ENGR 610/PSC 603N: Renewable Energy Policy

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Email: Please use the WebCampus Email tool for the course. If the WebCampus system is down, then use: kaunecki@ohio.edu

Office hours: Email Professor Kauneckis if you would like to set up an appointment for a Web conference.

Course Description:
This course focuses on the key policy instruments utilized to foster use and development of renewable energy. It covers a basic introduction to public policy, reviews the scope of policy instruments, various levels of policy-making, and assesses different policy tools as they relate to renewable energy. The goal of the course is to introduce students to the range and scope of renewable energy policy, develop the analytic framework to understand the variety of policy impacts, and theoretical and practical foundation for understanding renewable energy policy as a professional working in the field.

Prerequisite: For those students enrolled in the Graduate Renewable Energy Certificate program, ENGR 600 Alternative Energy Fundamentals is recommended preparation for this course.

Course Objectives: On successful completion of the course, student should have developed competency in the following areas:
1. A general understanding of the rationale for government interventions to stimulate the use and development of renewable energy sources.
2. Knowledge of the range and scope of current renewable energy policy.
3. Understanding of the vocabulary of various policy approaches.
4. Awareness of the benefits and problems of different policy instruments.
5. Exposure to new approaches under development and developments on the horizon.

Student Learning Outcomes: Student learning outcomes will be assessed using discussion contributions, written assignments and a series of progress exams. At the conclusion of this course, students will be able to:
1. Explain how and why government interventions stimulate the use and development of renewable energy sources.
2. Discuss the range and scope of current renewable energy policy.
3. Use the vocabulary of policy to discuss various policy approaches.
4. Describe the benefits and problems of different policy instruments.
5. Discuss new and potential future policy developments.
**Required Texts:** There are two textbooks required for this course. I have taken great care in selecting what I consider the best overall renewable energy policy textbooks on the market. However they are not necessarily comprehensive and additional material from outside the textbooks is included in the lectures.


**Other Recommended Readings:** These are NOT required for the class, however are very good sources to have in your library as a renewable energy professional.


Tester, Jeff. *Sustainable Energy: Choosing Among Options.*


**Student Expectations:** This course is designed to be a graduate level class in renewable energy policy offered online. This implies a number of things that are important to you as a student. First, I assume you are interested in the material, or otherwise you would have taken a different course in this series. As a graduate course, it is expected that you come with a fair amount of individual initiative and self-motivation. This means that if terms or concepts are unfamiliar, and you are unable to understand the material from the book, that you initiate conversations with other students and conduct the necessary work outside the class to understand the material. Additionally, you should be aware that the readings for this course are at a relatively high level and intellectually demanding. While it is not essential that you understand all the material presented in the readings, you should be able to summarize the key important points from each reading. The lecture notes will provide supplemental explanations of the material covered in the readings when needed, but it is critical that you have wrestled with the concepts from the readings first, before referring to the lecture notes. Finally, as graduate students you bring additional professional experiences that undergraduate students typically do not have. I highly encourage you to draw on these experiences for understanding the course material and in discussions with fellow students.

**Instructor Expectations:** As an instructor for this course, my responsibilities include providing engaging and relevant material to discuss, direction and feedback on ideas presented in class, and treating each student with fairness and respect. I will attempt to respond to questions in a timely manner.
Online Discussion Assignments: There is a discussion forum for each week associated with the readings and lecture, excluding exam weeks. You are required to post to the discussion forum each week, submitting at least one original discussion post and replying to at least one classmate’s discussion post each week. More exchange is encouraged. Your original posting should be posted by mid-week and all other discussion through Sunday midnight will be used to evaluate your discussion. (Each week’s discussion assignment is worth 10 pts.) However continued discussion on a point of interest is encouraged throughout the class and the discussion forum will remain open for additional input. The grading rubric that I will use to grade your online discussion is located in the Assignments and Grading area in this Syllabus section.

As the instructor for this course, I will occasionally intervene to answer specific questions and steer the conversation in the right direction, but as graduate students you are expected to be independent learners and use all the resources at your disposal, including your peers and outside resources as needed. Students should remain civil and offer reasoned arguments in all online discussions with your peers. Please keep your personal opinions out of the online discussions, only reasoned arguments and supported facts will receive credit for participation. Disagreement is encouraged, but offer logic and data to support a position, not emotion and opinion.

Exams: The format of the 3 course exams will be multiple choice and is typically composed of about 50 questions, worth two-points each. The exams are open book/notes and have a one-hour time limit. Exam 1 covers Modules 1-3, Exam 2 covers Modules 4 – 6, and Exam 3 covers Modules 7 – 9. Exam 1 and 2 may be taken anytime during the week indicated in the schedule.

Exam 3 is proctored through an external service called ProctorU and must be taken sometime between 5:00 a.m. (PST) Monday, Nov. 30, and 11:45 p.m. (PST) Friday, Dec. 4. To use the ProctorU service, you must create an account in advance at http://go.ProctorU.com. See the Exam 3 (Proctored) page in the course menu of WebCampus for more details.

Course Grading: Final grade will be based on:

Discussion (100 points): Interaction with fellow classmates is an important part of the course. You are expected to participate in online discussions and respond to questions posted on the discussion board. Discussion forums have been created that allow for group discussion and will be evaluated toward participation. Each week’s posted lecture has three questions that require your response in the online discussion forum. To earn full participation credit (10 pts. for each discussion weekly discussion) you must answer the three questions, and respond directly to at least one other student’s postings. These can be follow-up questions, critiques and/or additional supporting information and evidence. You interaction with other students is very important in order for you to develop a network of other energy professionals as well as illustrate your understanding and command of the material.
Exams (100 points each): There are three exams for the course. Exams will typically cover material from the previous three or four lectures and associated readings.

**Grade Scale:** Final course grades will be based on the following scale:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
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<tr>
<td>A</td>
<td>93-96</td>
</tr>
<tr>
<td>A-</td>
<td>90-92</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
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<tr>
<td>C</td>
<td>73-76</td>
</tr>
<tr>
<td>C-</td>
<td>70-72</td>
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<tr>
<td>D+</td>
<td>67-69</td>
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<tr>
<td>D</td>
<td>63-66</td>
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<tr>
<td>D-</td>
<td>60-62</td>
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<tr>
<td>F</td>
<td>below 60</td>
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**Academic Honesty:** Individual responsibility is one of the key aspects of independent learning. It is important that the student adhere to a personal code of ethics in the completion of the course lessons. Discussion of the lesson materials with other students is encouraged, but all work submitted must be your own. Anyone caught violating this university regulation will be subject to disciplinary action as stated in the Academic Standards section of the General Catalog at the University of Nevada, Reno. A violation may result in your failing the course.

**Civility:** Students are expected to conduct themselves in a civil manner at all times and in all forums. Students are responsible for contribute to the maintenance of a campus environment that fosters intellectual curiosity and diversity. That means respectful engagement with differing opinions and views. Harassment of one individual by another—in person, via e-mail or in electronic discussions—is uncivil behavior, which discourage the open expression of ideas on academic subjects.

**Class Conduct:** With recommendation of the instructor and approval of the college dean students may be dropped from class at any time for negligence or misconduct. Students may also be dropped for non-attendance upon indication of the instructor. Non-attendance in an online class consists of one or more of the following: Not logging into the WebCampus course a minimum of two times a week, not submitting assignments on a weekly basis and not participating in discussion questions by the dates assigned.

**Statement on Audio and Video Recording:** Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.

**Equal Access:** The Disability Resource Center at the University of Nevada supports the provision of equal access to students with disabilities. Any student with a disability
needing academic adjustments or accommodations is requested to contact the Jill Wallace, jwallace@unr.edu, or the Disability Resource Center at the University of Nevada, Reno, as soon as possible to arrange for appropriate accommodations.

Disability Resource Center/0079
University of Nevada, Reno
Reno, NV 89557
(775) 784-6000
http://www.unr.edu/drc/

Course Outline:

<table>
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<th>Date</th>
<th>Topic, Readings</th>
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| Week 1   | **Module 1: What is Renewable Energy Policy?**
           | Background: Randolph and Masters (2008), *Energy for Sustainability*, Ch. 1 “Energy Imperative and Patterns of Life”, Ch. 2 “Energy Sources and Sustainability”, Ch. 3 “Energy Futures”, Ch. 4 “Fundamentals of Energy Science” |
| Week 2   | **Module 2: Policy and Energy Analysis**
| Week 3   | **Module 3: Energy Conservation**
           | Randolph and Masters (2008), *Energy for Sustainability*, Ch. 6, “Energy Efficiency for Buildings”. |
| Week 4   | **Exam 1**
           | Covers Modules 1 though 3. |
| Week 5   | **Module 4: Solar**
| Week 6   | **Module 5: Electric Power Systems**
| Week 7   | **Module 6: Community Planning**
           | Randolph and Masters (2008), *Energy for Sustainability*, Ch. 8, “From Whole Building to Whole Community”, Ch. 15, “Whole Community Energy and Land Use” |
| Week 8 | **Exam 2**  
Covers modules 4 – 6. |
|---|---|
| Week 10 | **Module 8: Transportation**  
| Week 11 | **Module 9: Biofuels and Biomass**  
| Week 12 | **Module 10: National, State and Local Policy**  
| Week 13 | **Thanksgiving Week** |
| Week 14 | **Exam 3 (Proctored)**  
Covers modules 7 – 10. |