Vision Statement on the Role of the Dean of Undergraduate Studies and the Future of Undergraduate Education at WPI

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The most critical role of the Dean of Undergraduate Studies is to be a contributing member of the Provost’s administrative team. The current administrative organizational structure leaves too many details associated with the overall operation of WPI at the Provost’s desk. The new Dean must quickly become an effective assistant to the Provost and redefine the Dean’s role to relieve the Provost of many of the burdensome details associated with running the WPI undergraduate program.

The original WPI Plan included a cohesive set of required educational components and a distinctive over-arching pedagogical philosophy designed to offer a unique educational experience for the WPI undergraduate. However, over the years the faculty and administration have proposed and implemented several changes to the WPI Plan. While most of these changes were driven by practical issues, it is less clear now whether the current and newly proposed pieces of the undergraduate curriculum fit together in an optimal way to provide the most value to the undergraduate experience. This is not to suggest that we ‘undo’ these changes or look backwards in our vision, but rather as we architect and implement new changes to the undergraduate program, that we understand the interconnections between the components of the WPI undergraduate curriculum and strive to maintain the integrity of the original educational philosophy of the Plan. The responsibilities of the Dean of Undergraduate Studies place this administrator in a unique observation post to see and appreciate the full panorama of the undergraduate landscape. Thus, a primary task for the Dean is to bring to every discussion, meeting and forum, a perspective that looks towards solutions that are in the best interests of adding quality to the overall WPI undergraduate education.

The WPI undergraduate experience can be challenging and seven-week terms often create stressful situations for students. The Dean must work with the VP of Student Affairs and all the divisions of the Academic Advising Office to both advocate for and assist students as they experience college life at WPI. As the size of the undergraduate student body grows from a once stable 2600 students to the targeted goal of 3400, we must be vigilant to ensure that each student’s time at WPI is marked by enriching and rewarding activities. There are new challenges involved in this growth trajectory. With the hallmark of WPI’s academic program being small-group IQP and MQP activities, it will become difficult to maintain the individualized advising model that we currently take for granted. Moreover, as the breadth of WPI majors, minors and interdisciplinary opportunities expands, the profile of the typical WPI undergraduate mindset will be extended beyond the engineering and science viewpoint that most WPI faculty now assume. The start of this transformation is already visible when one interacts with students in the artist track of the IMGD (Interactive Media and Game Development) major. The objectives and
cognitive styles of these students are different from the perspective of traditional WPI students. We must not ignore these new types of students and their needs while we are redesigning components of the WPI experience.

The broadening of the WPI student body in several directions impacts the academic and student life components of the WPI experience. The challenge for the Dean of Undergraduate of Studies will be to work effectively with the Advising and Student Affairs Offices to provide all students with the opportunity to be successful at WPI. When students with gaps in their academic backgrounds or with weaknesses in their academic skills falter, the WPI support systems must be effectively utilized. We must assure that the WPI safety net protects both the physical and emotional well-being of the students entrusted to us. The Dean of Undergraduate Studies is one of the primary interfaces to the parents of students. In this role, the Dean must exercise care, patience and understanding when communicating with parents about both the successes and difficulties experienced by students.

The Dean of Undergraduate Studies has a primary responsibility to enhance the external reputation of the undergraduate program. The Dean must work with other parts of the Institute to expand the positive reputation associated with both our project-based learning style and our emphasis on global studies. This can be accomplished by the Dean actively attending and speaking at external forums related to undergraduate education and research. Moreover, the Dean must encourage and work with other WPI administrators and faculty to write new grants for funding related to pedagogical and undergraduate research initiatives at WPI.

While we claim to be innovative in our delivery of higher education, my sense is that with renewed emphasis on faculty research in recent years, we have become complacent in assessing the current state of our teaching skills and have not fully fostered an atmosphere that encourages faculty experimentation in pedagogy. I believe the Dean of Undergraduate Studies needs to work with CEDA (the Center for Educational Development and Assessment) to reignite the desire for faculty to try new techniques both inside and outside the classroom.

To summarize, my vision of the role of Dean of Undergraduate Studies is as the primary guardian of the undergraduate education (WPI’s gem). The Dean is a strong advocate for undergraduate students, a key member of the administrative team responsible for the well-being of undergraduate students and an international ambassador who spreads and enhances WPI’s reputation.

The Future of Undergraduate Education at WPI

Currently, the direction of the WPI undergraduate curriculum is explicitly being altered by the initiatives associated with the First Year Experience and implicitly being changed due to the deliberate growth in the student body (e.g., 910 incoming first year students this fall). Thus, before articulating a long range vision of the future WPI undergraduate experience, it is reasonable to consider these two short range changes.

The Trustees, the administration and an active group of faculty members have been strong advocates for a required first year seminar to bring more vitality to the students’ first year
experience. Having attended the presentation on last year’s experiment with two prototype first
year seminars, I am well aware of the excitement this has generated and of the plans to double
the number of first year seminars this year. Similar to seminars used by many small liberal arts
colleges, the first year seminar aims to connect the student immediately with WPI through small,
interesting seminars that fully engage the student early in their college life. Unfortunately, as the
presentation on the first year experiment made crystal clear, in its current form, the WPI first
year seminar is faculty-time intensive and there exists no consensus plan that integrates the first
year seminar into current undergraduate degree requirements. In its current form, the first year
seminar does not easily scale to serving 900 first year students. The Dean of Undergraduate
Studies needs to interact immediately with the Associate Dean of the First Year Experience to
make creative changes to the concepts and implementation details in this initiative to make it a
practical reality in the near future.

This academic year WPI is faced with a significant increase in the undergraduate student body
without equivalent percentage increases in the number of tenure-track faculty. As the advocate
for the undergraduate students, the Dean must work immediately with the Provost on a plan to
obtain adequate numbers of new tenure-track faculty hires to ensure continued quality in the
delivery of the undergraduate curriculum. WPI is judged externally by this metric and the quality
and size of the tenure-track faculty must mirror the planned growth in the undergraduate student
body.

Any future vision for WPI must start from the vision put forth by President Berkey. There are
two specific components of his vision statement that impact my understanding of where WPI is
headed. The President refers to WPI as a comprehensive university. Generally, this describes a
university that strikes a balance between teaching and research. My vision for undergraduate
education puts more emphasis on the research aspect of the undergraduate program. I believe we
can do significantly better at leveraging and elevating MQP and IQP activity on and off campus
to yield more publishable research. Historically, the practical aspects of the WPI education have
created an atmosphere where few undergraduates consider continuing on to graduate school. I
believe the faculty as a whole can elevate the undergraduate research environment and we should
courage more students to develop that sense of discovery which fosters future research
activity.

The second concept featured in President Berkey’s vision statement is the broadening of WPI’s
offerings and enhancing our programs in the arts, humanities, social science and management.
This objective strives to make WPI more than just an engineering school. I agree with this
direction. When I envision the WPI of 2015 with 3400 students, I do not see just more students
in engineering and science. Rather, I envision a student body expanded in areas suggested by
President Berkey and larger due to growth in interdisciplinary activities that will naturally
emerge from current strengths. Possible examples of these new areas are: bio-informatics, a new
communications major that fully utilizes technology in novel audio and visual media
applications, social science focused on expertise in global issues and psychology that focuses on
topics such as virtual worlds in the Internet, massively parallel computer games, the impact of
the Internet on education and possible futuristic interfaces between people and robots.
An important component of my vision for undergraduate education is further enhancement of our commitment to global studies. As the student body grows, IGSD will be faced with a significant challenge just to maintain the current percentage of students that are able to experience projects overseas. The current drop in the value of the dollar brings new financial challenges to these activities. We must develop creative schemes to expand our global studies program because it is critical to produce graduates with a breadth of international experience that will enable them to better solve the major issues facing the world today.

When I interact with students entering college now, I am immediately struck by the impact technology has made on their viewpoint towards life, the world and the ways they obtain information. They are completely comfortable using the Internet as the standard communication mechanism. The futuristic question for academics is how will higher education respond to and fully utilize these new avenues of information transfer and personal communication. Using more technology in the educational process is a popular trend that many predict for the future. The challenge is to create the proper academic environment at WPI such that our faculty will become recognized as innovative leaders in the use of technology in the classroom and throughout the college experience. I see fostering such a creative pedagogical environment as one way the Dean of Undergraduate Studies can positively impact the future of undergraduate education at WPI.

My goal as Dean would be to have a more pluralistic student body at WPI. Specifically, we should strive to increase the female, African-American, Latino and Native American populations of undergraduate students at WPI to more closely reflect the current distribution of the American population. To enhance the global experience in the reverse direction, we need more foreign students to attend WPI either as full-time undergraduates or as exchange students. Having a variety of ethnic and racial groups represented in the WPI student body enriches the college experience and helps students to develop better tolerance for individuals whose backgrounds are different from their own.

This is an exciting time for WPI with recent growth in both the student body and the campus physical facilities. This and planned future growth provides an unusual opportunity to refine and reshape components of the undergraduate experience at WPI. The new Dean of Undergraduate Studies will have the opportunity to work with other members of the WPI administration, the faculty, the staff and the students to build an academic community that will be passionate about making further improvements in the WPI undergraduate education. In this document I have made a first attempt to outline my thoughts on directions that might be taken to make the WPI experience even better than it is today. I look forward to discussing these ideas further as part of the search process.