Offered in Spring 2012!
Open to Students From All Departments!

Sustainable Energy

Two Sections for Undergrads and Grads: EEL 4935-003 / EEL 6935-003
by Dr. Rudy Schlaf, Electrical Engineering

This course will enable you to:
• **Understand** the scientific background of conventional and renewable energy, its storage and consumption.
• **Quantify** the impact of the various energy and storage technologies, as well as paths of energy use/consumption.
• **Assess** the feasibility of the most prominent sustainable energy conversion methods.
• **Identify** challenges to implement a world-wide sustainable energy economy.
• ** Participate** in the current debate about sustainable energy.

**More info:** [http://rsl.eng.usf.edu/Pages/Teaching.html](http://rsl.eng.usf.edu/Pages/Teaching.html)
Syllabus and a sample lecture are posted.

**Course Materials:** This course is based on scientific papers and internet resources, which will be made available through Blackboard to all enrolled students.

- Nissan Leaf EPA sticker. It states “99 miles/gallon”. Pretty good—or not?
  This course will discuss how to properly compare between “electrical mileage” and conv. gas mileage.
- Offshore wind turbines. Pretty? or not?
- Energy consuming air vortex behind a plane. Can we make better planes?
- Solar energy conversion: What is better, photovoltaics or solar thermal electricity generation? This course will discuss the pros and cons.
- Mountaintop removal coal mining: Fossil fuel use not only increases CO$_2$ in the atmosphere, but also causes extensive direct harm to the environment during the mining process.