“Scientists discover the world that exists; engineers create the world that never was.”

Theodore von Karman

Mechanical Engineering at WPI

John M. Sullivan, Jr.
Associate Department Head
Mechanical Engineering

http://www.wpi.edu/~sullivan  http://www.me.wpi.edu/
WPI was established in 1868.
31 Full-time faculty plus several adjunct faculty in ME
700+ Undergraduate students in Mechanical Engineering (in 4 yrs)
200+ Graduate students (full and part-time)

Undergraduate Degrees awarded in
  Mechanical Engineering
  Aerospace Engineering
  Robotics Engineering

Within Mechanical Engineering Degree can Concentrate in:
  Aerospace, Biomechanical, Design, Manufacturing,
  Material Science, Mechanics, Thermo-fluids
Need 45 courses minimum to graduate from WPI. What does this entail?

- (6) – Humanities Component  (All majors)
- (2) – Social Science Courses  (All majors)
- (3) – Interactive Qualifying Project (IQP)  (All majors)
- (3) – Major Qualifying Project (MQP)  (All majors)
- (1) – Physical Education  (All majors)
- (12) – Math and Science Component  (Required)
- (9) – Required ME Core Component  (Required)
- (6) – Your Choice of ME Courses  (Elective)
- (3) – Free Electives  (Elective)
(6) – Humanities Component

- Breadth = select one course from 2 of the 3 intellectual clusters:
  - art/art history, drama/theatre, and music (AR, MU, TH);
  - languages, literature, and writing/rhetoric (EN, WR, RH, SP, GN);
  - history, philosophy and religion (HI, HU, PY, RE).
- Depth = three courses in an area of focus that includes an inquiry seminar.
- Inquiry Seminar = culmination of the H&A Requirement.
  - The Seminar explores a particular topic or theme in the humanities in greater depth.
  - The Seminar has two primary goals: A) Foster independence of student thought, and B) Encourage a cooperative, dialogic approach to inquiry.
  - Setting is a small, intensive classroom setting (12 students or less).

http://www.wpi.edu/academics/Depts/HUA/Requirements/index.html

http://www.wpi.edu/academics/hua/course-sequence.html
(6) – Humanities Component (All majors)

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<tr>
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(2) – Social Science Courses (All majors)

- Social science is the scientific study of human thought and behavior, interpersonal relationships, and the institutional structure and functioning of human society.
- System Dynamics, Economics, Sociology, Psychology, and Political Science
- IQPs abroad requires ID/SS 2050. Social Science Research for the IQP.
(6) – Humanities Component (All majors)

(2) – Social Science Courses (All majors)

(3) – Interactive Qualifying Project (IQP) (All majors)

More than 60% of students do an IQP off campus (term abroad). Excellent opportunity to experience a different culture. It requires a course to expose you to the culture and/or social norms expected of the site. This also satisfies a SS requirement.

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### Mechanical Engineering at WPI
#### Flexible Curriculum

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# Mechanical Engineering at WPI

**Flexible Curriculum**

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- **(2)** – Social Science Courses (All majors)
- **(3)** – Interactive Qualifying Project (IQP) (All majors)
- **(3)** – Major Qualifying Project (MQP) (All majors)
- **(12)** – Math and Science Component (Required)
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Notes:
- 1st Yr.: HU-1, Calc-1, Phys-1
- 2nd Yr.: Diff Eqns ES-2501
- 3rd Yr.: MS-(Stats.) ES-3001
- 4th Yr.: MQP ME-3901
## Mechanical Engineering at WPI Flexible Curriculum

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### Flexible Curriculum

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Five-year BS/MS program

• A MS in Mechanical Engineering requires 30 credits
• The BS/MS allows 12 credits to count in both degrees
• The WPI undergraduate degree requires 45 courses or 135 credits, yet 144 credits are within the 4 years
• Using only the 12 credits double counted, a MS degree can be completed in the 5th year.
• Alternately, using the additional 9 credits within the 4 year UG schedule, a MS can be completed in 1 subsequent semester.
Questions?