**NOTE to prospective students:** This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course site for enrolled students and may be more current than this sample syllabus.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Economics of Traditional and Renewable Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>Econ 466</td>
</tr>
<tr>
<td>Credits</td>
<td>4</td>
</tr>
<tr>
<td>Instructor Name</td>
<td>Marc Hellman, PhD</td>
</tr>
<tr>
<td>Instructor email</td>
<td>541 737 1481</td>
</tr>
<tr>
<td>E-MAIL</td>
<td><a href="mailto:marc.hellman@oregonstate.edu">marc.hellman@oregonstate.edu</a></td>
</tr>
<tr>
<td>Instructor website</td>
<td><a href="http://oregonstate.edu/~hellman">http://oregonstate.edu/~hellman</a></td>
</tr>
</tbody>
</table>

**Course Description**
Reviews and analyzes the economics and structure of world markets for various traditional energy (e.g., oil, coal, natural gas), as well as renewable energy (wind, geothermal and solar) with the latter focusing on the Pacific Northwest electrical industry structure and regulatory framework. PREREQS: ECON 201.

**Communication**
Please email your instructor for matters of a personal nature. I will reply to course-related questions and email within 24-48 hours. I will strive to return your assignments and grades for course activities to you within five days of the due date. Please email at marc.hellman@oregonstate.edu for matters of a personal matter or questions specific to you and do not send questions through Canvas.

**Course Credits**
This is a four-credit course and students should expect to devote approximately 120 hours to instructional materials, activities, and assignments. The course qualifies as a Writing-Intensive Course (WIC) for undergraduate students majoring in Economics.

**Technical Assistance**
If you experience computer difficulties, need help downloading a browser or plug-in, assistance logging into the course, or if you experience any errors or problems, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email [osuhelpdesk@oregonstate.edu](mailto:osuhelpdesk@oregonstate.edu) or visit the [OSU Computer Helpdesk](http://osuhelpdesk) online.

**Learning Resources**

**Required Textbooks:**

Most required reading materials and articles will be made available through Canvas except for the textbook sections.

**Note to prospective students:** Please check with the OSU Bookstore for up-to-date information for the term you enroll ([http://osubeaverstore.com/Academics](http://osubeaverstore.com/Academics) or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the correct ISBN.
This course is offered through Oregon State University Extended Campus. For more information, contact:

Web: ecampus.oregonstate.edu  
Email: ecampus@oregonstate.edu  
Telephone: 800-667-1465

**Canvas**

This course will be delivered via Canvas where, through the discussion board, you will interact with your classmates. Within the course Canvas site, you will access the learning materials, such as the syllabus, discussion board topics and discussions, assignments, and projects.

**Measurable Student Learning Outcomes for Econ 466**

Per university policy, we now specify student learning outcomes for all courses. According to the Office of Academic Programs, student learning outcomes are specific statements indicating an understanding, knowledge, or skill-set that a successful student will have obtained upon the completion of a course.

- Describe the oil, natural gas and coal production background history and markets.
- Describe the wind, solar and geothermal and other renewable background legislative and operating history and markets.
- Recall the electric industry market structure with a focus on the Pacific Northwest.
- Explain the regulatory framework of the electric utility industry including treatment of renewable energy.
- Summarize and explain the major public policy issues regarding energy efficiency and carbon emissions.
- Analyze energy-related policy issues using standard economic tools.

**OSU Writing Intensive Curriculum Outcomes**

- Develop and articulate content knowledge and critical thinking in the discipline through frequent practice of informal and formal writing.
- Demonstrate knowledge/understanding of audience expectations, genres, and conventions appropriate to communicating in the discipline.
- Demonstrate the ability to compose a document of at least 2000 words through multiple aspects of writing, including brainstorming, drafting, using sources appropriately, and revising comprehensively after receiving feedback on a draft.

**Evaluation of Student Performance for Econ 466**

There will be one midterm exam. The exam will be one hour 50 minutes in length and worth 100 points. You may bring a calculator and one 8 ½ X 11 inch sheet of paper with handwritten notes on both sides of the paper to the midterm exam. The exam must be proctored to receive credit. **ECON 466 requires a paper exam. As such ProctorU cannot be used as a proctor for this exam. You will need to find an in-person proctor for this exam. If you have trouble finding one in your area please reach out to ecampustesting@oregonstate.edu.**

Another component of your grade worth 100 points of your grade is summary discussion papers. The paper must identify the article and presents a summary and observations of a reading material assigned to the class. The purpose of the reading is not to get thorough in depth knowledge of the articles but rather to capture the main themes and concepts of the papers as well as your own thoughts on the paper as well as how the article compares in analysis or information to other topic reading materials. **The eligible reading sections are denoted by bold letters in the syllabus.** Each summary paper is worth up to 10 points and the maximum number of points available for this class component is 100 points. There are 13 different course topics and a summary discussion paper is due for each of the 13 topics. Your score will be the sum of your best ten out of thirteen summary reports. **Your discussion paper must be no less than 500 words each and is to be posted on Canvas no later than by 5 pm PST, Friday for the class week that the reading materials are listed.**

A listing of each of the thirteen summary discussion topics is provided in the **Course Content Section** for each week along with the listing of selected reading articles.

**Class Participation**

Another component of your grade is class participation and is worth 25 points. There are two discussion board posts required on Canvas each week of no less than 50 words each of which at least one post is in response to another student’s discussion board post. For each week that the discussion board post requirement is met, you will receive 2.5 points. Discussion board questions will be posted on Canvas for each week of class.
The final exam for this class is worth the remaining 175 points of the total 400 points and is in the form of an Energy Issue Review and Analysis Report on a topic of your choice concerning any of the subjects covered in this course. (See also Instructions for Energy Issue Review and Analysis Report)

- The Energy Issue Review and Analysis Report shall be no less than 2500 words not including the bibliography, must include use and citation of at least five outside sources, include at least one graphs which are economically based such as demand and supply curves and involve either moving along a curve or shifting a curve with the discussion and graph clearly detailing the movement.

The report shall also contain the student's synthesis of the discussion in terms of observations and recommended policy actions and/or research. The process for developing an Energy Issue Review and Analysis Report is to first submit a first draft of the report which will be reviewed for content and substance. A final draft will then be due a few weeks later which reflects feedback provided on the first draft. Your paper needs to be a minimum of 2500 words but this requirement should be viewed as just that: a minimum. Your paper should be as long as necessary to clearly express your ideas and thoughts and no longer. There is a minimum of five outside sources for the paper; again, you should have as many references as necessary to fully support your ideas. This Energy Issue Review and Analysis Report is a term long project and should be viewed as such. Your paper should reflect ten weeks of concentrated effort and work, not a couple of days of cobbling something together.

The writing submissions will be graded on content, critical thinking, spelling and grammar. The discussion should be written in a working professional genre. While this writing style might be new to the student, through instructor feedback the student should become better aware of expectations and format.

Instructions for Summary Discussion Papers

- The purpose of each of the thirteen Summary Discussion Papers is to convey the main themes and concepts of the papers selected as well as your own thoughts on the topic, as well as if the article differs in analysis or information to other required topic reading materials.
- Any of the articles within each of the respective thirteen topics that are identified by bolded text in the Course Content Section of the syllabus or the relevant textbook sections may be selected as a summary discussion paper.
- The articles selected must be clearly identified.
- The minimum word requirement is 500 words.
- The Summary Discussion Paper should be double-spaced and be in format of Microsoft Word.
- All submissions must be posted no later than 5 PM PST, Friday, for the class week the reading materials are listed, on Canvas.

Summary Discussion Papers Grading Assessment: Your Summary Discussion Papers will be graded on two distinct but equally important points.

1. Content: To what extent has the review and analysis accurately represent the selected articles and facts presented in the article and also briefly discuss differing views from other required reading materials on that topic? Does the summary Discussion Paper also contain your own original thinking and observations?
2. Presentation: Is the paper clear, concise, easy to follow and well-edited? Are there spelling or grammar mistakes? Is the paper well-written in a professional work environment format?

Instructions for Energy Issue Review and Analysis Report

- The purpose of the Energy Issue Review and Analysis Report is to provide the opportunity to conduct a more in-depth review and analysis of a topic that is of interest to you, as well as contain your synthesis of the discussion in terms of observations and recommended policy actions and/or further research.
- There is great latitude in choice of topics for the Energy Issue Review and Analysis Reports as it can relate to any of the topics and articles included in the class materials listed in the syllabus and required textbooks.

This course is offered through Oregon State University Extended Campus. For more information, contact:

Web: ecampus.oregonstate.edu Email: ecampus@oregonstate.edu Telephone: 800-667-1465
The abstract for the proposed Energy Issue Review and Analysis Report is due Friday, 5 pm PST of Week 4. The one page proposal should describe the topic area and issue to be analyzed and include at least five preliminary citations.

The rough draft of your Energy Issue Review and Analysis Report is due Friday, 5 pm PST of week 7. This draft should have all major sections complete including:
   a) Introduction of topic or issue
   b) Background discussion, including at least five citations of prior published research
   c) Research and Analysis
   d) Conclusion

The final draft of your Energy Issue Review and Analysis Report must be a revision to the original draft report and is due Wednesday, 5 pm PST of Finals Week

The minimum word requirement is 2500 words, not including bibliography.

The Energy Issue Review and Analysis Report should be double-spaced and be in format of Microsoft Word.

Any data used for analysis should be provided in a separate file in Excel format with each variable well described.

The Energy Issue Review and Analysis Report must include at least one graph which is economic based such as demand and supply curves and involve either moving along a curve or shifting a curve with the discussion and graph clearly detailing the movement.

All submissions must be posted on Canvas.

Energy Issue Review and Analysis Report Grading Assessment:
Your Energy Issue Review and Analysis Report will be graded on two distinct but equally important points.
1. Content: How interesting and informed are your ideas? Is this paper a “book report” (bad) or your own original thinking, supported by ideas you have read and researched (good)? How well have you expressed those ideas? To what extent has the review and analysis report accurately represented published articles and discussed differing views on the topic?
2. Presentation: Is the paper clear, concise, easy to follow and well-edited? Are there spelling or grammar mistakes? Is the paper well-written in a professional work environment format?

Grading Scale
Grades will be awarded consistent with the table below:

<table>
<thead>
<tr>
<th>Cumulative Points Grading Scale</th>
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<tbody>
<tr>
<td>400-370</td>
</tr>
<tr>
<td>369-360</td>
</tr>
<tr>
<td>350-359</td>
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<tr>
<td>349-330</td>
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<tr>
<td>320-329</td>
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<tr>
<td>310-319</td>
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</tbody>
</table>

*Decimals will be rounded.

Course Content

Note: Students are responsible for all reading materials listed below in bold. Students are responsible for changes announced during lectures.

<table>
<thead>
<tr>
<th>Week/lecture</th>
<th>Topics</th>
</tr>
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<tbody>
<tr>
<td>Part I: Preliminaries</td>
<td></td>
</tr>
<tr>
<td>Week 1</td>
<td>Introduction to course, course plan, and why the interest in energy and background economic tools.</td>
</tr>
<tr>
<td>Week 2</td>
<td>Oil industry, history and market structure.</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Selected readings for Oil Summary Report #2:</td>
<td></td>
</tr>
<tr>
<td>Chapters 2, 5 and 6, Energy For Future Presidents;</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Week 3</th>
<th>Coal industry, history and market structure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected readings for Coal Summary Report #4:</td>
<td></td>
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</tbody>
</table>

| Nuclear Power. |
| Selected readings for Nuclear Power Summary Report #5: |

| Part II: Electric Market Structure and Regulation |
| Week 4 | Supply and Demand for Electricity in the US, PNW Electric Market Structure and Federal Regulatory Structure.  
Selected readings for Electricity Industry Structure Summary Report #6:  
Topics in electric tariff design.  
Selected readings for Electric Rate Design Summary Report #7:  
One page abstract for final research paper is due |
| Week 5 | Economics of electric power production, linear programming and marginal costs.  
Selected readings for Electric Power Production Economics Summary Report #8:  
Renewable Energy and Portfolio Standards  
Selected Readings for Renewable Resources Summary Report #9:  
Week 6 | First Midterm (Proctored Exam, You can use one page of notes double sided)  
Part III: Energy Policy  
Federal Legislation and the Bonneville Power Administration.  
Selected readings for BPA and Federal Legislation Summary Report #10:  
1937 Bonneville Project Act; The Preference Act;  1980 Regional Power Act, Sections 5 and 7; History of the Residential Exchange Program; The Residential Exchange Program (BPA publication); “The Preference Clause”, Columbia River Power for the People, Chapter 10; “West Coast Interties”, Columbia River Power for the People, Chapter 30. The BPA Fact sheet; The Transmission Act; Hydro, The Story of Columbia River Power; 9th Circuit 2013 Ruling Against BPA; http://www.youtube.com/watch?v=8cbsHTIBN_E&feature=c4-overview-vl&list=PLhze0rva6nVcL1Um9KnXTOH1-h7SFYgic  
Week 7 | Setting Electric Rates (no summary report is required for this set of reading materials)  
First Draft Final Summary Report Due

Week 8  Electric Industry Restructuring.
Selected readings for Electric Industry Restructuring Summary Report #11:

The quest for conservation—utility incentives, market structure, the decoupling of energy revenues and utility profits.
Selected readings for Conservation Resource Summary Report #12:

Week 9  Regulation of Carbon.
Selected readings for Carbon Regulation Summary Report #13:

Carbon continued

Selected readings for Carbon Regulation Summary Report #13 (continued):

Week 10  No Classes
Preparation for Energy Issue Review and Analysis Report

Finals  Energy Issue Review and Analysis Report is Due Wednesday 5 PM of Finals Week

Course Policies

NO LATE PAPERS ARE ACCEPTED FOR ANY PARTS OF THE ENERGY ISSUE REVIEW AND ANALYSIS REPORT.

This course is offered through Oregon State University Extended Campus. For more information, contact:

Web: ecampus.oregonstate.edu  Email: ecampus@oregonstate.edu  Telephone: 800-667-1465
Failure to turn in a rough draft will result in your final paper grade being dropped by two letter grades. Failure to turn in the abstract will result in your final paper grade being dropped by 1 letter grade. A late paper will receive a score of zero.

No extra credit is awarded in this class.

**Discussion Participation**
Students are expected to participate in all graded discussions. As noted above, a component of your grade is Discussion Board Participation and is worth 25 points. There are two discussion board posts required each week of no less than 50 words each of which at least one post is in response to another student’s discussion board post. For each week that the discussion board post requirement is met, you will receive 2.5 points.

**Proctored Exams**
This course requires proctored exams.

**Makeup Exams**
Makeup exams will be given only for missed exams excused in advance by the instructor. Excused absences will not be given for airline reservations, routine illness (colds, flu, stomach aches), or other common ailments. Excused absences will generally not be given after the absence has occurred, except under very unusual circumstances.

**Exam Time Limits**
The midterm exam in this class is timed and is one hour and fifty minutes.

**Incompletes**
Incomplete (I) grades will be granted only in emergency cases (usually only for a death in the family, major illness or injury, or birth of your child), and if the student has turned in 80% of the points possible (in other words, usually everything but the final paper). If you are having any difficulty that might prevent you completing the coursework, please don’t wait until the end of the term; let me know right away.

**Guidelines for a Productive and Effective Classroom**
Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university’s regulations regarding civility.

Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this course, paying particular attention to the following:

- Unless indicated otherwise, please complete the readings and view other instructional materials for each week before participating in the discussion board.
- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.
Statement Regarding Students with Disabilities
Oregon State University is committed to student success; however, we do not require students to use accommodations nor will we provide them unless they are requested by the student. The student, as a legal adult, is responsible to request appropriate accommodations. The student must take the lead in applying to Disability Access Services (DAS) and submit requests for accommodations each term through DAS Online. OSU students apply to DAS and request accommodations at our Getting Started with DAS page.

Accessibility of Course Materials
All materials used in this course are accessible. If you require accommodations please contact Disability Access Services (DAS).

Additionally, Canvas, the learning management system through which this course is offered, provides a vendor statement certifying how the platform is accessible to students with disabilities.

Expectations for Student Conduct
Student conduct is governed by the university’s policies, as explained in the Student Conduct Code.

Academic Integrity
Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit Academic Integrity for Students, or contact the office of Student Conduct and Mediation at 541-737-3656.
OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.

b) It includes:

(i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.

(ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.

(iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).

(iv) TAMPERING - altering or interfering with evaluation instruments or documents.

(v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.
c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University’s Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

**SafeAssign Plagiarism Prevention**

Your instructor may ask you to submit one or more of your writings to Canvas’s SafeAssign plagiarism prevention service. Your assignment content will be checked for potential plagiarism against Internet sources, academic journal articles, and the papers of other OSU students, for common or borrowed content. SafeAssign generates a report that highlights any potentially unoriginal text in your paper. The report may be submitted directly to your instructor or your instructor may elect to have you submit initial drafts through SafeAssign and you will receive the report allowing you the opportunity to make adjustments and ensure that all source material has been properly cited. Papers you submit through SafeAssign for this or any class will be added to the OSU SafeAssign database and may be checked against other OSU paper submissions. You will retain all rights to your written work. For further information, visit [Safe Assign – What is it?](#)

**Tutoring**

While this is a senior and graduate level class, there may be some topics for which the student may need assistance. [NetTutor](#) is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Students connect to live tutors from any computer that has Internet access. NetTutor provides a virtual whiteboard that allows tutors and students to work on problems in a real time environment. They also have an online writing lab where tutors critique and return essays within 24 to 48 hours. Access NetTutor from within your Canvas class by clicking on the NetTutor button in your course menu.

**OSU Student Evaluation of Teaching**

Course evaluation results are extremely important and are used to help me improve this course and the learning experience of future students. Results from the 19 multiple choice questions are tabulated anonymously and go directly to instructors and department heads. Student comments on the open-ended questions are compiled and confidentially forwarded to each instructor, per OSU procedures. The online Student Evaluation of Teaching form will be available toward the end of each term, and you will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. You will log in to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.

**REFUND POLICY INFORMATION**

Please see the [Ecampus website](#) for policy information on refunds and late fees.