

**Educational Innovation in the College of Engineering
Spring 2016
Request for Proposals**

Deadline: 5:00 pm Wednesday, February 10, 2016

The Education Innovation Committee (EIC) invites high-impact proposals for innovations to undergraduate education. Projects will be supported through the College of Engineering (COE) via undergraduate differential tuition funds and the Grainger gift. The EIC is particularly interested in innovations that pilot curricula for implementation in the Grainger-funded maker space, but is open to compelling proposals that advance any aspect of the COE educational mission.

Specific areas of priority are:

- Provide freshmen hands-on experience in design and engineering problem solving
- Offer cross-disciplinary (e.g., different departments) collaborative experiences for students that mimic modern engineering practice
- Increase hands-on opportunities, including capstone design projects
- Encourage student innovation and entrepreneurship
- Teaching innovations that are scalable to larger numbers of students

Successful proposals will be aligned with EIC and COE goals, which include:

- Pervasive active learning using any appropriate evidence-based pedagogy
- Promoting retention and success of at-risk or underrepresented students

Proposals may request funding for equipment under the Grainger initiative that would be placed either in the maker space when it opens in Fall 2017, or otherwise generally benefits the COE mission. Typical awards under this program, excluding equipment funds, are expected to be in the range of \$50,000-\$60,000. Requests for larger funding levels will be considered, but also be expected to have significantly greater impact.

Final decisions on funded projects are expected in March 2016. Funded projects are expected to participate in the COE Education Innovation Showcase in April 2016.

Selection criteria include:

- *Alignment with EIC and COE priorities and goals*
- *Sustainability of project outcomes*
- *Likelihood of promoting out-of-the-gate success of the maker space*
- *Highest impact with available funds*

The EIC will review the proposals and make funding recommendations to Dean Robertson.

Proposals must be received by 5:00 pm on Wednesday, February 10, 2016.

Proposal Submission

Proposals will be submitted through academic department offices. Each department should submit their two highest priority proposals involving one or more courses or other academic experiences. Proposals for cross-disciplinary activities do not count against the participating departments' limits.

Submit a single PDF file that includes all supporting documentation using the naming convention LEADPILASTNAME_EICRFP16.pdf by email to:

Barry Van Veen at: bvanveen@wisc.edu

Proposal Format and Organization

The Proposal should include the following:

- 1) Cover Page – project title, the departmental lead faculty name for the project (PI) and contact information (title, address, department or unit, telephone, and email). Below this information list all project collaborators and their primary department or unit.
- 2) Body of proposal – **no more than six single spaced pages** (8 1/2" X 11" with 11 point or larger font) that provide:
 - a. A list of the courses and instructors involved;
 - b. A statement of the motivation and goals for the project;
 - c. A statement of how the project addresses the selection criteria and the number of students impacted;
 - d. A description of the project approach, work plan, and roles of project personnel;
 - e. A description of assessment, dissemination and sustainability of the project outcomes;
 - f. A description of how your project will address retention of underrepresented and at risk groups;
 - g. A description of cooperative features and/or partnerships (if any);
 - h. A description of any equipment requested and how the equipment benefits the maker space and/or COE in general.
- 3) Budget estimate with a description of schedule for FY17 (July 2016–June 2017)
 - a. *Budget* – Provide a budget using the format shown in the appendix of this solicitation. Matching funds are not required, but if they are available please note them. Budgets should not be for normal course offering expenses. Budgets may include travel if appropriately justified (e.g. attending ASEE).

IMPORTANT NOTE: Up to one month faculty or staff summer salary support will be considered with appropriate justification. There is no limit on the amount that can be requested for student support.
 - b. *Budget Justification* – Provide a brief justification for each item in the budget.
 - c. *Project Schedule* – Funding may start at any time but budget expenditures should be completed by June 30, 2017.
- 4) Additional Documentation – Inclusion of additional relevant information is discouraged, but if the PI determines that such additional information is necessary, it is limited to a single page.

Reporting Requirements

1. A poster or other interactive activity describing the project presented at the COE Education Innovation Showcase April 22, 2016.
2. A preliminary report on the status of the project will be due towards the end of the fall semester 2016.
3. A final report will be due on August 1, 2017.
4. Project leaders will deliver a presentation describing the work accomplished to either the EIC or the College of Engineering in Fall 2017.

Questions regarding this Request for Proposals may be directed to any member of the EIC:

Dan Klingenberg	CBE	dan.klingenberg@wisc.edu
Trina McMahon	CEE	trina.mcmahon@wisc.edu
Wayne Pferdehirt	EPD	wayne.pferdehirt@wisc.edu
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Paul Voyles	MS&E	voyles@engr.wisc.edu
Justin Williams	BME	jwilliams2@wisc.edu
Barry Van Veen	ECE	bvanveen@wisc.edu (EIC Chair)
Jake Blanchard	COE	jake.blanchard@wisc.edu (ex-officio)

Other resources that may be helpful include Wend Commons' Teaching and Learning Services (tls@engr.wisc.edu) and the COE Diversity and Equity Committee.

Maker Space Description

The COE Maker Space will occupy the second (entry level) floor of Wendt Commons, and is projected to open in Fall 2017. The facility will include a wide variety of equipment and be structured to encourage creativity, innovation, and design thinking. It will be available to students for extra/co-curricular activities. It will also be used in credit-bearing curricular instruction.

The organization and equipment available in the maker space will evolve to meet changing educational needs and technological advances. At this early point in the design process, available equipment is expected to include: both low- and high-end 3-D printers; 3-D scanners; laser cutters; a variety of electronic controllers, components, and instrumentation; textiles; hand power tools; CAD stations and computers. Additional equipment will also be available, but further discussion is necessary to identify the initial inventory.

Administration of the facility is currently under discussion, including long-term vision, user training, reservation and check out procedures, and support of operational costs.

Appendix: Budget Format

***** Up to one month of summer salary for faculty or staff may be requested, but will only be considered with appropriate justification *****

1. Senior Personnel
 - Name....monthly rate....period....total
 - Fringe benefits (40% of salary for faculty and staff)
 - Subtotal

2. Other Personnel
 - Other professionals (name....monthly rate....period....total)
 - Fringe benefits (40% of salary for faculty and staff)
 - Teaching Assistants (monthly rate....period....total)
 - Project Assistants (monthly rate....period....total)
 - Fringe benefits for TAs and PAs (25% of total salaries requested)
 - Undergraduate students (hourly rateperiod....total)
 - Fringe benefits for student hourlies (5% of salary requested)
 - Subtotal

3. Other Direct Costs
 - Materials and supplies
 - Other services
 - Tuition remission (applicable only for PAs)
 - Subtotal

4. Total Direct Cost (sum subtotals 1 through 3)

5. Equipment (type and cost)

Common Grad Student Title Guidelines in COE

Project Assistant: This title designated for graduate students enrolled in a UW System institution who are employed to assist with research, training, or other academic programs or projects at the UW-Madison.

Teaching Assistant: This title is appropriate for graduate students enrolled in a UW System institution who have been assigned teaching responsibilities in an instructional department under the supervision of an academic staff or faculty member.