# EER & STEM Centers and Programs

- Arizona State University
- University of California-Berkeley
- Clemson University
- University of Cincinnati
- University of Georgia
- Georgia Tech
- University of Kentucky
- Linkoping University (Sweden)
- Michigan State University
- University of Michigan
- University of Minnesota
- North Carolina State University
- The Ohio State University
- University of Pittsburgh
- Purdue University
- Tufts University
- Universidad de las Americas Puebla (Mexico)
- Universiti Teknologi Malaysia
- University of Texas – Austin
- Uppsala University (Sweden)
- Utah State University
- Virginia Tech
- Washington State University
- University of Washington
- Wichita State University
Drs. Donna Llewellyn and Tris Utschig, along with other CETL staff members, encourage, consult, and partner with faculty who become involved in the scholarship and assessment of teaching and learning through individual, program, or grant driven initiatives. CETL offers a range of support for implementing engineering education research and innovation, from classroom consultations to seminars, project-based fellows programs, and retreats. CETL currently supports engineering education research efforts funded by NSF, the US Dept of Education, the Engineering Information Foundation, the Goizueta Foundation, and others.

Dr. Wendy Newstetter is a cognitive scientist with extensive research experience in engineering education. She is supported by the College of Engineering to work with faculty engineering education research efforts. In Biomedical engineering alone, she has collaborated with faculty on NSF funded efforts through grants REESE, EEC, SES, IRES, CCLI and DUE.

The Georgia Tech American Society for Engineering Education Student Section is working to build capacity. They recently held a workshop sponsored by the College of Engineering (COE) and ASEE entitled “Teaching, Scholarship, and Research: Building an Engineering Education Community at Georgia Tech” sponsored by COE and ASEE. Over 60 individuals participated in the day’s events, and the ASEE Student Section is planning similar future events to continue their efforts to improve engineering education and more strongly connect Georgia Tech’s engineering education research community.

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PhD in Engineering Education @
Regional Centre for Engineering Education (RCEE)
Universiti Teknologi Malaysia (UTM)

FACTS ON UTM
- 10 engineering schools
- 2000 tenured academics
- 2,800+ foreign students
- Largest number of engineering alumni in Malaysia
- More than 43% enrollment at graduate levels in engineering and technology in Malaysia

Transforming engineering education through innovative evidence-based practices
- Focus on training and research in Engineering Education
- PhD in Engineering Education program
  - Started in 2008
  - Up till now, 8 students completed PhD
  - Current enrolment: 40 students
- Also: Joint PhD in Engineering Education with Aalborg University, Denmark
- Post-doctoral and faculty position available

Contact:
khairiyah@cheme.utm.my

http://tree.utm.my
The CEER research team includes backgrounds in engineering, other STEM areas, and education. CEER is a DBER center with a core focusing on:

- Further engineering education research
- Widening the network of MSU EER researchers
- Support for outcomes-based education in EER

Collaboration to enhance MSU STEM research

U-Michigan: Center for Research on Learning and Teaching in Engineering

crilte.engin.umich.edu

**Programs to enable research**
- SoTL grants for faculty and graduate students
- PhD Certificate in Engineering Education Research
- Reading group to expand understanding of EER
- Faculty learning community around large course teaching
- EER Day, with multiple programs and a poster fair
- Community-built taxonomy for the field of EER

**Ongoing research initiatives**
- Faculty motivation to adopt effective teaching practices
- Impact of screencast technology on students
- Strategies for innovative design practice
- Ethical development of engineering undergraduates
- Challenges practitioners face when returning to grad school
Mission
The STEM Education Center is dedicated to the transformation of science, technology, engineering and mathematics education.

Initiatives
• STEM Integration
• Learning and Cognition
• Research and Instructor Preparation
• Evaluation and Assessment

Outreach
• Research
• Professional Development
• STEM Colloquium on K-12 Education Research to Practice

Contact Us
www.cehd.umn.edu/stem
stem@umn.edu
Follow us on Twitter, Facebook & Pinterest
PhD Option in Engineering Education

Contacts:
- Robert J. Gustafson, College of Engineering  
gustafson.4@osu.edu
- Paul Post, College of Education and Human Ecology  
post.1@osu.edu

The Leonhard Center for the Enhancement of Engineering Education

Founded in 1990 with a gift from William E. Leonhard

Mission includes:
- Leading and supporting enhancements in undergraduate engineering courses and programs
- Supporting assessment, including ABET
- Leading improvements in communication courses for engineering students
- Preparing graduate and undergraduate teaching assistants
- Conducting externally funded research

Current strategic focus areas:
- Cross-national teams in capstone courses
- Integration of creative process into engineering courses
- Ethics education for first year students
- Technology-enhanced learning

For more information, contact Tom Litzinger at TAL2@PSU.EDU or visit  www.engr.psu.edu/leonhardcenter/
University of Pittsburgh
http://www.engineering.pitt.edu/eerc/
STEM Education

Past and Current Research
- UTeach Engineering (NSF-MSP)
- Beyond Blackboards (NSF-ITEST)
- VaNTH (NSF-ERC)
- Teacher Training for Engineering
- IPRO - Programming Standing Up
- Adaptive Expertise in Engineering
- K-12 LEGO Robotics
- Discourse in K-12 engineering teams
- National HS Curriculum Project

Faculty
- David Allen (Chem Eng)
- Leema Berland (STEM-Ed)
- Richard Crawford (Mech Eng)
- Ken Diller (BioEng)
- Jill Marshall (STEM-Ed)
- Anthony Petrosino (STEM-Ed)
- Catherine Riegle-Crumb (STEM-Ed)
Engineering Education M.S. & Ph.D. Program
• Develop research on how students (K-College) learn/engage in engineering
• Interdisciplinary thesis committee (at least 1 education and 1 engineering professor)

Tufts Department of Education
Engineering Education M.S. & Ph.D. Program
• Develop research on how students (K-College) learn/engage in engineering
• Interdisciplinary thesis committee (at least 1 education and 1 engineering professor)

http://ceeo.tufts.edu/

Utah State University
http://www.engineering.usu.edu/htm/information/phd-engineering-education
Virginia Tech
http://www.enge.vt.edu/

First campus-based center in U.S. to combine research and instructional development missions
Engineering Education Research Center

- Six faculty in College of Engineering and Architecture who focus on engineering education
- About 20 active engineering education graduate students
- Students receive engineering degrees
- Research areas include conceptual change and epistemology, human computer interactions, adoption of innovations, assessment of design skills, problem-based learning, and collective intelligence in design

http://eerc.wsu.edu/
This engineering education wiki is a resource created by the American Society for Engineering Education's Student Division (ASEE Stud), in collaboration with the Center For Engineering Learning & Teaching (CELT). The resource offers lists of programs, centers, researchers, societies, publication venues, etc., intended to help in the exploration of the engineering education field. We hope that ultimately this wiki will encourage community members to expand this resource as a place to inform students and other interested individuals new to engineering education about the research happening in this field at institutions and centers all over the world.

Note about user registration: All site content is public. You do not need to request access or create a user to view the site. If you are interested in helping maintain the site, we welcome you to request access or contact the co-maintainers listed below.

The resource currently consists of lists in the following categories:

- Engineering Education Departments and Programs
  - Graduate level
  - Undergraduate level