

## **COURSE REDESIGN TECHNOLOGY GRANTS**

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### **Program Overview**

The Course Redesign Technology Grant program is a joint initiative co-sponsored by the Academic Affairs Division and the Information Technology Division at WPI. The grants are administered by the Academic Technology Center, who works with the Center for Educational Development and Assessment (CEDA), Educational Development Council (EDC) and other instructional and information technology service groups on campus, such as the Computing and Communications Center (CCC), the Gordon Library, and other departments within the Academic Affairs Division.

The goals of the Course Redesign Technology Grants are to assist faculty with:

- Redesigning their instructional approaches using technology to achieve enhanced learning.
- Taking advantage of efficiencies that can be realized through the use of technology for teaching.
- Evaluating the impact of new instructional approaches.

Details of the Course Redesign Technology Grant program include:

- Faculty work one-on-one with an ATC project coordinator to define, design, implement, and evaluate the course redesign. Other members of the WPI community are brought into the project on an as-needed basis. If faculty apply for a grant as a group, the entire group works with the ATC coordinator.
- Course redesigns will look to technology to assist with addressing teaching challenges. Course redesigns require more than just using technology as an add-on and instead will incorporate technology into the course on a broader scale.
- Redesigned courses must be implemented within two years of the time the grant is awarded, but the timeline for the project can be flexible. For example, a redesigned course may be implemented and evaluated within 6 months or within 18 months, depending on the scope of the redesign, when the course is scheduled, etc.
- Funding is available to support course redesign projects. Proposals must include a budget justification which identifies how the money will be used. In an effort to gain maximum impact from the available funds, proposals in the \$3,000 to \$5,000 range are generally more likely to be funded.
- Evaluation of each course redesign project is required to determine whether or not the project objectives were achieved. This evaluation should occur within 6 months of implementation.
- Faculty who receive a grant are expected to share their experience with their WPI colleagues. Food for Thought sessions, department presentations, or other similar venues would be appropriate. They are also required to write a brief report summarizing the project activities and outcomes.

### **Examples of Course Redesign Projects**

- Students review learning objectives, key concepts and supplemental material posted on the class myWPI site prior to class and complete online quizzes, which provide immediate feedback to students and data for instructors to assess student knowledge levels. During class, the instructors use clickers to compile and display students' responses to problem-solving activities. Class time is divided into short lecture segments followed by sessions in which students work in small

groups applying concepts to solve problems posed by the instructors. Instructors reduce class time spent on topics the students clearly understand, increase time on problem areas, and target individual students for remedial help.

- Students use online interactive activities and simulations to review and augment text material. Students receive credit for completing four online mastery quizzes each week and are encouraged to take the quizzes as many times as needed until they attain a perfect score. Only the highest scores count.
- Reduce class meetings from four to two each week. Create online resources (such as recorded presentations, demonstrations, animations, simulations, videos, etc.) that allow students to cover key concepts of theory-based content. Allow students to practice their knowledge in online self tests. Use the remaining class meetings for discussion and group activities.
- In a foreign language class, reduce class-meeting times from 3 to 2 per week. Move grammar instruction, practice exercises, testing, writing, and small-group activities focused on oral communication to the online environment. Use in-class time for developing and practicing oral communication skills.
- Engage students in the course content by having student groups teach the rest of the class about a key concept in the course. Students create a wiki page or a multimedia project that teaches the other students about each concept.

### **Eligibility and Criteria**

All WPI full-time faculty members are eligible to apply for a Course Redesign Technology Grant. Teams of faculty who want to collaborate on a joint project are also encouraged to apply. Part-time adjunct faculty are welcome to apply to the program with a full-time faculty member.

To be awarded a grant, faculty must submit an application outlining specific challenges they are facing in a course they are scheduled to teach within the next two years. The application also requires faculty to submit a budget, ideas for evaluating their course redesign project, and ideas for sharing their experience with others at WPI and beyond. Grantees are responsible for consulting with WPI's Institutional Review Board (IRB) to determine if the project involves human subjects and constitutes exempt or non-exempt activity.

Proposals will be evaluated by members of the EDC and the ATC on the following criteria:

- Significance of the teaching challenge and the potential impact on student learning by redesigning the course and incorporating technology.
- Initial ideas for evaluating the impact of the course redesign.
- Plans for sharing the course redesign experience with others (i.e. making a presentation at a Food for Thought session or department meeting).
- Project's overall feasibility, likelihood of success, and alignment with the stated goals of the program.
- Cost effectiveness and how the grant will enable the proposed work.

### **Application Process**

Applicants are encouraged to discuss their ideas with one of the individuals listed below prior to submitting a proposal.

To apply for a Course Redesign Technology Grant, a cover page and proposal must be submitted no later than **January 15, 2010**. Submissions can include a complete hard copy of the cover page with original signatures and the proposal, or a hard copy with original signatures of the cover page with a

Word file containing the remainder of the proposal. *Proposals should be submitted to Kate Beverage in the ATC (x6012, [kwrigley@wpi.edu](mailto:kwrigley@wpi.edu)).*

Applications will be reviewed by representatives from the ATC and from the Educational Development Council (EDC), including at least two faculty and a student. Applicants will be notified of the review committee's decisions by the end of D-term.

Proposals should contain:

- Cover page
- Narrative  
The narrative should not exceed five double-spaced pages and should include the following:
  - The scope of the teaching challenge to be addressed
  - The objectives of the project
  - A description of the proposed redesign, including specifics on how technology will be included and how it will assist with achieving the objectives
  - Expected results
  - A plan for evaluating the results of the project
  - A plan for sharing the course redesign experience with others at WPI (i.e. making a presentation at a Food for Thought session or department meeting)
  - A timetable for development, implementation and evaluation of the project
- Budget with Justification  
Allowable costs may include:
  - Faculty compensation, which will be funded as a stipend
  - Student hourly wages (not tuition)
  - Software or hardware

Questions about the program can be addressed to any of the following individuals:

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Kate Beverage  
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