IST 212: Energy

Section 202— Lecture: MWF 1:00-1:50pm

Room: Science ML 119

Instructor: Thomas Jones E-mail: jonest@marshall.edu

Office Hours: Mon, Wed 11am, 2pm or Wed. 3:00-4:00 or by appointment in room Morrow 115

**Course Description**

The production and use of energy underpins our modern lifestyles. Students will investigate topics ranging from fossil fuel extraction to electrical generation and the transfer of the energy around the country. West Virginia is pivotal in all these energy topics.

**Required Textbooks**

* Energy Explained vols. 1 & 2. Vikram Janardhan and Bob Fesmire 2011

ISBN 978-1-4422-0372-3 hardback

* Shale Gas: The Promise and the Peril. Vikram Rao 2012

ISBN 978-1934831106

**Policies**

* Students with Disabilities: The Marshall University H.E.L.P. Program is committed to providing assistance through individual tutoring, mentoring and support, as well as fair and legal access to educational opportunities for students diagnosed with Learning Disabilities (LD) and related disorders such as ADD/ADHD.  If you have, or believe you may have, a handicap or learning disability that will make it difficult for you to complete this course as structured, please contact the H.E.L.P. office in Myers Hall at 696-6252 (http://www.marshall.edu/help/).  The H.E.L.P. program will assess your situation and provide information designed to help me meet your educational needs.
* Plagiarism or cheating will result in a failing credit for the course and may result in further University sanctions. There will be no second chances. This is taken seriously.
* Absences will be excused only with written excuses in accordance with University policy.
* The University Computing Services Acceptable Use Policy, the Affirmative Action Policy, the Academic Honesty Policy, and the **all important Inclement Weather Policy** can all be found at this link: <http://www.marshall.edu/assessment/Syllabus%20Information/University_Policies.doc>

**Grading Policy**

Debate 100

Participation 100

Presentation 200

Homework 100

Group Presentation 200

Quizzes 100

Test 1 100

Test 2 100

**Total** 1000

**Grade Scale**

90-100% A

80-89% B

70-79% C

60-69% D

Below 60% F

**Course Goals/Assessment:**

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| --- | --- | --- |
| Course Student Learning Outcome | How Practiced in this Class | How Assessed in this Course |
| Introduce students to the relationship between themselves and the worlds’ energy sources. | Class lecture (CL), Hands on examples and discussion (HOED) | Class projects, paper, & presentation |
| Detail the likely alternative energy sources of the future. | CL, HOED | Class projects, paper, presentation, quizzes & exams |
| Discover the positives and negatives of many energy sources. | CL, HOED | Class projects, paper, presentation, quizzes & exams |
| Investigate the role of transportation with energy production. | CL, HOED | Class projects, paper, presentation, quizzes & exams |
| Relate the scientific method to daily life and decisions. | CL, HOED | Class projects, paper, presentation, quizzes & exams |
| Students will use general computer programs and email. | CL, HOED | Class projects & paper |
| Students will use above techniques to collect data, analyze it and present findings using power point and mini videos. | CL, HOED | Class projects, paper, presentation, quizzes & exams |

**Assignment Details**

1) formal debate format between small groups chosen by students. Topics chosen by groups but must be OK’d by professor.

2) Points for class participation come from a series of small tasks assigned during class time. These brief projects will be submitted via email.

3) Students will complete a 5 page papers on chosen topics. Papers will have a minimum of 10 citations with no more than 6 web pages. One citation must be a book not including dictionaries, thesaurus, etc. The paper will be argumentative in format.

4) Students will form groups of 4 to present a 20 minute multimedia presentation for the class. Topics will be verified with the professor. No repeat topics. “First Come…First Serve” on topics so turn them in early! Each student must speak for a minimum of 5 minutes.

5) Most classes will begin with a simple 10 point quiz on the reading materials assigned. The goals of these quizzes are to inform students on their current retention of assigned readings and to introduce topics for discussion.

6) Two written exams will be given. The first exam will be given at midterm and the second as a final.

**Make-up Exams and Late Penalty**

Make-up exams **will not** be given unless under extenuating or unusual circumstances as well as satisfactory written justification. If you miss an exam due to an unexcused absence you will receive a grade of zero. University excused absences or those occurring with a good (my discretion) reason, with that reason given **prior** to missing the exam (email or find me!) will be excused. Make-up exams MUST be taken within **one** week of the original scheduled date.

If an assignment is turned in late, after the deadline I set, I will automatically take off ten points before grading it. If there is a problem or you have an emergency, email me the assignment. I will always accept assignments turned into me by email but I prefer you to hand them in.

**Schedule**

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| Topics: Week | Subject | Readings |
| week 1 Jan 19-13 | Introduction | Syllabus & Volume 1: Chapter 1 |
| week 2 Jan 16-20 | Intro | Monday- No class - Martin Luther King Jr.  Volume 1: Chapter 2 |
| week 3 Jan 23-27 | Oil | Volume 1: Chapters 3 & 4 |
| week 4 Jan 30 - Feb 3 | Oil | Volume 1: Chapters 7 & 8 |
| week 5 Feb 6-10 | Oil | Volume 1: Chapters 9 & 10 |
| week 6 Feb 13-17 | Gasoline | Volume 1: Chapters 5 & 6 |
| week 7 Feb 20-24 | Fossil Fuels and Global Warming | Volume 1: Chapters 11-13 |
| week 8 Feb 27-Mar 3 | **Midterm**  Chapters 1- 13 |  |
| week 9 Mar 6-10 | Electricity | Volume 1: Chapters 14-17 & Volume 2 Chapter 15 |
| week 10 Mar 13-17 | Policy | Volume 1: Chapters 18-20 |
| week 11 Mar 20-24 |  | Spring Break! |
| week 12 Mar 27- 31 |  | **Dr. Jones at mussel Conference Cleveland, OH**  **No class this week!** |
| week 13 Apr 3-7 | Renewable  Energy | Volume 2: Chapters 1-6 |
| week 14 Apr 10-14 | Energy and Transportation | Volume 2: Chapters 7-13 |
| week 15 Apr 17-21 | Energy Security and Efficiency | Volume 2: Chapters 14, 17-21 |
| Week 16 Apr 24-28 | Nuclear Energy and Energy Revolution | Volume 2: Chapters 16 &24 |
| Week 17 May 1 - 5 | **Final**  Volume 1 14-20  Volume 2 1-24 | Final exam is Monday May 5 from 12:45 |