



Interested in Renewable Energy?

Want a brief introduction to renewable energy technologies and how they might meet our future energy demands?

Consider EET 498: Renewable Energy and Electricity Production

Introduction:

A new course is being offered in the Fall of 2010 to present renewable energy topics. This course will introduce the different types of renewable energy technologies and geographical considerations when evaluating renewable energy resources. This unique approach allows students to be able to not only understand the technologies but be able to assess the viability of a particular site.

Beyond the renewable energy and resource presentation, the course will cover power plant economics and fuel concerns. The course will compare costs between renewable energy technologies and conventional fossil fuel plants. The course will also look at the scale and location of electric power producing plants.

This course will be taught by licensed professional engineers who have worked in the field of renewable energy. Dr. David Dvorak is an expert on fuel cell systems and has been developing a graduate program in renewable energy in Iceland. Mr. Paul Villeneuve has worked extensively in the power generation, supply, and delivery arena and was heavily involved with the first commercial scale wind farm in the state of Maine. These two instructors will surely provide you a new way of thinking about renewable energy.

Who Should Register:

This course will cover more than just the science of renewable energy technologies. As a result, those who are interested in policy regarding renewable energy are also encouraged to enroll. Further, those interested in economic evaluations of proposed power plants will also find the course to be of value. Finally, if you are interested in the future of energy supply in the world, you should register for this class. Prerequisites for this course include physics and introductory calculus.

Method of Delivery:

This course is a three credit hour course that will meet on Tuesday and Thursday from 11AM to 12:15PM. The course will also be offered via the web so flexible scheduling is available.

Contact:

Dr. David Dvorak: david.dvorak@umit.maine.edu

Mr. Paul Villeneuve: paul.villeneuve@umit.maine.edu



Registration:

- **On-Site:** The course will meet Tuesdays and Thursdays in room 207 Shibles Hall from 11:00AM to 12:15AM. People interested in attending the live lectures and participating in classroom discussion should enroll in **Section 0983 (CRN 15008)**.
- **Off-Site:** All course materials, including recorded lectures, will be available over the web. People interested in taking the course from a remote location should enroll in **Section 0993 (CRN 15010)**.

Continuing Education:

Registered students who complete this course with an average of C or better are eligible to receive 45 Professional Development Hours (PDHs).

About the Instructors:

Dr. David Dvorak, P.E.

Dr. S. David Dvorak is a Professor of Mechanical Engineering Technology at the University of Maine, and Coordinator of the Fuel Cell Systems and Hydrogen Specialization at RES, the School for Renewable Energy Sciences in Akureyri, Iceland. A Fulbright Scholar, Dr. Dvorak has worked with fuel cell projects in Europe and the USA. He received Bachelor's and Master's Degrees in Mechanical Engineering from the University of Illinois at Urbana-Champaign in 1981 and 1982 respectively, and a Ph.D. in Physics from the University of Maine in 1998. From 2000 to 2007 he served as Director of the UMaine School of Engineering Technology. Dr. Dvorak is a Licensed Professional Engineer, and began working on alternative energy applications over 20 years ago, investigating the use biomass-derived fuels for industrial gas turbines at GE Aircraft Engines in Cincinnati Ohio. He is also a Certified Energy Manager through the Association of Energy Engineers, and has extensive experience helping Maine companies reduce energy costs. Dr. Dvorak's current interests include fuel cell applications using liquid renewable fuels, control of fuel cell power systems, and innovative polymer electrolyte fuel cell membranes.

Mr. Paul L. Villeneuve, P.E.

Mr. Villeneuve has over six years experience at the University of Maine. He developed, completely revised, and taught 9 courses. He developed advanced power systems courses that cover grid operation. He works closely with industry in the power systems field to provide advanced analysis. Mr. Villeneuve consulted on numerous alternative energy projects including Mars Hill Wind Farm, Stetson Mountain Wind Farm, and Record Hill Wind Farm to name a few. He provided engineering advice and counsel on numerous projects at the University of Maine. Paul was invited to write a chapter in the Encyclopedia of Energy Engineering. He has published and presented numerous publications at national conferences, and was the General Conference Chair of the 2010 American Society of Engineering Educators' Conference of Industry and Education Collaboration.