Which HIEP(s) will you be using?

- Undergraduate research
- Common intellectual experience
- Collaborative assignments and projects

Please describe your project (100 words or less)

I would guide students, together with their friends, to address societal needs and to fulfill their intellectual curiosity through design, research and invention. Students are encouraged to do original research, individually or as a group. Students would gather voluntarily in our Hydrodynamics Laboratory every Saturday (9-5) for student-centered, project-based study. Students would be informed about grant opportunity and publication/presentation opportunity. Students from previous class and other colleges could also participate to share common intellectual experience. Students are guided to write and present their invention closure, FAU Undergraduate Research Grant Application and research papers.

Describe 2 learning outcomes and what are you planning to assess and HOW?

Number of invention closure, FAU Undergraduate Research Grant Application and research papers produced in class and percent of students continue to participate in research after the course is over are good measures. Students will present their achievement at the Annual FAU Undergraduate Research Symposium. I would like to focus on interdisciplinary collaboration in the Fall 2014. Therefore number of students involved from outside of my class is another important measure. I would like students to form clubs, like Invention Club and Interdisciplinary Research Club. My Fall 2012/2013 class has formed a very successful Robotics Club, attracted 60+ students in their first meeting. They have three projects team ongoing for various goals initiated by their own. Get students to involve in out-of-class academic pursuit early on and bond them together could have a high impact on their retention and academic success.

Please describe the VALUE ADDED that you will have from this experience – SPECIFICALLY what you will do differently than in the past to make this an enhanced experience (100 words or less)

The most interesting problems involve multiple disciplines. I would like to get student outside engineering involved in my Saturday research gathering and our research and invention team. This experience provide an opportunity to reach out to other instructors to team up with. The participation may allow me to highlight the freshman research as a main thrust of QEP. This could happen in the Spring 2014 UG Research Symposium. There are 2000 undergraduates at FAU with undeclared major, I like to get them involved in interdisciplinary study to help them find their place at FAU.