

Worcester Polytechnic Institute

<http://www.wpi.edu/news/20156/nae2015.html>

<http://www.wpi.edu/academics/igsd/iqp.html>

Interactive Qualifying Project



The Most Distinctive—and Personally Rewarding—Element of the WPI Plan

WPI believes that in order to become the best engineers and scientists they can be, students should have a broad understanding of the cultural and social contexts of those fields, and thus be more effective and socially responsible practitioners and citizens.

That's the intent of the Interactive Qualifying Project (IQP), a nine-credit-hour interdisciplinary requirement involving applied research that connects science or technology with social issues and human needs.

The IQP is not organized as a course, nor is it related to the major. Instead, small teams of students work under the guidance of faculty members from all disciplines to conduct research, using social science methods, directed at a specific problem or need. Students deliver findings and recommendations through formal reports and oral presentations to project sponsors (often nonprofit, municipal, or government agencies) and faculty advisors.

Sustainability serves as a common theme for IQPs, many of which address problems related to energy, environment, sustainable development, education, cultural preservation, and technology policy. About half of all IQPs are completed off-campus through the [Global Projects Program](#) (GPP).



Creating a Mentorship Program for Orphans in Morocco

A WPI student IQP project team is helping orphans in Morocco by developing a sustainable mentoring program that brings in students from a local university to serve as positive role models and teach children social and academic skills.

- [Read more.](#)

IQP Learning Outcomes



The IQP is a general education requirement, not directly related to students' majors. WPI Faculty created the IQP to help students learn to solve real-world problems and make decisions with an understanding of and appreciation for the social and humanistic contexts of their work. The IQP also is central to how WPI students learn to do research, write, and work in teams. According to the faculty-approved learning outcomes, IQP students will:

1. Demonstrate an understanding of the project's technical, social and humanistic context. (1, 7, 8)
2. Define clear, achievable goals and objectives for the project. (6)
3. Critically identify, utilize, and properly cite information sources, and integrate information from multiple sources to identify appropriate approaches to addressing the project goals. (7, 10)
4. Select and implement a sound approach to solving an interdisciplinary problem. (7, 10)
5. Analyze and synthesize results from social, ethical, humanistic, technical or other perspectives, as appropriate. (8, 9)
6. Maintain effective working relationships within the project team and with the project advisor(s), recognizing and resolving problems that may arise. (5)
7. Demonstrate the ability to write clearly, critically and persuasively. (4)
8. Demonstrate strong oral communication skills, using appropriate, effective visual aids. (4)
9. Demonstrate an awareness of the ethical dimensions of their project work. (9)

Approved by the WPI Faculty in October 2006.

The IQP is an opportunity for significant intellectual and professional development that, done well, prepares WPI graduates broadly for successful and satisfying lives and careers.

The numbers in parentheses denote corresponding [WPI curriculum-wide undergraduate outcomes](#) adopted by the faculty on May 20, 2004.

Humanities & Arts Requirement

WPI's innovative curriculum is anchored in its Humanities & Arts (HUA) Requirement, completed by all WPI students and satisfied by a set of six courses of their choosing. The HUA Requirement provides

intellectual scope beyond the sciences and engineering, requiring students to explore the human experience through performance, analysis, the creative process, or cultural exploration.

The HUA Requirement:

- Introduces students to the breadth, diversity, and creativity of human experience as expressed in the humanities and arts.
- Develops students' ability to think critically and independently about the world.
- Enhances students' ability to communicate effectively with others in a spirit of openness and cooperation.
- Enriches students' understanding of themselves.
- Deepens students' ability to apply concepts and skills in a focused thematic area through sustained critical inquiry.
- Encourages students to reflect on their responsibilities to others in local, national, and global communities.
- Kindles in students a lifelong interest in the humanities and arts.

With greater insight into the diversity and creativity of the human condition, students gain the skills and reflection necessary for situating science and technology in human contexts and assuming roles as tomorrow's global citizens.

To complete this requirement, students choose between six sequential courses in a single foreign language, concluding with an advanced course that satisfies the Inquiry Seminar or Practicum requirement; or a six-course set of courses, including a breadth and a depth component, that culminates in an Inquiry Seminar or Practicum. All students must complete two units, equaling six courses, of HUA coursework. [Learn more...](#)

Meeting the Requirement

Breadth and depth are important components of the HUA requirement. Breadth ensures that students have the chance to explore more than one disciplinary area of interest and learn about the different modes of intellectual inquiry in at least two HUA disciplines. The breadth requirement is fulfilled by selecting one course each from two of five intellectual course groupings. Depth is satisfied by completing one unit (three courses) of work related by theme or discipline, including at least one 2000-level or higher course. Depth can be organized around a disciplinary field of interest, like music or philosophy, or around a thematic interest, like Chinese culture.

Students conclude their HUA Requirement with an Inquiry Seminar or Practicum in the area of depth. As an alternative to the breadth component, students can take six sequential foreign language courses in German, Spanish, or Chinese culminating in a seminar or practicum. [Learn more...](#)

Planning Your Course Sequence

Proper planning is essential to creating a course sequence that best fulfills the HUA requirement. Contacting HUA professors in your [areas of interest](#) early in your WPI career is strongly advised to see what courses they suggest as preparation for Inquiry Seminars/Practicums they teach. [Learn more...](#)

