Course Syllabus

CIVL 498A: Environmental Stewardship and Engineering

September – December, 2015: Tues/Thurs 5:00-6:30 pm

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Course Description:
If you are interested in working in, and contributing to, the green economy, CIVL 498A will be of interest. This seminar-style course provides a grounding in aspects of Environmental Stewardship, including key methodologies from ecological engineering, selected Design for the Environment techniques, design processes for sustainable infrastructure systems as well as sustainable infrastructure case studies, and Adaptive leadership skills. Weekly discussions of readings, and presenting findings from both library research and interviews with experts, will make up the core activities in the course. Throughout, you will develop a portfolio containing material you will use in your future as a practicing "green" engineer.

Prerequisites:
- At least 3rd or 4th year engineering standing
- technology and society credits
- introductory understanding of mass and energy balances

Goals:

- Describe and critique the context of environmental stewardship and engineering.
- Describe and apply knowledge frameworks that are relevant to environmental stewardship.
- Describe and apply (within an introductory situation), environmental stewardship design strategies and analysis techniques used in best practice engineering.
- Describe and apply leadership models leading to environmental stewardship
- Critique engineering case studies through the lens of environmental stewardship.

Course Deliverables:

- **Class Presentations (30% of Grade)**
- **Technical Report (40%)**
- **Portfolio (20%)**
- **Professional Development Journal (10%)**

Tentative Course Topics: