



Making the most of your

First Year Experience



WPI



Opportunities Are Everywhere

Whether you're exercising your brain or your muscles, improving your musical skills or your analytical reasoning abilities, WPI offers all students a wealth of opportunities to learn, grow, and become leaders both in and out of the classroom.



Getting Started



Eric Hahn '80 (previous page, bottom right photo) generously supports WPI's first year experience with the "Great Problems Seminars." Hahn is a graduate of WPI and partner of the Inventures Group in Palo Alto, California.

Welcome to your first year at WPI!

We're excited that you'll be part of the WPI family. You'll find that you have joined a hard-working, motivated, bright, and fun community—and that you have what it takes to succeed here.

The best first steps are to participate fully in New Student Orientation—the keys to success are all there. Get to know your Resident Advisor, your Community Advisor, your Insight Faculty Advisor, and, most important of all, your peers—the friends who will support and sustain you.

This first year is a great opportunity to try new things—join an organization that intrigues you, take a class that sounds fascinating. Try a Great Problems Seminar, a terrific introduction to the WPI project experience. Many departments have specific programs to introduce first year students to their major. **Take charge of your First Year Experience!**

This guide is a great place to learn about the myriad opportunities at WPI. Have fun reading through it. We hope it will provide not only useful information, but also excitement about the coming year.

We look forward to seeing you soon.

Kris Wobbe

Associate Dean for the First Year

"There is one thing I took away from my Great Problems Seminar that will stay with me: one person can make a difference in the world. I have an opportunity to be one of those people."

Jump-start Your Project Experience

The Great Problems Seminars (GPS) are two-term courses defined by the grand challenges that face science, engineering, and society in the 21st century. You'll work in teams, connect academic disciplines, and dig into real problems in the WPI community and beyond. From day one. The skills you develop in a GPS are exactly what you need to succeed in project work at WPI and in your future career.

When we started the Great Problems Seminars, we learned that first year students could do amazing work when the problem is important and when they are truly engaged. This adds a special challenge for you as a first year student at WPI: we **know** what you can do!



GPS Offerings

The Grand Challenges Seminar
Power the World
Heal the World
Feed the World
Educate the World

The National Academy of Engineering (NAE) has defined 14 Grand Challenges for Engineering in the 21st century. The Great Problems Seminars at WPI are your chance to begin working on Grand Challenges from the beginning. Visit engineeringchallenges.org for more information about the NAE.

The Grand Challenges Seminar begins with a high-speed tour of the Grand Challenges for Engineering in the 21st century: population growth, climate change, energy, mobility, water and food, aging infrastructure, resource recovery and recyclability, and healthcare. The course blends engineering with humanities and builds a framework for the world in which students will live, showing them how they can make the world different through their ingenuity and innovation. Policy and societal issues are also discussed in context of the Grand Challenges. Students debate questions ranging from "Was the Industrial Revolution a mistake?" to "What is the future of a car?... a book?... a house?"

Readings include McDonough and Braungart's *Cradle to Cradle*; Friedman's *Hot, Flat, and Crowded*; articles from *The Economist*; and a reading list augmented by the students themselves.

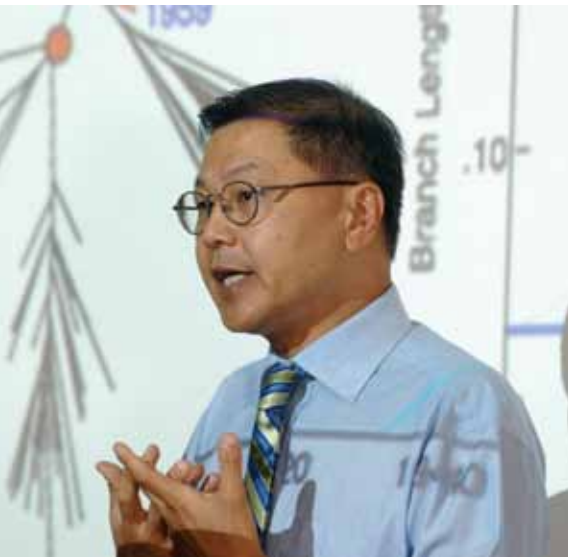
Students in the Grand Challenges Seminar have...

- analyzed methods for improving the efficiency of solar cells,
- developed plans for organic waste management at WPI,
- developed a combined business/education plan for soap production in Malewa, Kenya,
- developed a sustainable design of water and road systems in Kamba, Sierra Leone, and
- invented a Kinetic Energy Harvesting Device.

Power the World looks at both the physics and the policies involved with energy technologies. Every generation in every community has experienced an “energy crisis.” People have found ways to proceed, but solutions have always involved positive and negative consequences. Our students gain access to this depth and breadth of awareness from the first day of the first term. This awareness is key to becoming not only effective engineers, but effective citizens of the 21st century.

Students in Power the World have...

- developed a consumer guide for residential wind power,
- analyzed policies for nuclear waste management,
- analyzed the costs and benefits of a green roof on WPI’s proposed recreation center, and
- studied algae for biodiesel production.



Heal the World starts with the biology of an infectious disease and moves on to study both the biology and the management of disease control. Students have studied the cost of research (and regulation) required to bring new drugs to market. They’ve examined problems with local complexity and global scale.

Readings include Steven Johnson’s *Ghost Map* (a study of the cholera epidemic in 19th century London), a biological/medical text of their own choosing, and a number of case studies on various diseases. In previous years students researched such management issues as cost/benefit analysis, innovation, decision making, and competitive analysis.

Students in Heal the World completed projects that...

- analyzed non-compliance for tuberculosis treatment in Tamil Nadu, India,
- studied inefficiencies in the delivery of healthcare,
- completed a case study of cervical cancer in Zambezia, Mozambique,
- studied DNA vaccines for HIV/AIDS, and
- studied river blindness and schistosomiasis in Africa.

“I’m really supportive of the idea to get freshmen, who were high school students just a few months ago, thinking about the world’s biggest problems.”

–David Ho, MD
Guest speaker, 2008

“I liked the group projects that got us to learn outside the classroom, including the ethnic market and Heifer International projects. It was good to see how the skills we were learning could be directly applied to real life.”



Bob Corcoran, General Electric's VP for Corporate Citizenship and president of the GE Foundation, praises the Great Problems Seminars for preparing students to confront and solve the major issues facing the world today.

Feed the World has been built around a sequence of projects—team and individual—tied to food. Students have studied the chemistry of nutrition and analyzed the nutritional content of their own diets. They have shopped for a family of four (at big chain supermarkets as well as smaller, ethnic markets in Worcester), and studied food waste in campus dining halls. Readings have ranged from Michael Pollan's *The Omnivore's Dilemma* to recent *Scientific American* articles on perennial crops for sustainable farming.

Students in Feed the World have...

- developed a plan to expand the Meals on Wheels program in Worcester,
- analyzed the impact of aspartame on children's health,
- developed economic incentive schemes to control fertilizer runoff,
- developed a business plan for aquafarming in the Northeast, and
- connected Heifer International with WPI's project center in Namibia.

Educate the World The path to a strong economy and a brighter future depends on developing a technologically well-educated populace. This course explores various aspects of education from a global perspective, looking at a select set of cultures (Hong Kong, Ireland, Japan, Norway, and more).

Students in Educate the World might answer such questions as...

- Why do some countries excel in educational performance in math and science?
- What cultural and societal factors enhance or inhibit learning?
- What technologies will enable countries to rapidly advance educationally?



What is special about the GPS?

“It’s what happens in
REAL LIFE.
There is no substitute.”

Take the opportunity
to explore your major.

Many majors have designed special courses for first year students. For example, ECE 1799: Frontiers and Current Issues of Electrical and Computer Engineering reviews the problems, career choices, and technology that define the field. First year students interested in engineering design should consider ES1020: Introduction to Engineering, which guides students through the design process from first steps to building and evaluating a prototype. If you are interested in interactive media, take a look at IMGD 1000: Critical Studies of Interactive Media and Games.

Departments and faculty are developing new options every year, so talk with your academic advisor to learn about the latest.

“The Great Problems Seminars gave me an understanding of how groups function and how to work in a group.”

Discover Yourself



“Incoming freshmen are thrown into college life and routines without experience, and the Insight program made the transition so much easier than I could have imagined.”



Get involved.

Participation in out-of-class activities is considered a significant element of the student experience at WPI. Student organizations provide the campus community with activities, programs, and resources that enhance the quality of student life. WPI encourages and promotes participation in student groups, leadership development, community service, club sports, and Greek Life as a way for students to develop life skills for achieving their goals. For more information on how to get involved on campus, visit the Student Activities website, wpi.edu/+sao.



Insight: A Supportive Community

Build your network through Insight.

We recognize that students often face a difficult and sometimes stressful first semester as they transition from high school to college. To help alleviate some of the stress associated with this transition, WPI has developed a wonderful first year advising and mentoring program, known as **Insight**, that provides first year students with a strong support network of faculty, staff, and students.

You'll be grouped by floors in the residence hall or by your designation as a commuter or transfer student. Each group is assigned to an Insight team, which consists of a Faculty Advisor (FA), a student leader called a Community Advisor (CA), and a Resident Advisor (RA). The members of the Insight team are there every step of the way to guide you in your first semester as you adapt to college life.

How does it work?

Each Insight team plans academic and non-academic activities outside of the classroom on team building, healthy lifestyles, community service, time and stress management, student involvement, relationship building, selecting a major, and academic skills workshops, to name a few. These programs will enable you to develop and improve the skills needed for WPI's fast-paced seven-week terms. You may elect to be part of a small study group or attend help sessions to assist you in preparing for classes and exams. You also have an opportunity to participate in several community-building events and attend several social events.

Combine physical and mental power.

For those who want a more in-depth experience, you can opt to participate in a **wellness class**, an extension of Insight. You'll get a jump start on your physical education requirement while learning and experiencing the benefits of being healthy and appreciating the value of overall wellness. Students who choose to participate will enroll in a term-long course that will address the topics of stress management, time management, nutrition, career development, and diversity awareness, to name a few.

Students who choose to enroll in this program—and fulfill all of the requirements—will receive 1/12 of a physical education credit. For further information on this program, visit wpi.edu/+FYE/wellness.html.



Tools for Success

Need some career advice? It's not too early to start planning for the future.

At the **Career Development Center (CDC)**, career counseling is one of many services to take advantage of while at WPI. You can also count on the CDC to help you choose a major, make career decisions, write resumes and cover letters, devise search strategies for jobs or internships, hone your interview skills—even apply to graduate school. Check out the Job Finder system for full-time, part-time, summer, and co-op opportunities.

Our new 1/12 unit course, open to students who are undecided about or are thinking about changing their academic major, will guide participants through WPI majors and related careers. A self-assessment is part of the course, along with exposure to academic departments, informational interviews, job shadowing/company tours and individual counseling meetings. For more on all CDC has to offer, visit wpi.edu/+CDC.



Treat learning as a cooperative enterprise.

The **Office of Academic Advising** is a great resource that you'll want to become familiar with. If you have questions about Advanced Placement credit, your academic standing, course selection, major selection, struggling with a class, or changing your academic advisor, they are here to help. Visit wpi.edu/+oaa or reach them at academic-advising@wpi.edu or AIM: FirstYRAadvising.



Use resources to help you succeed.

WPI's **Academic Resources Center** provides support services designed to enrich and enhance the learning experience of all WPI undergraduate students. Any student who wishes to ensure academic success can benefit from the resources available through the ARC. Students may obtain assistance in such areas as learning styles, effective study strategies, time management, problem solving, and critical thinking skills. Learn more at wpi.edu/+arc.

Learn from your peers.

The **M*A*S*H (Math and Science Help)** leaders and Peer Tutors are upperclass students who have been particularly successful in their academic work. They have excellent study habits and strong communication skills and are committed to helping other students succeed by providing assistance, feedback, and encouragement. They help students help themselves by offering study tips and reinforcing learning by reviewing concepts and problems. The leaders' job is to help students think about what they heard in a lecture or read in a textbook; they help them master new concepts, learn new vocabulary, and put ideas into perspective.



Coaches are found not only on the field.

Academic coaching is a supportive partnership that helps students identify and successfully pursue their academic goals. We offer one-on-one academic coaching as well as group time management sessions with peer academic coaches. You can choose depending on your comfort and learning style. Through coaching, you'll develop the skills and strategies necessary to be academically successful at WPI.

Do you have a hard time articulating thoughts into words? DYKWIM?

Trained undergraduate **writing tutors** are available to help WPI students with their writing five days a week in one-hour appointments. Students may sign up for help with projects, course papers, oral presentations, document design, or personal writing.

Enhancing growth for self, others, and the community.

The **Student Development and Counseling Center** (SDCC) staff provides educational programming and training as well as counseling, referral, and crisis intervention services. Educational and training programs for student groups include leadership, interpersonal communication, teamwork, and academic success. Counseling services aim at helping students thrive. Short-term counseling, consultation, and referral services address situational problems, such as academic performance, loss of an important relationship, roommate disputes, and general stress; more serious crisis issues, such as physical or sexual assault, suicidal thoughts, loss of a loved one; or simply gaining a better understanding of oneself.

SDCC staff members are sensitive to students' concerns regarding confidentiality. Services are available at no charge to currently enrolled students. Appointments may be made by calling 508-831-5540 or visiting West Street House.

Have more questions?

For more information about the First Year Experience at WPI, contact the Office of the First Year at welcome@wpi.edu or 508-831-6264, AIM: FirstYRAdvising, or visit wpi.edu/+fye.



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“I enjoyed the freedom of choice for the project topics and the way that the range of topics provided review of important ideas.”

“My Insight team gave me advice about college life, choosing a major, and what classes I should take. My Insight team cared about my success at WPI.”

“I found Insight to be an incredible help while I was transitioning into my college lifestyle.”

“I would definitely recommend this program to other first year students. You gain a lot of knowledge in a wide range of areas that are beneficial to incoming students.”

“The GPS gave me a great introduction to projects at WPI. I know that when it comes time to do my MQP, I will be ready.”