

# CAREER DEVELOPMENT AND GRADUATE SCHOOL

S E C T I O N

Six

Career Development .....	270
Graduate Studies .....	270
Graduate Program .....	271
Graduate Degrees and Requirements .....	272
Combined Bachelor/Master's Program .....	272
Five Year Programs .....	273

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 on a drop-in basis. Help is provided in many areas including making career choices, resumes, devising a job search plan, interviewing, and graduate school.
2. **MAJOR SELECTION PROGRAM**- This program offers a variety of services to students trying to choose the major that's best for them.
3. **CAREER RESOURCE CENTER**- CDC maintains a large library of 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. For those students considering graduate schools, the center provides information of graduate education at WPI and elsewhere. The center also houses standard examinations required by many graduate schools such as Graduate Record Exam (GRE), Graduate Management Admissions Test (GMAT), Medical College Admission Test (MCAT, and Law School Admission Test (LSAT).
4. **CAREER FAIRS**- Each year the CDC organizes job fairs for students to obtain information of full-time, part-time, summer, and co-op opportunities.
5. **CAREER WORKSHOPS**- 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 Graduate School.
6. **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.
7. **JOB OPPORTUNITIES**- The CDC posts full-time, co-op, part-time, and summer opportunities. In fact the current students and alumni can be updated on professional full-time opportunities through the offices WEB JOB LISTING SYSTEM. This service is available 24 hours a day, 7 days a week.

8. **ON-CAMPUS RECRUITMENT**- The CDC office coordinates a busy schedule of interviews by recruiters from over 200 private, government, civic, and professional companies and organizations. To give you an idea, here are just a few organizations which have employed WPI graduates in recent years:

Analog Devices	National Grid
BAE Systems	Naval Undersea Warfare Center
General Dynamics-Electric Boat	Pratt & Whitney
General Electric	Raytheon
IBM	Saint Gobain
Kiewit Construction	Teradyne, Inc.
MIT/Lincoln Labs	U.S Govt/Naval Underwater System Center

9. **COMPUTERIZED RESUME DATABASE**- All students that register with the CDC office for on campus interviews or off campus referral will submit their resume via the web to the office. Employers access the resumes through various Web Resume Books which the CDC maintains.

Even after students graduate from WPI, the CDC office provides assistant to alums seeking new employment or facing a change in career goals.

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](http://www.wpi.edu/+CDC)

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## GRADUATE STUDIES

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Many students enroll in graduate school on a full- or part-time basis, realizing that a graduate degree can open the door to job opportunities such as advanced research or development, college teaching, upper level management, law or medicine. Graduate study is another step in the self-learning process begun at WPI, a process that will last a lifetime.

Most graduate schools require applicants to take a standard examination such as the Graduate Record Examination (GRE) or Graduate Management Admission (GMAT). Information on such examinations is available from the Office of Graduate Studies & Enrollment or CDC.

The Office of Graduate Studies and Enrollment and the Career Development Center (CDC) can provide information on graduate education at WPI or elsewhere.

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## INTRODUCTION

For students who wish to continue their education after receiving the bachelor's degree in the same or a related field, the WPI graduate program offers the opportunity either to specialize or to broaden one's preparation. The M.S. degree is typically a 30-36 credit program. Many programs include options for thesis or directed research. Several graduate departments offer the Master of Engineering, a non-thesis option to the M.S. degree. The M.B.A. degree provides preparation for careers in the management of technological enterprises. In addition to master's programs, graduate-level certificates are offered by select departments.

Graduate study represents a natural extension of education beyond the WPI undergraduate Plan. With proper planning, WPI students may shorten the time required to earn the master's degree as described in the "Combined Bachelor's/Master's Program" section, page 272.

The Ph.D. represents recognized original and independent professional work in the form of research for a dissertation and peer-recognized competence in the technical aspects of the profession.

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## ADMISSION

Admission decisions to a graduate program of any department is made by the faculty of that department with a formal letter issued by the Office of Graduate Studies & Enrollment. Students generally may enroll in a maximum of two to four graduate courses without formal admission to a degree program. Because numerous exceptions to this rule do exist, students are asked to check with their specific program head and the graduate catalog for exceptions to this rule.

Prospective students who desire an advanced degree should contact the Graduate Studies and Enrollment Office specifying the department in which they intend to do their major work. In general, a complete application, transcripts of all college work, and three letters of recommendation are needed for admission to a graduate program. The Graduate Record Examination (GRE) is required in some programs and, for others, is highly recommended; for all Management programs, the GMAT is required. The required \$70 application fee is waived for WPI alumni and current undergraduate students.

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## REGISTRATION AND TUITION PAYMENT

Registration for graduate courses opens several months in advance of the start of each semester. Students are encouraged to register early in the cycle.

Tuition for courses taken by graduate students is \$997 per credit hour for the year 2006-2007. (Undergraduate courses listed as "one-third unit" are equivalent to three credit hours.)

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

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## FINANCIAL AID

### GRADUATE ASSISTANTSHIPS

Assistantships are of two types—teaching and research. Generally, teaching assistants are assigned duties supporting faculty in the grading of papers and the supervision of laboratory sections. Research assistants usually are involved in sponsored-research projects that become a part of their theses or dissertations.

Financial assistance is available for full-time graduate students. This assistance typically includes tuition and a monthly stipend. For details, go to the graduate catalog on-line at [www.wpi.edu/Pubs/Catalogs/Grad/](http://www.wpi.edu/Pubs/Catalogs/Grad/).

### FELLOWSHIPS

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

The Backlin Fund, administered by the Associate Provost for Academic Affairs provides assistance for students nearing completion of their degree requirements who are recommended by a faculty member and their department chairman.

Competition for the prestigious Goddard Research Fellowship is open to U. S. citizens. Preference is given to doctoral candidates.

Information is available online at <http://www.grad.wpi.edu/Financial/fellowships.html> or by contacting the Graduate Studies and Enrollment Office.

### APPLICATION DEADLINES

Although applications for financial aid are considered at any time, the major distribution of aid is based upon complete admission applications submitted by February 1 for the fall semester. For further information on the above programs, please contact the Graduate Admissions Office.

### LOANS

Additional assistance in the form of federal and private student loan funds is available to graduate students through the Office of Financial Aid. In order to apply for these loans, students need to complete the FAFSA and Graduate Studies and Enrollment Office. For information on these forms, please visit the Office of Financial Aid website at <http://www.wpi.edu/Admin/FA/Grad/>.

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## SCHOLARSHIPS AND GRANTS FOR GRADUATE STUDY ABROAD

### RHODES SCHOLARSHIPS

Rhodes Scholarships, covering tuition, fees and a stipend for two years of study in selected fields of science and engineering at Oxford University, are assigned through state and regional competitions. Students interested in applying for the Rhodes Scholarships should begin to assemble documentation during the junior year. Applicants should have achieved academic standing sufficiently advanced to assure completion of a bachelor's degree before their projected matriculation at Oxford.

For information, see Prof. Peter Hansen, 39 Dean St., Room 254.

### 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. Contact the Office of Graduate Studies & Enrollment for more information.

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### GRADUATE DEGREES AND REQUIREMENTS

WPI offers master's degrees in applied math, applied statistics, biology and biotechnology, biomedical sciences, chemistry and biochemistry, computer and communications networks, computer science, management, mathematics for educators, and physics, biomedical/clinical, chemical, civil and environmental, electrical and computer, financial math, industrial math, fire protection, interdisciplinary studies, manufacturing, materials science, and mechanical engineering.

The doctorate is offered in biotechnology, computer science, chemistry, physics, materials science and engineering, mathematical sciences, and in biomedical/clinical, chemical, civil and environmental, electrical and computer, manufacturing, mechanical engineering, and fire protection.

Further information and specific requirements for these advanced degrees may be found in the *Graduate Catalog*.

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### PART-TIME GRADUATE PROGRAM

The part-time graduate programs provides the opportunity to engage in part-time study leading to the master's degree. The evening program is operated by WPI to serve the educational needs of technical and management professionals in central New England.

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, and physics, biomedical/clinical, civil and environmental, electrical and computer, fire protection, manufacturing, materials science, and mechanical engineering. The master of engineering for part-time students is offered in biomedical, civil and environmental engineering. The master of business administration (M.B.A.) is also offered.

Although the number of courses in each discipline may be limited in any given year, the schedule of courses is such that students taking two courses per semester are generally able to complete the course requirements for the master of science or master of engineering degree in about three years or the M.B.A. in four years.

Students may enroll in individual evening 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 to four courses. Exceptions to the rule exist, therefore, interested students should verify the actual number of courses allowed prior to matriculation with the specific program department.

Graduate-level certificate programs are also available in some departments (see Graduate Catalog for details).

A more detailed description of the program and specific course offerings is available in the Graduate Catalog. Questions relating to the program should be referred to the discipline department heads or to the Office of Graduate Studies & Enrollment.

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### COMBINED BACHELOR/ MASTER'S PROGRAM

The Combined Bachelor/Master's Program is a unitary program leading a student to a bachelor degree and to a master of business administration, master of engineering, or master of science degree. The purpose of the Combined Bachelor/Master's Program is to give WPI undergraduates an opportunity to earn a bachelor and a master's degree from WPI concurrently in less time than would be required if the student were to complete work on the bachelor degree before beginning work on the master's degree. To gain the full benefit of this program, a student should apply for the Combined Program well before the bachelor degree is completed. Application at the beginning of the junior year is recommended.

For the master of science and master of engineering degrees, the Combined Program typically allows a student to complete requirements for both degrees in about one more year of full-time study than would be required to earn the bachelor degree. With careful planning, a student can obtain a similar reduction in the amount of time required to earn an M.B.A.

#### PROGRAM REQUIREMENTS

Only registered WPI undergraduates may enter the Combined Program. To enter, a student must apply to the WPI Graduate Program. Admission to the Combined Program is made by the faculty of the program that awards the graduate degree. A student in the Combined Program continues to be registered as an undergraduate until the bachelor's degree is awarded.

While in the Combined Program, a student may continue to take courses or projects toward the undergraduate degree; the student may also register for graduate courses, projects, directed research or thesis credits toward the master's degree.

To obtain a master's degree via the Combined Program, the student must satisfy all requirements for that master's degree, including any requirements of the graduate degree-awarding program for satisfactory completion of specified courses or a master's thesis. To obtain a bachelor's degree via the Combined Program, the student must satisfy all the requirements for that bachelor degree, including distribution and project requirements.

A student in the Combined Program, may, within the program limit and with prior approval, use the same courses toward the bachelor and master's degrees. The limitation is computed from the graduate credit hours for each course. Courses, whose credit hours total no more than 40% of the credit hours required for the master's degree, and which meet all other requirements for each degree, may be used to satisfy requirements for both

degrees. Such courses are recorded on the transcript using the credit hours/units and grades appropriate at the graduate or undergraduate levels. For students in the Combined Program, approved undergraduate courses are assigned graduate credit with a conversion rate of  $1/3$  WPI undergraduate unit = 3 credit hours, while graduate courses applied toward the undergraduate degree are awarded undergraduate credit with a conversion rate of 1 credit hour =  $1/9$  undergraduate unit. There are some academic departments that allow only 30% or 3 course double counting of credit. Check the graduate catalog for rules pertaining to your program.

Students in the Combined Program may use advanced undergraduate courses to satisfy graduate degree requirements. The department decides which courses may be used in this way. Faculty members teaching these advanced undergraduate courses may impose special requirements, appropriate to an undergraduate course being used for graduate credit, on Combined Program Students.

In many cases, including if the programs awarding the bachelor and master's degrees are not the same, the program awarding the graduate degree may require that the student's Major Qualifying Project relate in some way to the graduate program's discipline. The graduate program may also make other requirements as it deems appropriate in any individual case. These requirements take the form of a written agreement (obtain Course Selection Form from the Office of Graduate Studies & Enrollment or at [www.wpi.edu/+GAO](http://www.wpi.edu/+GAO)) between the student and the graduate program, which must be completed and filed with the registrar before the student may be matriculated in the Combined Program.

The Combined Program is a full-time program of study. Once admitted to the Combined Program, a student must register every fall and spring semester until the graduate degree is completed. A student in the Combined Program who, during the fall or spring semester, has no registered activities is automatically terminated from the Combined Program, and may only be readmitted to the Combined Program by the Committee for Graduate Studies and Research via petition showing extenuating circumstances. Termination from the Combined Program does not affect a student's ability to continue toward the bachelor's degree.

Some graduate-degree-awarding programs impose additional restrictions on students in the Combined Program. Consult the degree requirements of individual programs for details.

Questions relating to the program should be referred to the discipline department heads or to the Office of Graduate Studies & Enrollment.

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## 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 bachelors and masters degree. The master's degree is limited to one of these three programs.

High school students interested in any one of these programs must apply for admission to WPI and indicate on the application which of the 5-year programs they would like. Applicants accepted to the program will receive a letter of admission to both the undergraduate and graduate program at WPI. During the first four years, it is highly recommended that students 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/graduate year is conditional on completion of an undergraduate degree at WPI and in good academic standing.

Particulars about each of the programs are available in the department of Mathematics and Fire Protection Engineering, as well as the Office of Graduate Studies & Enrollment.

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## OFF-CAMPUS GRADUATE STUDY

In response to the changing needs of technical professional people, WPI offers a growing number of graduate courses at the Westborough and Waltham campus. Off-campus graduate courses can be used in fulfilling degree requirements and residence requirements at WPI.

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## GRADUATE COURSE LISTINGS

Graduate courses of interest to undergraduate students are listed by title in the "Course Descriptions" 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 credit hours =  $1/3$  unit. Registration for research or projects is accomplished using an individual program number rather than a course designation.

For more information about WPI's Graduate Programs, please contact:

Office of Graduate Studies & Enrollment

Voice: 508-831-5301

Fax: 508-831-5717

[gse@wpi.edu](mailto:gse@wpi.edu)

[www.grad.wpi.edu](http://www.grad.wpi.edu)

The complete Graduate Catalog and application form are available on-line through our website.