

GENB 7397 Seminar in Energy Efficiency (Section 25633)

Instructor: Coordinated by Dr. Radha Radhakrishnan

Class day & Time: Thursday 3:00-6:00 PM

Energy efficiency stands at the intersection of energy & sustainability. The success of the nation and the world in finding better ways to use energy as efficiently as possible will go a long way in shaping our future.

This is a seminar course created collectively by several faculty members who teach courses or have interests in Energy & Sustainability and is open to all graduate students.

Each class of three hours will be devoted to one topic on Energy Efficiency and will be led by one professor. Each class will begin with an overview of a key issue involving energy efficiency (for example, the CAFE standards requiring a 54.5 miles per gallon fleet average for automobiles sold in the U.S. in 2025 and after). Then an outside expert from industry, government, or environmental groups will address the class on an important aspect of the problem being explored. The last hour will be class discussion.

The following includes a list of topics, professors who will lead the discussion, and potential guest speakers.

Professor in charge	Department	Topic	Potential Guest Speaker
Radha Radhakrishnan	Business	Overview	
Joe Pratt	Economics/ Business	History of Advances in Energy Efficiency Forecast into the Future	Mark Finley, VP BP
William Epling	Chemical Engineering	CAFE Standards & Auto Engine Efficiency	John Wall, CTO Cummins
Badri Roysam / Xin Fu	Electrical Engineering	Energy Efficient Computing	Alan Goodrum, etc. of HP
Haleh Ardebili	Mechanical Engineering	Energy Storage	Donald Sadoway / Elon Musk / NRG Exec
Leonard Bachman / James Madget	Architecture	Energy Efficiencies in Buildings – several potential topics	To Be Announced
Heidar Malki / Wajiha Shireen	Technology	Role of Power Electronics in energy efficiency	To Be Announced
Jacqueline Weaver / John Dernbach	Law	Fed. Energy Efficiency & Conservation Laws	To Be Announced
Ramanan Krishnamoorthi	Chief Energy Officer U of H	Solar Thermal	David Ramm, Chairman & CEO BrightSource Energy
Alex Freundlich	Cntr. For Advanced Matl.	Solar Energy (Professor to confirm)	afreundlich@uh.edu
Raymond W. Flumerfelt / Su Su Wang	Chem Engg Mech. Engg.	Wind Energy (Professor to confirm)	To Be Announced
Zhifeng Ren	Physics	Thermoelectrics	To Be Announced
Radha Radhakrishnan	Business	Refinery / Petrochemicals	To Be Announced

For further details, contact Dr. S. Radhakrishnan at sradhakrishnan3@uh.edu.