Advancing Engineering Education Research to Meet the Needs of the 21st Century

Call for Applications

Institute for Scholarship on Engineering Education (ISEE) 2006-07

July 9 – 14, 2006: ISEE Summer Summit Kick-off Meeting

Howard University, Washington, D.C.

A unique year long research opportunity sponsored by the Center for the Advancement of Engineering Education (CAEE) to advance state-of-the-art scholarship in engineering education

Application Deadline: March 6, 2006

What are crucial needs of the 21st century? The theme for this year’s ISEE is diversity. This theme of diversity incorporates a “nation as laboratory” idea that builds on previous themes of “class as lab” (U Washington 2004-05) and “campus as lab” (Stanford 2005-06). A “nation as lab” theme emphasizes the need to approach engineering education from ALL perspectives:

- Although there are many exemplary programs for increasing the diversity of the engineering profession, our community has hit a plateau—we need to identify “next tier” strategies. What do we know about our students? What brings them into engineering and what keeps them there? How do they navigate an engineering education?
- What are opportunities to impact institutional cultures? What can we learn about effective strategies for a “scholarship of impact”?
- What are key principles behind the successes of exemplary programs? What does this suggest regarding “scaling up” programs or informing other programs in other educational settings?
- We also need to better understand the impact of a more diverse profession on the nature of engineering work. What ways of knowing leverage different perspectives that promote effective solutions to ever-increasing complex social and technological problems?
The Institute for Scholarship on Engineering Education (ISEE) is a year long intense, interactive, and hands-on approach for impacting engineering education in a scholarly way. ISEE seeks to advance engineering education by:
- Investigating engineering student learning and advancing the scholarship in this field
- Using research to make a difference locally and nationally
- Developing community networks for supporting long term professional growth and fulfillment

The ISEE Experience

<table>
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<th>Application Process</th>
<th>15 Scholars will be selected on the basis of submitted applications. The application process provides opportunities for individuals and teams of 2-3.</th>
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<tbody>
<tr>
<td>Summer Summit “kick-off” at Howard U. (July 9-14, 2006)</td>
<td>Learn about complexities of human learning. Develop education research skills. Formulate and plan a study.</td>
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<tr>
<td>Year long Project on your home campus (2006-07 Academic Year)</td>
<td>Collaborate to gather data on your campus. Analyze and synthesize findings. Interact with the ISEE community.</td>
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Who Is Eligible: ISEE 2006-07 encourages applications from engineering faculty and administrators of diversity-related programs in diverse institutional settings. A particular emphasis is on building teams of Scholars to promote local communities of engineering education researchers.

Who should apply: Please consider applying if you:
- Have a nagging question and want to take the next step to transform it into a research study.
- Want to be part of a growing engineering education research community.
- Want to engage in deep conversations with individuals who share similar interests in advancing engineering education.
- Have always wanted to do this kind of research but don’t know how to get started.

Honorarium: ISEE covers all travel and lodging expenses for the Summer Summit. Faculty Scholars receive a $2500 honorarium for travel and research expenses to support their ISEE project (such as attending and presenting work at engineering education conferences). For example, 2004-05 Scholars ran a large interactive poster session at the 2005 Frontiers in Education Conference.

To learn more about ISEE or ask questions about the application process, please contact Dr. Robin Adams (rsadams@purdue.edu) or Dr. Lorraine Fleming (lfleming@howard.edu).

ISEE is supported by NSF (grant # ESI-0227558) through the Center for the Advancement of Engineering Education (www.engr.washington.edu/caee/) and aligns with the national agenda from the National Academy of Engineering’s Center for the Advancement of Scholarship in Engineering Education (CASEE).