



# New Advisory Board Member Orientation October 11, 2007

Lance Schachterle  
Associate Provost



WPI – 1865

Third Oldest U.S. Technological University  
("Polytechnic institute")



## “Two Towers” Tradition

Boynton Hall – Academic  
Washburn Shops – Practical

73% of graduates in August poll indicated “Two Towers” is WPI’s distinctive tradition

# WPI's Motto

“Lehr und Kunst”  
Theory and Practice  
Learning and Art



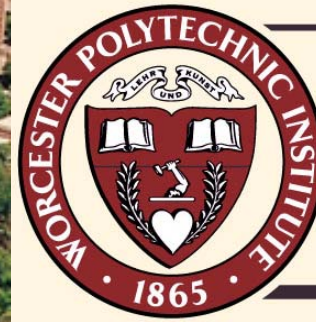
# Who We Are Now

A university with a core focus on science, engineering, and the management of technology that grants bachelor's, master's, and doctoral degrees in 30+ disciplines.



# Accreditation

- NEASC
- AACSB
- ABET/CAC/EAC



WPI

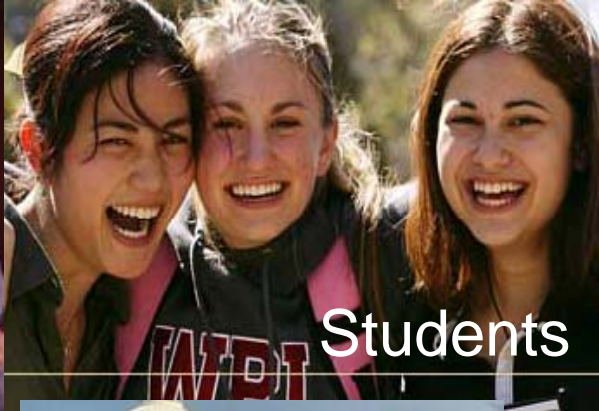
# Academics and Research: an Introduction

John A. Orr  
Provost *ad interim*  
Dean of Undergraduate Studies

# WPI is...



Faculty



Students



Staff



Alumni



Facilities



Heritage



Mission



# Overview

- Private, Founded in 1865
- BS, BA, MS, MBA, PhD programs
- Over 50 areas of study, focusing on Science, Engineering, Management
- About 250 Full-time faculty
- 3000 undergraduates, 1100 graduate students
- Approximately 600 BS, 250 Masters, 30 PhD degrees annually



# Tradition of Theory and Practice

- Commitment to undergraduate education
  - Student responsibility and experiential learning
  - Global perspective
  - Relevant programs
- A small, focused research university

# The Faculty

A world-class faculty engaged in cutting-edge research in such fields as biotechnology, fuel cells, nanotechnology, materials processing, tissue engineering, and information security.

- 325 full- and part-time
- 212 Tenured/Tenure Track
- Student-to-faculty ratio: 13:1
- Chairman's Prize for Exemplary Faculty



Richard Sisson,  
ME



John McNeill,  
ECE

# The “WPI Plan” for Undergraduate Education

- Flexible Curriculum, Student Responsibility for Learning
- Four Term Academic Year Calendar
- Non-Punitive Grading Policy
- Project-Enriched Academic Plan
- Balance among Science/Technology and Humanities/Social Sciences

# The Plan is Based on WPI's Undergraduate Goals

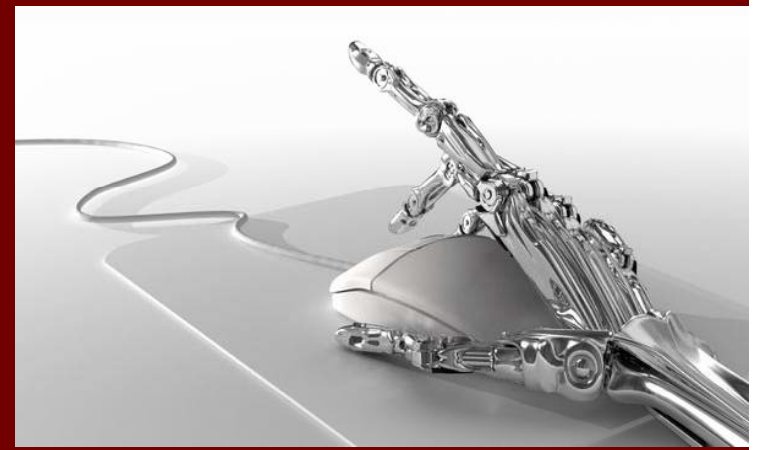
- The goals of the undergraduate program are to lead students to **develop an excellent grasp of fundamental concepts in their principal areas of study; to lay a foundation for life-long renewal of knowledge; to gain a mature understanding of themselves; and, most importantly, to form a deep appreciation of the interrelationships among basic knowledge, technological advance, and human need.** These principles are today manifest in the WPI Plan, a unique, project-oriented program which emphasizes intensive learning experiences and direct application of knowledge. WPI remains committed to continued educational improvement and innovation.

# WPI's Project Emphasis

- Major Qualifying Project
  - 1U, Capstone project in the student's major
- Interactive Qualifying Project
  - 1U, Relates Science or Technology to Society, generally in junior year
- Humanities, several ways to accomplish:
  - Concluding seminar with a substantial paper
  - Musical or theatrical performance
  - Language proficiency

# New Undergraduate Programs

- Environmental Engineering
- Interactive Media and Game Development (IMGD)
- Robotics Engineering
- BA program in Environmental Studies in development



# Top employers of WPI alumni

U.S. Government



Saint-Gobain



Raytheon



National Grid

Hewlett-Packard



General Dynamics





# Graduate Program

- Integral part of our educational program
- The BS degree is no longer sufficient for long-term career success
- Essential to support our growth in research
- New administrative organization
- Corporate and Professional Education (CPE) plays a major role

# Graduate Studies

- Extensive Masters, PhD, and certificate programs
- Multiple modes
  - Full-time and Part-time
  - Day and evening
  - Semester and “executive” schedules
  - Classroom and Distance Learning delivery



# Enrollment and Degrees

## Degrees Awarded

### Academic Year 2007:

- BS: 570
- Masters: 310
- PhD: 27

## Enrollment

### Academic Year 2008

- Class of 2011: 808
- Class of 2010: 755
- Class of 2009: 639
- Class of 2008: 673
- Class of 2007: 47
- Other UG: 94
- **Total UG: 3016**
- Grad FT: 459
- Grad PT: 682
- **Total Grad: 1141**
- **Grand Ttl: 4157**

# Research at WPI

- Scholarship is an expectation for faculty
- Faculty in all academic departments pursue scholarship
- The graduate program supports research (and v v)
- \$12M - \$16M annual external research support

# Goals for Graduate and Research Programs

- Major initiative in the Life Sciences and continued success and growth in areas that are currently strong
- Substantial growth in external research support
- Growth in numbers of students
- Growth in the number of financially supported students
- Growth in graduate student quality

# Research Funding

- Individual scholarship is an expectation as part of the faculty appointment
- External funding provides support for graduate students, equipment, supplies, travel, and faculty time
- In many disciplines, external support is practically essential for significant research accomplishments

# Recent Research Funding History

Year	# Props	Prop \$M	# Awards	Award \$M
FY05	209	82.6	111	11.5
FY06	219	69.3	121	16.7*
FY07	217	63.1	120	11.4

Notes:

Only proposals submitted through Research Administration are included.

\*Includes \$4.2M In Federal appropriations

# Tenure-Track Faculty Hiring

Academic Year	New Hires	Minorities	Females
00/01	14	0	4
01/02	5	1	1
02/03	18	4	2
03/04	7	2	3
04/05	12	2	5
05/06	5	0	2
06/07	10	3	2
07/08	17	5	6

**7 searches authorized for new faculty hires in 08/09**



# Academic Departments

## ■ Engineering

- Biomedical
- Chemical
- Civil and Environmental
- Electrical and Computer
- Fire Protection
- Mechanical

## ■ Science

- Biology and Biotechnology
- Chemistry and Biochemistry
- Computer Science
- Mathematics
- Physics

- Humanities and Arts
- Social Science
- Management

- Interdisciplinary and Global Studies Division

- Physical Education
- Air Force Aerospace Studies
- Military Science

