

# **Course Syllabus: FRF 101-J**

## **Alternative Energy – Separating Myth From Reality**

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### ***Mission, Goals and Objectives of FYF 101 at Wilkes University:***

#### ***Mission:***

To provide an academically rigorous experience that challenges students to develop the strategies essential for a successful transition into the Wilkes University culture.

#### ***Goals:***

To facilitate significant learning experiences through which first-year students develop:

1. self-knowledge and intellectual curiosity
2. an openness to diversity,
3. a commitment to lifelong learning
4. civic responsibility.

#### ***Objectives:***

Each First Year Foundations (FYF) course will provide techniques that assist first-year students in achieving long-term academic success at Wilkes University. Specifically, each of these courses will:

1. help develop the student's critical thinking skills
2. provide techniques for the effective evaluation and utilization of information resources
3. aid the student in making the necessary academic transition from high school to the collegiate level.

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## ***Description and Objectives of FYF 101J – Alternative Energy***

#### ***Description:***

Modern human civilization depends upon energy to drive our machines, give us light, and regulate our thermal environment. Over the past century, the energy has largely come from fossil fuels like coal, oil, and natural gas. Many scientists are concerned that the byproducts of fossil fuel combustion are leading to potentially catastrophic climatic change. To address that problem, and overcome dwindling energy supplies, many are advocating the development and implementation of alternative renewable energy like wind, solar, geothermal, biomass, and hydrogen. But are those alternatives more sustainable and environmentally friendly? This course will explore the growing scientific evidence relating to the costs and benefits of alternative energy, and will help you to distinguish between reality, hype, and fanaticism.

***Topical Objectives:***

Students completing FYF 101J will be able to:

- Understand the current trends of traditional energy production and consumption locally, nationally, and on a worldwide basis
- Learn and critically evaluate arguments about the sustainability of current forms of energy production and use
- Identify potential sources of alternative energy being explored
- Learn and critically evaluate information about the benefits and weaknesses of each alternative energy source from a variety of perspectives
  - Potential energy yield
  - Economic
  - Environmental
  - Sociopolitical
- Develop a well-reasoned personal philosophy about the present energy situation and the best way to move forward on developing and implementing alternative sources
- Develop the ability to meaningfully participate in a group seeking to understand a complex issue from a variety of perspectives, and communicate its findings to others.

***Students will also learn:***

- How to be an outstanding student
- How to interact effectively in a group situation
- Bibliographic search techniques
- How to effectively communicate electronically
- The relationship between Web 1.0 and Web 2.0
- How to evaluate information sources, especially those on the Internet, for reliability
- About data and its relationship to knowledge, including
  - forms of data and metadata
  - graphically depicting data
  - interpreting graphs and tables
  - QA/QC issues

***Long-Term Objective***

Students will develop a mature attitude about - and lifelong interest in - energy issues, and will assert leadership on that topic long after the course is completed.

**Information delivery**

***Students will gain information about traditional and alternative energy by way of:***

- Presentations given by the course instructor
- Presentations given by guest lecturers
- Guided inquiries via “Webquests” (see <http://www.webquest.org/index.php>)
- Handouts distributed by the class instructor
- Information provided by students

### **Assessment and Grading**

***Students will be assessed via:***

- Individual and group writing assignments
- Group presentations (in which each student will present)
- Periodic exams
- End of semester poster

***Grading System (subject to change; students will be given fair notice of any changes):***

Writing assignments	100 points
Group oral reports	200 points
Exams (2 @ 75 points each)	150 points
<u>Group poster</u>	<u>200 points</u>
Total	500 points

Grades will be assigned as follows:  $\geq 90\%$  = 4.0; 85-90% = 3.5; 80-85% = 3.0; 75-80% = 2.5; 70-75% = 2.0; 65-70% = 1.5; 60-65 = 3.0;  $< 60\%$  = 0.0. These cutoffs may be adjusted downward.

### **Academic Honesty:**

Academic Honesty requires students to refrain from cheating and to provide clear citations for assertions of fact, as well as for the language, ideas, and interpretations found within the works of others. Failure to formally acknowledge the work of others, including Internet resources, written material, and any assistance with class assignments, constitutes Plagiarism. Cheating and plagiarism are serious academic offenses that cannot be tolerated in a community of scholars. Violations of academic honesty will be addressed at the programmatic and university levels and may result in a decision of course failure or program dismissal. (see University Student Handbook).

#### *University Statement on Intellectual Responsibility and Plagiarism*

At Wilkes the faculty and the entire University community share a deep commitment to academic honesty and integrity. The following are considered to be serious violations and will not be tolerated:

1. Plagiarism: the use of another's ideas, programs, or words without proper acknowledgment
2. Collusion: improper collaboration with another in preparing assignments, computer programs, or in taking examinations.
3. Cheating: giving improper aid to another, or receiving such aid from another, or from some other source.

### **Miscellaneous**

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e-mail: [kklemow@wilkes.edu](mailto:kklemow@wilkes.edu)

Office Hours: MWF, 11 A.M.-12 P.M., TR, 9-10 A.M.;

Course webpage: <http://klemow.wilkes.edu/FYF-101J.html>

IM Screenshot: DrKlemow

Facebook: <http://www.facebook.com/DrKlemow>

## Alignment of Grading Criteria and Course, Programmatic, and Institutional Student Learning Outcomes

### Student Learning Outcomes

Grading Criteria (Course-Level Measures)	FYF 101-J SLOs	FYF SLOs	Institutional SLOs
	By completing this course, students will be able to:	<b>First-Year Foundations</b> Students will demonstrate the skills, qualities, and actions associated with and document progress in achieving or acquiring	<b>Wilkes University</b> Students will develop and demonstrate through coursework, learning experiences, co-curricular and extra-curricular activities
Team oral presentations, exams, poster, exams, writing assignments.	<p>Understand the current trends of traditional energy production and consumption locally, nationally, and on a worldwide basis. Learn and critically evaluate arguments about the sustainability of current forms of energy production and use. Understand potential sources of alternative energy being explored. Learn and critically evaluate information about the benefits and weaknesses of each alternative energy source from a variety of perspectives (including: Potential energy yield, Economic, Environmental, and Sociopolitical). Develop a well-reasoned personal philosophy about the present energy situation and the best way to move forward on developing and implementing alternative sources. Develop the ability to meaningfully participate in a group seeking to understand a complex issue from a variety of perspectives, and communicate its findings to others.</p> <p>How to be an outstanding student, How to interact effectively in a group situation, Bibliographic search techniques, How to effectively communicate electronically, The relationship between Web 1.0 and Web 2.0, How to evaluate information sources, especially those on the Internet, for reliability, About data and its relationship to knowledge, including forms of data and metadata, graphically depicting data, interpreting graphs and tables, QA/QC issues</p>	<ul style="list-style-type: none"> <li>• self-knowledge</li> <li>• intellectual curiosity)</li> <li>• openness to diversity</li> <li>• commitment to lifelong learning</li> <li>• commitment to civic [group or community] responsibility</li> </ul>	<ul style="list-style-type: none"> <li>• interpersonal skills;</li> <li>• knowledge of self as a learner;</li> <li>• practical, critical, and analytical skills;</li> <li>• information literacy;</li> <li>• respect for diversity</li> <li>• environmental stewardship and civic responsibility</li> <li>• knowledge, skills, and scholarship that are appropriate to their . . . general areas of study</li> </ul>