Conference Workshops

All workshops are scheduled for Sunday on The Citadel Campus

Note box lunches will be provided for all workshops

Workshop 1

Title: "High Performance Learning Environments (Hi-PeLE)".
Instructors: Pedro E. Arce and Jennifer A. Pascal.
LeTellier Hall Room 202 Time 1100AM-3:30PM

Hi-PeLE is a student-centered, active, and collaborative intensive learning methodology that enhances the development of the student ability to become an independent learner. The methodology uses some of the most advanced pedagogical approaches to learning (see, fro example, "How People Learn" by Branford et al., NAE) and it is organized in three key "engines": One related to the knowledge development and acquisition (by the students) and based on two embedded cycles of learning and documentation; another one related to a "Linear Engineering Sequence" (LES) where the students focus on innovation and creativity; the third one is a "connector" between the two engines mentioned and it is related to "Recourses" where instructors, TA, materials, experts, etc are placed to serve the student's learning needs. This methodology has been implemented in numerous places here within the USA and in Argentina, Peru and Chile with excellent results. The workshop conductors will introduce the audience, in an interactive fashion, to the the key aspects of Hi-PeLE and help instructors to develop their own strategy for their courses.

Workshop 2

Title: "Introduction to BioMEMS on a Shoestring"
Instructor: Kevin Seales
LeTellier Hall Room 209 Time 10:00AM-3:00PM

This workshop will provide the background and basic information about microfabrication and microfluidic devices for biological research. It is intended for investigators and teachers wishing to begin educational and research projects in biomicroelectromechanical (bioMEMS) devices. The workshop consists of a brief presentation followed by hands-on design and fabrication of microfluidic devices using inexpensive shrinky-dinks, inkjet printers and toaster ovens.

It's more fun than your average workshop!

Workshop 3

Title: "Robert E. Noyce Program
Instructor: Dr. Sheryl Sorby
LETellier Hall Room 303 Time Noon- 4:00PM

The Robert E. Noyce program was established by Congress and is administered through the National Science Foundation with a stated mission of: *"The Robert Noyce Teacher Scholarship Program, seeks to encourage talented science, technology, engineering and mathematics majors and professionals to become K-12 mathematics and science teachers."* The budget for the Noyce

program has grown exponentially in recent years; in 2009 with stimulus funding, the success rate for Noyce was ~75%.

We are offering a ½ day workshop that informs engineering faculty and administrators about working with the K-12 system and about how to successfully prepare a proposal for the *Noyce* program. We are offering information that will improve your professional understanding of the *Noyce* program and upon completion of our workshop you will be able to write competitive grant applications to future cycles of *Noyce* funding.

These workshops will be led by a former NSF program officer, and engineering faculty who have extensive experience in working with K-12 educators.