

CAREER DEVELOPMENT AND GRADUATE SCHOOL

Career Development Center	195
Graduate Study at WPI	196

SECTION 6

CAREER DEVELOPMENT CENTER

The Career Development Center (CDC) at WPI is here to assist students in the development of life-long skills related to careers and the job search process. CDC serves not only undergraduate students but graduate students and alumni as well. Information and guidance is provided in the areas of full-time employment, graduate school, part-time employment, cooperative education and summer positions.

The Career Development Center (CDC) provides a variety of services to students including the following:

1. **INDIVIDUAL CAREER COUNSELING** – Students can arrange to meet a Career Counselor by appointment or during walk-in hours. Help is provided in many areas including assistance with major selection, making career choices, resumes and cover letters, devising a job search plan, interviewing and applying to graduate school.
2. **CAREER RESOURCE CENTER** – CDC maintains literature and information about various companies that recruit on campus so that students will be well prepared for their interviews and have a reasonably good idea whether they would be interested in a particular company. CDC also provides vocational resources for students researching and exploring various careers. In addition, it includes WPI major binders to learn more about what you can do with a WPI major. For those students considering graduate school, the center provides information on the graduate school search process, graduate education at WPI and elsewhere. The center also houses general information on standard examinations required by many graduate schools such as the Graduate Record Exam (GRE), Graduate Management Admission Test (GMAT), Medical College Admission Test (MCAT), and Law School Admission Test (LSAT).
3. **CAREER FAIRS** – Each year the CDC organizes three career/job fairs for students to obtain information of full-time, part-time, summer and co-op opportunities.
4. **CAREER WORKSHOPS & SEMINARS** – Throughout the year a variety of workshops are offered to students. Topics have included: Resume/Cover Letters, Job Search Strategies, Summer Job Search, Job Offer Decision Making, and Applying to Graduate School.
5. **COMPANY PRESENTATIONS** – Information sessions are provided by recruiters so that students have an opportunity to evaluate and learn more about the companies interviewing on campus.
6. **JOB LISTINGS** – The CDC posts full-time, part-time, summer and co-op opportunities. Students and alumni can access job listings through the CDC's web-based system.
7. **ON-CAMPUS INTERVIEWS** – Annually the CDC brings companies to campus to interview students. Over 200 private, government, civic and professional companies and organizations have participated in this program. Employers interview for summer, co-op or full-time employment. To give you an idea, here are a few organizations which have employed WPI graduates in recent year:
 - Analog Devices
 - BAE Systems
 - General Dynamics-Electric Boat
 - General Electric
 - IBM
 - Kiewit Construction
 - MIT Lincoln Lab
 - National Grid
 - Naval Undersea Warfare Center
 - Pratt & Whitney
 - Raytheon
 - Teradyne
8. **RESUME REFERRAL** – Students can house their resume in the CDC's web-based system. Employers can access students' resumes in two ways, a web resume book or referrals by the CDC for specific positions.
9. **ALUMNI ASSISTANCE** – After students graduate from WPI, the CDC provides assistance to alums seeking new employment or facing a change in career goals.
10. **GRADUATE STUDIES** - The Career Development Center (CDC) and the graduate coordinators in each department can provide information on graduate education at WPI or elsewhere.

LOCATION: The Career Development Center is located in the Lower Level of the Project Center. The phone number is 508-831-5260. The website is www.wpi.edu/+CDC

INTRODUCTION

WPI offers more than fifty graduate degree programs that enable students to deepen and enrich their understanding of a field, and to develop their professional expertise.

GRADUATE PROGRAMS BY DEPARTMENT**Biology and Biotechnology**

- Master of Science in Biology/Biotechnology*
- Ph.D. in Biotechnology

Biomedical Engineering

- Master of Science in Biomedical Engineering
- Master of Engineering in Biomedical Engineering
- Master of Engineering in Clinical Engineering
- Ph.D. in Biomedical Engineering
- Joint Ph.D. in Biomedical Engineering and Medical Physics with UMass Medical School
- Graduate Certificate

Chemical Engineering

- Master of Science in Chemical Engineering
- Ph.D. in Chemical Engineering

Chemistry and Biochemistry

- Master of Science in Chemistry
- Master of Science in Biochemistry
- Ph.D. in Chemistry
- Ph.D. in Biochemistry

Civil and Environmental Engineering

- Master of Science in Civil Engineering
- Master of Science in Environmental Engineering
- Interdisciplinary Master of Science in Construction Project Management
- Master of Engineering in Civil Engineering
- Ph.D. in Civil Engineering
- Graduate Certificate
- Advanced Certificate

Computer Science

- Master of Science in Computer Science
- Master of Science in Computer Science Specializing in Computer and Communications Networks (CCN)
- Ph.D. in Computer Science
- Graduate Certificate
- Advanced Certificate

Electrical and Computer Engineering

- Master of Science in Electrical and Computer Engineering
- Master of Science in Electrical and Computer Engineering Specializing in Computer and Communications Networks (CCN)
- Ph.D. in Electrical and Computer Engineering
- Graduate Certificate
- Advanced Certificate

Fire Protection Engineering

- Master of Science in Fire Protection Engineering
- Ph.D. in Fire Protection Engineering
- Graduate Certificate
- Advanced Certificate

Interdisciplinary Studies

- Master of Science in Interdisciplinary Studies
 - Impact Engineering
 - Manufacturing Engineering Management
 - Power Systems Management
 - Systems Engineering
 - Systems Modeling
- Ph.D., Interdisciplinary Studies

Management

- Master of Business Administration (M.B.A.)
- Master of Science in Information Technology
- Master of Science in Marketing and Technological Innovation
- Master of Science in Operations Design and Leadership
- Graduate Certificate

Manufacturing Engineering

- Master of Science in Manufacturing Engineering
- Ph.D. in Manufacturing Engineering
- Graduate Certificate

Materials Process Engineering

- Master of Science in Materials Process Engineering

Materials Science and Engineering

- Master of Science in Materials Science and Engineering
- Ph.D. in Materials Science and Engineering
- Graduate Certificate

Mathematical Sciences

- Master of Mathematics for Educators (M.M.E.)
- Master of Science in Applied Mathematics
- Master of Science in Applied Statistics
- Professional Master of Science in Financial Mathematics
- Professional Master of Science in Industrial Mathematics
- Ph.D. in Mathematical Sciences
- Graduate Certificate

Mechanical Engineering

- Master of Science in Mechanical Engineering
- Ph.D. in Mechanical Engineering
- Advanced Graduate Certificate

Physics

- Master of Science in Physics
- Ph.D. in Physics

Social Science and Policy Studies*

- Master of Science in System Dynamics
- Interdisciplinary Ph.D. in Social Science
- Graduate Certificate in System Dynamics

* *Fall semester admission only.*

At WPI, the Master of Engineering degree is rooted in practice; its aim is to cultivate advanced professional and technical competence. It does not require a thesis and is most appropriate for students who plan pursue careers in industry.

The Master of Science has a stronger theoretical component than the Master of Engineering degree. Its aim is to prepare students for careers in research and development or academia. The M.S. is the more natural precursor to the Ph.D., although students with an M.Eng. can also successfully obtain this credential. WPI offers both thesis-based and non-thesis Master of Science degrees.

The Ph.D. indicates that a student has undertaken original research and has demonstrated mastery of his or her field through the completion of a substantial project. Ph.D. students present their research findings in a dissertation that is subject to review by the faculty and, in some cases, by professional peers outside of WPI.

WPI's M.B.A. program takes advantage of the Institute's technical and scientific strengths. It places a strong emphasis on the management of scientific and technological concerns. Some of the key areas of study are technology transfer, information security, operations management, and entrepreneurship.

Finally, the Professional Master of Science and the Master of Mathematics for Educators degrees are akin to the Master of Engineering degree in that they are practice-oriented in both conception and scope.

Further information and the specific requirements for these advanced degrees may be found in the Graduate Catalog (<http://www.wpi.edu/+gradcat>).

ADMISSION

Prospective graduate students are encouraged to discuss their academic plans with the graduate coordinator of their desired program.

Students may take graduate courses without being formally admitted to a degree program; that is, as a non-matriculating student. But each department limits the number of courses a non-matriculating student may count towards a degree. In the Department of Management, for example, students may not take more than two courses before applying for admission. In some other programs, a student may complete as many as four courses without being admitted. No department permits a student to complete more than four courses before a formal admission decision has been made. If you plan to enroll in classes as a non-matriculating student, be sure to contact your department to learn what restrictions have been placed on course work completed before admission to a degree program.

Students should contact the Office of Graduate Admissions (grad@wpi.edu) if they have questions about their application or the application process. In general, each department requires its applicants to submit a completed application, original transcripts of all previous academic work, and three letters of recommendation. The Graduate Record Examination (GRE) is required in some programs and strongly recommended in others. The Graduate Management Admission Test (GMAT) is required of all applicants to programs in the Department of Management. Be sure to check the website for your program to learn its application requirements.

Once a student's application is complete, the Office of Graduate Admissions sends it to the department for review. When the faculty have reached a decision, the Office of Graduate Admissions will notify the student with a formal letter. Decisions are usually rendered four to six weeks after the application has been completed.

Applications for graduate study are accepted year-round. WPI alumni and current WPI undergraduate students are exempt from the \$70 application fee.

REGISTRATION AND TUITION PAYMENT

Registration for graduate courses begins several months before the beginning of each semester. Students are encouraged to register for their courses as early as possible.

Tuition for courses taken by graduate students is \$1089 per credit hour for the 2008-2009 academic year. Undergraduate courses listed as "one-third unit" are equivalent to three graduate credit hours.

Tuition and fees, including health insurance, must be paid before the start of classes.

COMBINED BS/MS PROGRAMS

For information on combined BS/MS programs, see page 181.

FINANCIAL AID

INTRODUCTION

Prospective graduate students who wish to be considered for WPI assistantships and fellowships are strongly advised to submit their applications by January 15th for Fall admission and October 15th for Spring admission. Assistantships and fellowships typically include full or partial remission of tuition and a monthly stipend. Only full-time graduate students are considered for assistantships and fellowships and preference is given to students who are actively conducting research. Students indicate that they want to be considered for funding on their graduate application forms. There is no separate application for assistantship or fellowship support at WPI.

ASSISTANTSHIPS

There are two types of assistantships at WPI. Teaching assistants support the faculty in the grading of papers, the supervision of laboratory sections, and other teaching duties. Research assistants, on the other hand, are usually given some facet of a larger sponsored-research project that typically becomes a part of the student's thesis or dissertation. Fellowship assignments are made by the faculty in each department and are approved by the Office of the Provost.

WPI FELLOWSHIPS

Several fellowships are available for students in particular departments and through endowed funds.

Competition for the prestigious Godard Research Fellowship takes place during the admissions process. Candidates are nominated by the departments and the final selection takes place in the Office of the Provost. The competition is only open to U.S. citizens, and preference is given to students pursuing the Ph.D. degree.

The Backlin Fund provides assistance for students nearing the end of their degree programs. Candidates are nominated by their department chairs and selection is made by the Associate Provost for Academic Affairs.

A complete list of WPI funding sources can be found at <http://grad.wpi.edu/Prospective/fellowships.html>.

NSF GRADUATE RESEARCH FELLOWSHIPS

The National Science Foundation awards multi-year fellowships to promising science and engineering students in the early stages of their graduate careers. These highly-competitive, prestigious awards provide three years of support and are available to both Master's and Ph.D. students, as long as the degree is research-based. You can learn more at the NSF website: <http://www.nsf.gov/funding/>.

GEM FELLOWSHIPS

WPI is a member of the GEM consortium. Students who belong to underrepresented minority groups and want to pursue the Master's or Ph.D. degree in a field of science or engineering may apply for funding from the consortium to continue their studies at a GEM member school. More information can be found at the GEM website: <http://www.gemfellowship.org/>.

LOANS

Graduate students may also receive additional financial assistance in the form of federal and private student loan funds. In order to apply for these loans, students are required to submit the Free Application for Federal Student Aid (FAFSA) form. This form can be completed online at www.fafsa.gov. For more information you can contact the Office of Financial Aid website at <http://www.wpi.edu/+finaid>.

SCHOLARSHIPS AND GRANTS FOR GRADUATE STUDY ABROAD**RHODES SCHOLARSHIPS**

Rhodes scholarships cover tuition, fees, and a stipend for two years of study in selected fields of science and engineering at Oxford University. They are awarded through state and regional competitions. Students interested in applying for a Rhodes Scholarship should begin to assemble their dossier during the Junior year. Applicants should have completed enough of the Bachelor's degree to assure its completion before their projected matriculation at Oxford. For more information, contact Prof. Peter Hansen in the Department of Humanities and Arts.

FULBRIGHT GRANTS

A wide variety of grants for graduate study abroad, usually for research toward the doctorate, is available through the federally-funded Fulbright Grants Program. For more information, contact Prof. Peter Hansen in the Department of Humanities and Arts.

PART-TIME GRADUATE PROGRAMS: ONLINE AND CAMPUS-BASED STUDY

Part-time graduate programs provide flexible educational opportunities for working students. Online, evening, and on-site corporate programs are taught by WPI faculty to serve the educational needs of technical and management professionals around the world.

Master of Science degrees for part-time students are offered in applied math, applied statistics, chemistry and biochemistry, computer and communications networks, computer science, financial math, industrial math, marketing and technological innovation, manufacturing management, physics, and system dynamics. The part-time MS is also offered in biomedical/clinical engineering, electrical and computer engineering, fire protection, manufacturing, materials science, and mechanical engineering. The Master of Engineering degree can be completed part-time in biomedical, civil and environmental engineering. The Master of Business Administration (M.B.A.) is also offered on a part-time basis.

Graduate-level certificate programs are also available in some departments. For more details, see the Graduate Catalog.

Although the number of courses in each discipline may be limited in any given year, courses are scheduled so that part-time students are generally able to complete the requirements for the

master's level degree in three to four years. Online and evening courses are offered year-round.

Students may enroll in individual graduate courses without being admitted to a graduate degree program. Those who wish to obtain a degree must apply for formal admission prior to completing two courses for graduate certificate programs and four courses for master's degree programs. Exceptions to this rule exist, so interested students should verify the actual number of courses they may take prior to matriculation within the specific program department.

A more detailed description of the part-time programs and of specific course offerings is available in the Graduate Catalog. Questions about each program should be related to the department heads or the graduate coordinators.

FIVE YEAR PROGRAMS

WPI offers unique five-year programs in Fire Protection Engineering, Industrial Mathematics, and Financial Mathematics. Each program begins with admission to the freshman year at WPI and ends with both a Bachelor's and Master's degree following five years of study.

High school students indicate their interest in one of these programs when they apply for admission to the undergraduate program at WPI. Applicants who are accepted into one of these programs will receive a letter of admission to both the undergraduate and graduate programs. Students in these programs are strongly urged to major in a field closely related to the graduate degree program. For example, most students choosing the Fire Protection Engineering program will have an undergraduate major in Mechanical or Civil Engineering. An academic advisor will assist students in course selection. Admission to the fifth year of study (i.e., the graduate program) is contingent on successful completion of the undergraduate degree and good academic standing.

For more information about these programs, contact the graduate coordinators or administrators in the Departments of Mathematics or Fire Protection Engineering.

GRADUATE COURSE LISTINGS

Graduate courses of interest to undergraduates are listed by title in the "Course Description" section of this catalog. A complete list is included in the graduate catalog. Most courses meet once per week in a fourteen-week format. The credits applied in either case are as shown to the right of the course title. Undergraduate students taking graduate courses may use the conversion factor: 3 graduate credit hours = 1/3 unit. Students register for research or projects by using an individual program number rather than a course designation.

FOR MORE INFORMATION ON GRADUATE STUDY AT WPI

Consult the graduate catalog for more information about WPI's graduate programs. The departmental graduate coordinators are available to answer any program-specific questions you may have.

For more information about applying to WPI's graduate programs, please contact:

WPI Office of Graduate Admissions

www.grad.wpi.edu

grad@wpi.edu

Voice: 508-831-5301

FAX: 508-831-5717

Graduate Catalog online: www.wpi.edu/+gradcat