ENHANCING SCHOLARSHIP AT WPI: A Report by
The Task Force on Scholarship
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OVERVIEW
An advanced academic degree is grounded in original creative work. Those who receive such a degree are universally understood to be specially qualified to pursue careers that include both teaching and scholarship. The ideal faculty member is a teacher-scholar who balances the two enterprises.

As mandated by tenure and promotion criteria, WPI faculty members are correctly placed under an obligation to reflect this balance in their professional lives. WPI, in turn, has an obligation to establish and to maintain an environment that promotes vigorous creative activity, and that encourages its faculty to engage in active scholarship. Its definition of scholarship should be broad enough to include and encourage both disciplinary and interdisciplinary work. Such activity may be of interest primarily to academic audiences, or it may directly address industrial concerns; it may involve creative writing, art, or the performance arts; it may focus on pedagogical inquiry.

But one thing is certain: the results of these varied creative activities must be disseminated in ways that make it possible for off-campus audiences to access and evaluate them. This, like WPI’s unique brand of project-based teaching, is exceedingly labor-intensive. Thus, unnecessary demands on already limited faculty time should be minimized; excessive time devoted to committee work should be discouraged; new institutional directions that fail to acknowledge the importance of scholarship should be avoided.
In order to achieve and maintain a proper balance between teaching and creative activities at WPI, it is necessary to increase the emphasis currently placed on conducting active scholarship. In fact, encouraging active scholarship should serve as the core of WPI's efforts to enhance both its undergraduate and graduate programs. Active scholars are keenly aware of fundamental research questions that remain unanswered, of industrial concerns that are most in need of attention, of potential literature and art and music that can speak in new forms to the human condition. By incorporating such insights into their teaching, faculty members ensure that their courses remain current. By providing access to their laboratories, they expose students to the most recent technologies.

In addition, in order for the educational programs at WPI to derive full benefit from a faculty devoted to both teaching and scholarship, student-faculty scholarly collaboration should be encouraged, with the expectation that the results of MQP's, IQP's, and graduate theses and dissertations will be of a quality worthy of dissemination to the appropriate audiences. Such collaboration should be viewed as a natural way to combine teaching and scholarship, and as an effective way to motivate and stimulate students.

WPI's immediate goal should be to ensure that the number of qualified tenure-track faculty is sufficient to guarantee both the continued excellence of WPI's labor-intensive, project-based education and the promotion of scholarly production. This dual excellence will improve WPI's ability to recruit and retain the very best faculty, and to attract an academically qualified and geographically diverse pool of students. Without it, the vitality of our educational programs will be at risk.

**ENHANCING SCHOLARSHIP: CONCRETE SUGGESTIONS**

What follows are nine concrete suggestions that are designed to provide the WPI faculty with the time and resources necessary to enhance their scholarly production. The first three require reallocation of funds within the operating budget; the final six are to be supported by the capital campaign according to the "spending rule." The suggestions within each category are listed in order of priority.
Operating Budget

Reduced Teaching Responsibilities:
WPI should maintain a sufficient number of tenure-track faculty positions to insure that each faculty member is required to teach between two- and-one-half and three courses per academic year. Project loads should be carried equitably within departments by individual department members. In this manner, no faculty member will be overwhelmed during any one term, and each faculty member will have at least one term per year to devote a more concentrated effort to scholarship. Combined with term breaks and summer recess, this will allow sufficient time for faculty members to focus effectively on their various scholarly activities.

In order to make this a realistic goal, academic departments should consider ways to reduce the number of course offerings without damaging the quality of academic programs. When appropriate, duplication of content should be minimized, unnecessary courses should be eliminated, and fewer offerings of the same course should be considered. Faculty positions should not be eliminated as academic departments propose ways to make course offerings more efficient.

Improved Sabbatic Leave Program:
Sufficient funds should be made available to academic departments to replace the effort of faculty members on sabbatic leave. Department heads could then give their full endorsements to faculty members who apply for sabbatic leaves without requiring others in the same department to compensate by teaching additional courses.

In addition, the compensation to faculty members who take full-year sabbatic leaves should be increased from 50 percent to 80 percent of their normal salaries. Because it is difficult to secure the additional funds necessary for a full year's leave, faculty members often settle for half-year sabbaticals, or compensate by assuming teaching responsibilities at other institutions. In either case, the opportunities for professional development are diminished, and the time for scholarly pursuits is reduced. Offering 80 percent of salary will encourage faculty to take full-year sabbaticals, and will increase the scholarly value of the sabbatic leave program.
**Increased Research Incentive Payment:**
The incentive payment returned to principal investigators should be increased from ten to twenty percent of indirect costs charged to sponsored research accounts. This would further motivate faculty to seek external funding, allow faculty to reinvest significant sums in their professional development, and send a clear signal that WPI appreciates the efforts of those who attract off-campus sponsors for their work.

**Capital Campaign**
**Seed Grants for New Research:**
WPI should encourage individual faculty and small groups of faculty to initiate new research by making funds available to conduct preliminary studies in unexplored areas. A portion of these funds could be used specifically to encourage the formation of on-campus interdisciplinary research teams. Proposals submitted should be judged on their scholarly merit. The funds would be used for graduate student support, equipment, supplies, and no more than one month of summer salary and benefits for each faculty member involved. Those who receive such funding would be obligated to document their results and use their findings as a basis to seek external funding for more elaborate studies in the same area.

The amount recommended for this purpose is $250,000 per year; individual awards should not exceed roughly $25,000. Required contribution: $5,000,000.

**Professional Development Funds:**
WPI should provide each faculty member with a modest, reliable source of professional development funds to pay for such items as travel, small equipment, and supplies. Each faculty member would have a responsibility to demonstrate the professional benefit derived from each expenditure. The recommended amount for this purpose is $2,000 per faculty member per year. Required contribution: $8,000,000.

**WPI-Sponsored Travel Fellowships:**
To improve the opportunities faculty members have to explore new scholarly areas, to utilize resources at other institutions, and to establish collaborations
with academic and industrial colleagues who are not at WPI, travel fellowships should be made available that would permit faculty to be away from campus for up to two terms. Fellowship applications would be submitted by individual faculty members, and would be judged on the value to the overall scholarly development of the applicant. Each faculty member would have the responsibility to document the benefits derived from such travel. While away, faculty members would receive normal compensation.

The recommended amount of each fellowship is $3,000 for travel expenses, and $5,000 to departments for each term during which one of its faculty members was away. Five travel fellowships per year are recommended. Required contribution: $1,300,000.

**Equipment Purchase Account:**
WPI should use funds from the capital campaign to establish an account for the annual purchase of equipment that supports scholarly activity, and would be made available for use by both faculty and students. Requests for funds would be submitted by faculty, and should include the costs of maintenance and service if no other source is available to pay those costs. The requests should require no new staff members. Among the criteria used to judge the merits of the requests submitted, priority should be given to pieces of equipment that would have the greatest number of users, and the greatest likelihood of attracting users from a variety of disciplines. The recommended amount available is $300,000 per year. Required contribution: $6,000,000.

**Undergraduate Summer Research Fellowships:**
To stimulate undergraduates by more effectively involving them in scholarly activities, fellowships should be available on a competitive basis to students wishing to participate in summer research projects. In many (but not all) cases, the projects would be related to MQP’s and IQP’s that students anticipate carrying out during the following academic year. Such "head starts" will enhance the quality of the MQP and IQP, and make it more likely that the results will be of a quality worthy of dissemination. Students applying for the fellowships would include a description of the proposed research project, and
where appropriate may include the endorsement of one or more faculty members.

The recommended amount of each fellowship is $3,000 in summer stipend. Efforts should be made to endow as many summer fellowships as possible. Required contribution: $60,000 per fellowship.

**Doctoral Fellowships:**

Our current graduate student population consists primarily of students enrolled in master's degree programs. However, because it ordinarily takes several years to develop the expertise to conduct independent research, Ph.D. students are far more effective in assisting faculty members to advance their research programs.

To strengthen the doctoral programs at WPI, endowed fellowships should be available to our best Ph.D. students. The recommended amount for each fellowship is $25,000 per year for tuition and stipend. Efforts should be made to endow as many doctoral fellowships as possible. Required contribution: $500,000 per fellowship.