort Entering	
	6 years ago	4 years ago	6 years ago	4 years ago
First-time, Full-time Students				
Degree from original institution	96%	82%		
Not graduated, still enrolled at original institution				
Degree from a different institution				
Transferred to a different institution				
Not graduated, never transferred, no longer enrolled				
First-time, Part-time Students				
Degree from original institution				
Not graduated, still enrolled at original institution				
Degree from a different institution				
Transferred to a different institution				
Not graduated, never transferred, no longer enrolled				
Non-first-time, Full-time Students				
Degree from original institution				
Not graduated, still enrolled at original institution				
Degree from a different institution				
Transferred to a different institution				
Not graduated, never transferred, no longer enrolled				
Non-first-time, Part-time Students				
Degree from original institution				
Not graduated, still enrolled at original institution				
Degree from a different institution				
Transferred to a different institution				
Not graduated, never transferred, no longer enrolled				

Measures of Student Achievement and Success/Institutional Performance and Goals

		3 Years Prior (FY 2013)	2 Years Prior (FY 2014)	1 Year Prior (FY 2015)	Current Year (FY 2016)	Next Year Forward (goal) (FY 2017)
Success of students pursuing higher degrees (add more rows as needed; add definitions/methodology in #1 below)						
1	WPI Undergrad Students (BS + BA)	19%	25%	21%	19%	20%
2						
3						
4						

Other measures of student success and achievement, including success of graduates in pursuing mission-related paths (e.g., Peace Corps, public service, global citizenship, leadership, spiritual formation) and success of graduates in fields for which they were not explicitly prepared (add more rows as needed; add definitions/methodology in #2 below)

1						
2						
3						
4						

Definition and Methodology Explanations

1	
2	

Standard 8: Educational Effectiveness
(Licensure Passage and Job Placement Rates and Completion and Placement Rates for all Undergraduate Programs)

		3-Years Prior		2 Years Prior		1 Year Prior		Most Recent Year	
		(FY 2013)		(FY 2014)		(FY 2015)		(FY 2016)	
	State Licensure Examination Passage Rates								
	Name of exam	# who took exam	# who passed	# who took exam	# who passed	# who took exam	# who passed	# who took exam	# who passed
1									
	National Licensure Passage Rates								
	Name of exam	# who took exam	# who passed	# who took exam	# who passed	# who took exam	# who passed	# who took exam	# who passed
1									
	Job Placement Rates								
	Major/degree/time period	*	2012 Outcomes		2013 Outcomes		2014 Outcomes		2015 Outcomes
1	Actuarial Mathematics, B.S., six months		73%		75%		84%		75%
2	Aerospace Engineering, B.S., six months		59%		46%		58%		79%
3	Architectural Engineering, B.S., six months						33%		33%
4	Biochemistry, B.S., six months		57%		63%		48%		29%
5	Bioinformatics & Computational Biology, B.S., six months						67%		100%
6	Biology & Biotechnology, B.S., six months		53%		49%		50%		43%
7	Biomedical Engineering, B.S., six months		70%		63%		60%		62%
8	Chemical Engineering, B.S., six months		50%		62%		68%		58%
9	Chemistry, B.S., six months		50%		56%		25%		31%
10	Civil Engineering, B.S., six months		64%		76%		65%		77%
11	Computer Science, B.S., six months		73%		89%		81%		90%
12	Economic Science, B.S., six months				N/A		0%		100%
13	Electrical & Computer Engineering, B.S., six months		73%		82%		80%		84%
14	Engineering Physics, B.S., six months		0%		N/A		33%		100%
15	Environmental & Sustainability Studies, B.A., six months				N/A		33%		100%
16	Environmental Engineering, B.S., six months		50%		71%		84%		100%
17	Humanities & Arts, B.S., six months		100%		0%		83%		50%
18	Industrial Engineering, B.S., six months		67%		75%		94%		93%
19	Interactive Media & Game Development, B.S., six months		83%		68%		64%		63%
20	Interdisciplinary, B.S., six months				50%		100%		
21	International Studies, B.S., six months				100%				100%
22	Liberal Arts & Engineering, B.A., six months				100%		N/A		
23	Management, B.S., six months		67%		50%		100%		86%
24	Management Engineering, B.S., six months		85%		67%		81%		76%

25	Management Information Systems, B.S., six months			100%		94%		83%		69%
26	Manufacturing Engineering, B.S., six months			100%				0%		N/A
27	Materials Science & Engineering, B.S., six months									N/A
28	Mathmatical Sciences, B.S., six months			69%		52%		67%		39%
29	Mechanical Engineering, B.S., six months			59%		60%		70%		66%
30	Physics, B.S., six months			25%		27%		38%		67%
31	Professional Writing, B.S., six months					67%		63%		75%
32	Psychological Science, B.S., six months			0%		67%		33%		50%
33	Robotics Engineering, B.S., six months			69%		64%		73%		76%
34	Society, Technology, & Policy, B.S., six months			0%		0%		N/A		0%

* Check this box if the program reported is subject to "gainful employment" requirements.

Web location of gainful employment report (if applicable)

Completion and Placement Rates for Short-Term Vocational Training Programs for which students are eligible for Federal Financial Aid

		3 Years Prior (FY 2)	2 Years Prior (FY2)	1 Year Prior (FY 2)	Current Year (FY 2)	Next Year Forward (goal) (FY 2)
	Completion Rates					
1						
	Placement Rates					
1						

Please enter any explanatory notes in the box below

All data presented are six month placement rates for undergraduate programs.
Note:N/A - no graduates from program; All data is presented as a percent of total responses by major. The overall response rate is approximately 90%.

Standard 8: Educational Effectiveness
(Graduate Programs, Distance Education, Off-Campus Locations)

Student Success Measures/ Prior Performance and Goals	3 Years Prior (FY 2013)	2 Years Prior (FY2014)	1 Year Prior (FY 2015)	Current Year (FY 2016)	Next Year Forward (goal) (FY 2017)
Master's Programs (Add definitions/methodology in #1 below)					
Retention rates first-to-second year	74%	86%	87%	87%	87%
Graduation rates @ 150% time	81%	77%	60%	72%	75%
Average time to degree					
Other measures, specify:					
Doctoral Programs (Add definitions/methodology in #2 below)					
Retention rates first-to-second year	63%	81%	67%	74%	80%
Graduation rates @ 150% time	75%	81%	74%	79%	80%
Average time to degree					
Other measures, specify:					
First Professional Programs (Add definitions/methodology in #3 below)					
Retention rates first-to-second year					
Graduation rates @ 150% time					
Average time to degree					
Other measures, specify:					
Distance Education (Add definitions/methodology in #4 below)					
Course completion rates					
Retention rates					
Graduation rates					
Other measures, specify:					
Branch Campus and Instructional Locations (Add definitions/methodology in #5 below)					
Course completion rates					
Retention rates					
Graduation rates					
Other measures, specify:					

Definition and Methodology Explanations

1	Retention only includes full time students entering in the Fall semester of each year
2	
3	
4	
5	

Standard 9: Integrity, Transparency, and Public Disclosure (Integrity)

Policies	Last Updated	Website location where policy is posted	Responsible Office or Committee
Academic honesty	August 2016	http://wpiacademicintegrity.weebly.com/	Dean of Students
Intellectual property rights	May 2016	https://www.wpi.edu/about/policies/intellectual-roperty	Intellectual Property & Innovation
Conflict of interest	March 2003	https://www.wpi.edu/about/policies/faculty-exempt-staff-conflict-of-interest	Office of Compliance & Risk Management
Privacy rights	August 2016	https://www.wpi.edu/about/policies/privacy-policy	HR, IT, Office of the Registrar
Fairness for students	August 2016	WPI/Policies/FINAL%20Code%20of%20Conduct_with%20Table%20of%20Contents%20for%20Website.pdf	Dean of Students
Fairness for faculty	August 2016	https://web.wpi.edu/Images/CMS/FacultyGov/Faculty_Handbook-Updated_August_25_2016.pdf	Faculty Governance
Fairness for staff	May 2015	https://web.wpi.edu/offices/hr/benefi56.html	HR
Academic freedom	2012	http://digitalcommons.wpi.edu/ctaf/	Committee for tenure and academic freedom
Research	2013	https://www.wpi.edu/sites/default/files/docs/About-WPI/Policies/Research_Misconduct_Policy.pdf	Vice Provost for Research
Title IX	August 2016	https://www.wpi.edu/about/policies/equal-opportunity-anti-discrimination-harassment	Philip Clay, Vice President of Student Affairs
Other; specify			
Non-discrimination policies			
Recruitment and admissions			
Employment	May 2015	https://web.wpi.edu/Images/CMS/HR2/Equal_Opportunity_A.pdf	HR
Evaluation	May 2015	https://web.wpi.edu/Images/CMS/HR2/Performance_Appraisals2.pdf	HR
Disciplinary action	May 2015	https://web.wpi.edu/Images/CMS/HR2/Work_Behavior-Discipline3.pdf	HR
Advancement	May 2015	https://web.wpi.edu/Images/CMS/HR2/Promotions_reclassifications_2.pdf	HR
Other; specify			
Resolution of grievances			
Students	August 2015	https://www.wpi.edu/sites/default/files/docs/Student-Experiences/SAVE/code-of-conduct.pdf	Dean of Students
Faculty	August 2016	https://web.wpi.edu/Images/CMS/FacultyGov/Faculty_Handbook-Updated_August_25_2016.pdf	Faculty Governance
Staff	May 2015	https://www.wpi.edu/Images/CMS/HR2/Grievance_Procedure2.pdf	HR

Standard 9: Integrity, Transparency, and Public Disclosure (Transparency)

Information	Website location and/or Relevant Publication(s)
How can inquiries be made about the institution? Where can questions be addressed?	https://www.wpi.edu/contact
Notice of availability of publications and of audited financial statement or fair summary	https://web.wpi.edu/Images/CMS/Finops/WPI_FS_2015_Final.pdf
Processes for admissions	https://www.wpi.edu/admissions/undergraduate/apply/how-to
Processes for employment	https://careers.wpi.edu/
Processes for grading	https://www.wpi.edu/offices/registrar/policies-procedures/grade-system
Processes for assessment	https://web.wpi.edu/Images/CMS/Outcomes/Assessment_Plan.pdf
Processes for student discipline	https://www.wpi.edu/Images/CMS/CampusLife/code-of-conduct.pdf
Processes for consideration of complaints and appeals	https://web.wpi.edu/Images/CMS/CampusLife/Dispute_Resolution_Options.pdf https://www.wpi.edu/offices/registrar/policies-procedures/grade-appeal-grade-change-policy

List below the statements or promises made regarding program excellence, learning outcomes, success in placement, and achievements of graduates or faculty and indicate where valid documentation can be found.	
Statement/Promise	**Website location and/or publication where valid documentation can be found**
Excellence in Research	www.wpi.edu/research
Excellence in Teaching	www.wpi.edu/academics/faculty/morgan-teaching-learning-center
Job Placement	www.wpi.edu/employers-partners/hire-wpi
Facts and Figures	www.wpi.edu/about/facts
Top 100 Best Colleges	US News and World Report 2016
Innovative project-based curriculum	www.wpi.edu/academics/undergraduate/project-based-learning

Date of last review of:	
Print publications	UG Catalog: December 2015; Grad Catalog: June 2016
Digital publications	Website: August 2016

Please enter any explanatory notes in the box below

Standard 9: Integrity, Transparency, and Public Disclosure
(Public Disclosure)

Information	Website location
Institutional catalog	https://www.wpi.edu/academics/calendar-catalogs
Obligations and responsibilities of students and the institution	https://www.wpi.edu/sites/default/files/docs/About-WPI/Policies/FINAL%20Code%20of%20Conduct_with%20Table%20of%20Contents%20for%20Website.pdf
Information on admission and attendance	https://www.wpi.edu/admissions
Institutional mission and objectives	https://www.wpi.edu/offices/dean-students
Expected educational outcomes	https://www.wpi.edu/about/policies/undergraduate-learning-outcomes
Status as public or independent institution; status as not-for-profit or for-profit; religious affiliation	www.wpi.edu/research/support/sponsored-programs/resources/institutional-information-rates
Requirements, procedures and policies re: admissions	https://www.wpi.edu/admissions/undergraduate/apply/requirements.html
Requirements, procedures and policies re: transfer credit	https://www.wpi.edu/offices/registrar/transfer-credit.html
A list of institutions with which the institution has an articulation agreement	https://www.wpi.edu/admissions/undergraduate/apply/how-to/transfer-student-faqs
Student fees, charges and refund policies	https://www.wpi.edu/offices/bursar/refunds
Rules and regulations for student conduct	https://www.wpi.edu/Images/CMS/CampusLife/code-of-conduct.pdf
Procedures for student appeals and complaints	https://www.wpi.edu/Images/CMS/CampusLife/code-of-conduct.pdf
Other information re: attending or withdrawing from the institution	https://www.wpi.edu/offices/registrar/policies-procedures/withdrawing
Academic programs	https://www.wpi.edu/academics/study
Courses currently offered	https://www.wpi.edu/offices/registrar/course-registration/schedules
Other available educational opportunities	https://www.wpi.edu/student-experience/career-development/internships
Other academic policies and procedures	https://www.wpi.edu/offices/registrar/policies-procedures
Requirements for degrees and other forms of academic recognition	https://www.wpi.edu/academics/calendar-catalogs
List of continuing faculty, indicating department or program affiliation, degrees held, and institutions granting them	https://www.wpi.edu/academics/faculty/directory
Names and positions of administrative officers	http://web.wpi.edu/academics/catalogs/ugrad/flip/
Names, principal affiliations of governing board members	http://www.wpi.edu/offices/trustees/current.html
Locations and programs available at branch campuses, other instructional locations, and overseas operations at which students can enroll for a degree, along with a description of programs and services available at each location	NO BRANCH CAMPUSES
Programs, courses, services, and personnel not available in any given academic year.	https://www.wpi.edu/academics/catalogs/ugrad.html
Size and characteristics of the student body	https://web.wpi.edu/Images/CMS/InstituionalResearch/2015_Fact_Book_Web_Version.pdf
Description of the campus setting	http://wp.wpi.edu/admittedstudents/explore/life-on-campus/
Availability of academic and other support services	http://www.wpi.edu/offices/advising/arc.html

Range of co-curricular and non-academic opportunities available to students	https://www.wpi.edu/offices/student-activities
Institutional learning and physical resources from which a student can reasonably be expected to benefit	http://web.wpi.edu/academics/library
Institutional goals for students' education	http://www.wpi.edu/academics/catalogs/ugrad/goal.html
Success of students in achieving institutional goals including rates of retention and graduation and other measure of student success appropriate to institutional mission. Passage rates for licensure exams, as appropriate	http://www.wpi.edu/offices/ir/student-retention.html
Total cost of education and net price, including availability of financial aid and typical length of study	https://www.wpi.edu/admissions/tuition-aid/cost-attendance
Expected amount of student debt upon graduation and loan payment rates	https://www.wpi.edu/admissions/tuition-aid/types-of-aid/loans-financing
Statement about accreditation	http://www.wpi.edu/about/accreditation.html

Appendix 7.5

E-Series Forms

E-SERIES FORMS: MAKING ASSESSMENT MORE EXPLICIT
OPTION E1: PART A. INVENTORY OF EDUCATIONAL EFFECTIVENESS INDICATORS FOR THE INSTITUTION

INSTITUTION LEVEL ASSESSMENT	(1) Where are the learning outcomes for this level/program published? (please specify) Include URLs where appropriate.	(2) Other than GPA, what data/ evidence is used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	(3) Who interprets the evidence? What is the process? (e.g. annually by the curriculum committee)	(4) What changes have been made as a result of using the data/evidence?	(5) Date of most recent program review (for general education and each degree program)
Great Problems Seminars	Catalog and on the web at www.wpi.edu/academics/undergraduate/project-based-learning/great-problems-seminar	Project Reviews at Project Presentation Day	Associate Dean; UOAC	The program is experimenting with using guided reflections after key assignments.	Assessment each year
Humanities and Arts: Inquiry Seminar and Practicum	Catalog and on the web at www.wpi.edu/academics/undergraduate/project-based-learning/humanities-arts-requirement/learning-outcomes	Assessment program under development	Department Head; UOAC		Review of Learning Outcomes and Assessment Plan in 2014
Interactive Qualifying Project	Catalog and on the web at www.wpi.edu/academics/undergraduate/project-based-learning/interactive-qualifying-project/outcomes	Review of Project Reports; Student Report of IQP Learning Outcomes; Advisor Report on IQP Learning Outcomes	Dean of IGSD; UOAC; Dean of Undergraduate Studies	Advisor Resources on the IGSD web site	Alumni Study in 2012; External Review in 2013
Major Qualifying Project	Catalog and on the web at www.wpi.edu/academics/undergraduate/project-based-learning/major-qualifying-project/learning-outcomes	Departmental review of Project Reports; Student Report on MQP Learning Outcomes; Advisor Report on MQP Learning Outcomes	Department Heads, Dean of Undergraduate Studies; UOAC	Multi-department ethics project	3-year cycle of review; Engineering programs in 2016; Alumni Study in 2013

Institutions selecting E1a should also include E1b.

E-SERIES FORMS: MAKING ASSESSMENT MORE EXPLICIT
E1: PART A. INVENTORY OF EDUCATIONAL EFFECTIVENESS INDICATORS FOR ARTS & SCIENCES

Programs in the Arts & Sciences	(1) Where are the learning outcomes for this level/program published? (please specify) Include URLs where appropriate.	(2) Other than GPA, what data/ evidence is used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	(3) Who interprets the evidence? What is the process? (e.g. annually by the curriculum committee)	(4) What changes have been made as a result of using the data/evidence?	(5) Date of most recent program review (for general education and each degree program)
Actuarial Mathematics	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; Actuarial Exams	Director of Actuarial Program, Department Head		
Biology and Biotechnology	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; Course-based assessment	Associate Dept Head, Program Review Committee		
Chemistry and Biochemistry	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; Senior Exit Survey	DH, Program Review Committee	Complete restructuring of intro Chemistry and Lab sequence in 2016	External Review 2015 by ACM
Bioinformatics and Computational Biology	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review	Program Director		
Computer Science	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; Course-based assessment	DH, Program Review Committee	Added intro course for non-majors in 2013	External review in 2014
Economic Science	Part of Social Science & Policy Studies, in catalog and on the web at www.wpi.edu/academics/departments	MQP Review; Student Course Reports	DH, Annual Faculty Retreats		External review in 2013

Environmental and Sustainability Studies (BA)	Catalog and on the web at www.wpi.edu/academics/departments	MQP Review; IQP Review; Course-based assessment	Program Director		
Humanities and Arts	Catalog and on the web at www.wpi.edu/academics/departments	Inquiry Seminar Review	DH, Program Review Committee		
Interactive Media and Game Development	Catalog and on the web at www.wpi.edu/academics/departments	MQP Review; Project presentation day; Course-based assessment	Program Director and IMGD Steering Committee		Advisory Board Annual: MQP Review in 2015
International Studies	Catalog and on the web at www.wpi.edu/academics/departments		Program Director		
Liberal Arts and Engineering (BA)	Catalog and on the web at www.wpi.edu/academics/departments		Program Director		
Mathematical Sciences	Catalog and on the web at www.wpi.edu/academics/departments	Standard Tests, Project Presentation Day; MQP Review	Associate Department Head, Calculus Committee, Undergraduate Committee	New Mathematics Core; Added specialized courses for majors.	External Review in 2016
Physics and Engineering Physics	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review	DH, Program Review Committee	"Best practices" resource for MQP students; Improvements in first year labs	External Review in 2013
Psychological Science	Part of Social Science & Policy Studies, in catalog and on the web at www.wpi.edu/academics/departments	MQP Review; Student Course Reports	DH, Annual Faculty Retreats		External review in 2013
Society, Technology and Policy	Part of Social Science & Policy Studies, in catalog and on the web at www.wpi.edu/academics/departments	MQP Review; Student Course Reports	DH, Annual Faculty Retreats		External review in 2013

System Dynamics				Program Eliminated 2015 due to low enrollment (the Grad program remains)	

Institutions selecting E1a should also include E1b.

E-SERIES FORMS: MAKING ASSESSMENT MORE EXPLICIT
E1: PART B. INVENTORY OF ARTS AND SCIENCES ACCREDITATION

(1) Professional, specialized, State, or programmatic accreditations currently held by the institution (by agency or program name).	(2) Date of most recent accreditation action by each listed agency.	(3) List key issues for continuing accreditation identified in accreditation action letter or report.	(4) Key performance indicators as required by agency or selected by program (licensure, board, or bar pass rates; employment rates, etc.). *	(6) Date and nature of next scheduled review.
Chemistry and Biochemistry	ACS 2015	No issues or concerns	Focus is on Curriculum, Syllabi, and Faculty	Spring 2017

*Record results of key performance indicators in form 8.3 of the Data First Forms.

Institutions selecting E1b should also include E1a.

E-SERIES FORMS: MAKING ASSESSMENT MORE EXPLICIT
OPTION E1: PART A. INVENTORY OF EDUCATIONAL EFFECTIVENESS INDICATORS FOR BUSINESS

Programs in the School of Business	(1) Where are the learning outcomes for this level/program published? (please specify) Include URLs where appropriate.	(2) Other than GPA, what data/ evidence is used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	(3) Who interprets the evidence? What is the process? (e.g. annually by the curriculum committee)	(4) What changes have been made as a result of using the data/evidence?	(5) Date of most recent program review (for general education and each degree program)
Industrial Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review	Dean, Program Director, Program Review Committee		AACSB 2013
Management (Business beginning in 2016)	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review	Dean and PRC	Program renamed to Business in 2016	AACSB 2013
Management Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review	Dean and PRC		AACSB 2013
Management Information Systems	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review	Dean, Program Director, PRC		AACSB 2013

Institutions selecting E1a should also include E1b.

E-SERIES FORMS: MAKING ASSESSMENT MORE EXPLICIT
OPTION E1: PART B. INVENTORY OF BUSINESS ACCREDITATION

(1) Professional, specialized, State, or programmatic accreditations currently held by the institution (by agency or program name).	(2) Date of most recent accreditation action by each listed agency.	(3) List key issues for continuing accreditation identified in accreditation action letter or report.	(4) Key performance indicators as required by agency or selected by program (licensure, board, or bar pass rates; employment rates, etc.). *	(6) Date and nature of next scheduled review.
Industrial Engineering	ABET 2015		Learning Outcomes;	2020 for Regular Review
Management (Business beginning in 2016)	AACSB		Learning Outcomes;	2017 for Regular Review

*Record results of key performance indicators in form 8.3 of the Data First Forms.

Institutions selecting E1b should also include E1a.

E-SERIES FORMS: MAKING ASSESSMENT MORE EXPLICIT
OPTION E1: PART A. INVENTORY OF EDUCATIONAL EFFECTIVENESS INDICATORS FOR ENGINEERING

Programs in Engineering	(1) Where are the learning outcomes for this level/program published? (please specify) Include URLs where appropriate.	(2) Other than GPA, what data/ evidence is used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	(3) Who interprets the evidence? What is the process? (e.g. annually by the curriculum committee)	(4) What changes have been made as a result of using the data/evidence?	(5) Date of most recent program review (for general education and each degree program)
Aerospace Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review; Course-based assessment	Program Director; AE Program Committee	Added required course in Aeronautics	2015 by ABET
Architectural Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review; Course-based assessment	Program Director	New Program in 2012	2015 by ABET
Biomedical Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review; Course-based assessment	Department Head, BME Undergraduate Curriculum Committee	Added sophomore-level course in engineering design	2015 by ABET
Chemical Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review; Course-based assessment	Department Head, CHE Undergraduate Committee		2015 by ABET
Civil Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review;	Department Head, CEE Curriculum Assessment Committee		2015 by ABET

		Course-based assessment			
Electrical and Computer Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review; Course-based assessment	Department Head	Advisory Board activity increased	2015 by ABET
Environmental Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review; Course-based assessment	Program Director, EVE Associated Faculty and Advisory Board		2015 by ABET
Industrial Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review; Course-based assessment	Program Director, IE Core Faculty; Board of Advisors		2015 by ABET
Mechanical Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review; Course-based assessment	Department Head, ME Program Committee		2015 by ABET
Robotics Engineering	Catalog and on the web at www.wpi.edu/academics/departments	Annual Project Presentation Day; MQP Review; IQP Review	Program Director, RBE Program Review Committee		2015 by ABET

Institutions selecting E1a should also include E1b.

E-SERIES FORMS: MAKING ASSESSMENT MORE EXPLICIT
OPTION E1: PART B. INVENTORY OF ENGINEERING ACCREDITATION

(1) Professional, specialized, State, or programmatic accreditations currently held by the institution (by agency or program name).	(2) Date of most recent accreditation action by each listed agency.	(3) List key issues for continuing accreditation identified in accreditation action letter or report.	(4) Key performance indicators as required by agency or selected by program (licensure, board, or bar pass rates; employment rates, etc.). *	(6) Date and nature of next scheduled review.
Aerospace Engineering	ABET 2015	Experimental topics required	Assessment focus on Program Learning Outcomes	2016 progress report
Architectural Engineering	ABET 2015	Improved feedback loop for program assessment; Number of tenure-track faculty	ABET Learning Outcomes	2016 for progress report
Biomedical Engineering	ABET 2015	Explicit engineering standards addressed in MQP	Learning Outcomes	2016 progress report
Chemical Engineering	ABET 2015	None	Learning Outcomes	2020 for Regular Review
Civil Engineering	ABET 2015	Access to dedicated computer labs was an issue raised.	Learning Outcomes	2016 for Interim Review
Electrical and Computer Engineering	ABET 2015	Explicit engineering/industrial standards addressed in the curriculum	Learning Outcomes	2016 progress report
Environmental Engineering	ABET 2015	None	Learning Outcomes	2020 for Regular Review
Mechanical Engineering	ABET 2015	None	Learning Outcomes	2020 for Regular Review
Robotics Engineering	ABET 2015	None	Learning Outcomes	2020 for Regular Review

*Record results of key performance indicators in form 8.3 of the Data First Forms.