

# **NSF Research Experience for Teachers (RET) Site**

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**Pre-RET Teacher Meeting  
College of Engineering and Applied Science  
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# Acknowledgements

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# What is the NSF's RET Program?

## Research Experiences for Teachers (RET)

RET is designed to provide teachers with the opportunity to conduct a research project under the guidance of a faculty mentor, and develop teaching modules related to engineering to take back to their classrooms

# Objectives of Our RET Site

- ❑ Motivate teachers to become critical thinkers
- ❑ Apply science to daily living
- ❑ Use engineering applications (**A**) to convey math and science concepts
- ❑ Encourage students to consider engineering careers (**C**)
- ❑ Show societal impact (**S**)

# Six RET Projects

- ❑ Availability of Safe Drinking Water
- ❑ Making Biodiesel for Research and Education
- ❑ Bio-Inspired Flight
- ❑ Renewable Energy System
- ❑ Simulation-Based Impact Analysis of Signalized Intersections
- ❑ Applications of Nanotechnology in Health and Beauty Products

# RET Participants

- ❑ 12 teachers
- ❑ Work in teams of 2 teachers, engineering faculty and graduate student
- ❑ 5 graduate fellows from Project STEP
- ❑ Education and engineering faculty and practicing engineers

# Why RET?

- ❑ Not enough engineers
- ❑ Declining interest in math and science fields

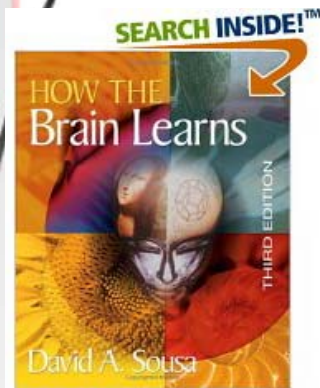


# RET Program Purpose

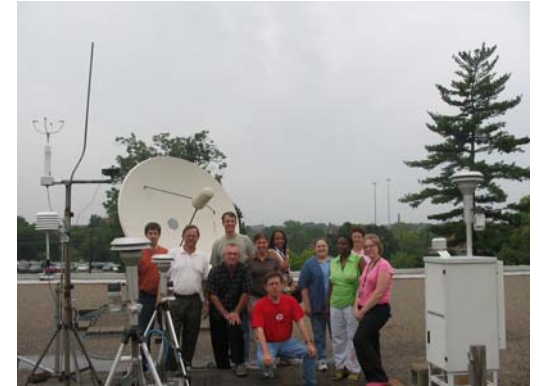
- ❑ To develop qualified and motivated teachers
- ❑ To provide solid learning for students
- ❑ Increase entrance of students into science, technology, engineering or mathematics (STEM) careers



# Teacher Development Process



- ❑ Participate in professional development skills workshops & enrichment seminars taught by educators and engineers in morning
- ❑ Conduct research in the afternoon
- ❑ Produce biweekly presentations and written reports
- ❑ Attend 4 field trips pertaining to some projects
- ❑ Write weekly electronic journals



# Outcomes of Projects

- ❑ Technical research report
- ❑ Classroom implementation plan from research
- ❑ Display Posters: Research & Classroom Implementation Plan
- ❑ Presentations: Research & Classroom Implementation Plan
- ❑ Project outcomes evaluated by external professional engineers and educators



# Project Outcomes for Teachers

- ❑ Learned importance of scientific method of inquiry
- ❑ Familiar with critical research skills used by engineers
- ❑ Understanding link of education to community issues and events





**QUESTIONS?**