

# New Fall 2014 Energy Courses

- **ENERGY 790: Renewables and the World's Poor, Meeting the Needs of 1.2 Billion People Who Lack Access to Power**
  - **Instructors:** Jim Rogers, Tim Profeta
  - **Wednesdays, 1:25 – 2:40, Gross Hall 104**
  - **20 graduate students, Selection Process TBD**
  - **Course Description:** One of the great challenges of our time is the need to bring electric power to the 1.2 billion people in the world who lack it. This graduate seminar will explore the challenges between rural and urban systems, and the technologies that can solve the issues of each situation. We will also investigate the impediments to progress, and explore the different business models and technologies that are being used to tackle the challenge. The class will culminate by asking students to help design the most appropriate model for deploying power technologies in a range of world regions, and build upon Rogers' investigation of this topic in his role as a University Fellow.
- **ENERGY 620: Energy Finance**
  - **Instructors:** Emma Rasiel, Jennifer Francis, S. Vish Viswanathan, John Buley
  - **To be scheduled, Most likely to be scheduled in Fuqua on Monday nights from 5:30 – 8:30pm**
  - **Graduates and Advanced Undergraduates who meet Pre Requisites**
  - **Course Description:** Exploration of energy financing and investment decisions as they relate to energy companies and energy-related projects. Key topics include discount rates, discounted cash flows, valuation approaches, option pricing, real options, energy derivatives, project finance, energy specific taxation, and risk management. Prerequisites include: College-level Calculus, Intermediate-level microeconomics, Introductory-level Macroeconomics, and either Economics 572 or Engineering Management 530.
- **PUBPOL/ENERGY 590S: Applied Energy Economics**
  - **Instructor:** Steven Sexton
  - **Monday/Wednesday, 3:05 – 4:20, Rubenstein Hall 149**
  - **15 Graduates and Advanced Undergraduates**
  - **Course Description:** This course trains students in the use of data to analyze energy policy and market outcomes. Students will be introduced to time-series and panel data methods used for the purposes of forecasting, program evaluation, and market analysis. Concepts will be introduced in the context of contemporary energy economics problems, including decisions concerning public and private energy infrastructure investments and economic and environmental regulation in oil, natural gas, and electricity markets. Students should be familiar with multivariate econometrics (e.g., ECON 208, PUBPOL 812, or similar) and intermediate microeconomic theory (e.g., ECON 201, PUBPOL 303, or similar). Previous knowledge of energy markets (e.g., ENV 635) and policy analysis (e.g., PUBPOL 155, ECON 338, ENV 531, PUBPOL 803) is advantageous but not required.

- **LAW 327/ENERGY 727: Energy Law**
  - **Instructor: Jonas Monast**
  - **Time and Location TBD, will be scheduled in the Law School**
  - **25 Law Students and 20 other Graduate Student Seats**
  - **Course Description:** The course will examine the legal framework governing energy production and consumption in the United States and policy approaches for balancing energy needs with other societal goals.

*New course on Energy Applications of Big Data Analytics coming in spring 2015*