2008 YFU Community College Program

Energy Short-term Programs to Denmark

Program dates: May 29 – June 14, 2008

Course: International Perspectives on Sustainable Energy Syllabus

Course Number: **ENV 148 -** 22:137
Semester Hours Credit: **3.0** **Total Contact Hours: 54**
Days, Time, & Location: **May 29 – June 14, 2008, Denmark**

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1. Course Description:

This course is intended to provide an international perspective on energy and its use. Students will travel to Denmark to study and compare that country's approach to energy use with that of the United States. The international oil Cartel embargo of the 1970's demonstrated how significantly dependent western economies were on imported oil. This course is intended to compare how other governments have dealt with their energy needs since the 1970's. Areas of comparison will include: energy use, energy waste, energy production, energy and the environment and the economics of energy. Course participants will be expected to observe Danish culture while living with a Danish host-family for approximately two weeks. The course will include a pre and post component of study at the student's home college to enhance and reinforce the Danish experience. College level reading, writing and mathematics skills are required.

2. Pre-requisites and/or Co-requisites:

Successfully complete an application interview process

Reading Level: College; Writing Level: College; Math Level: College

3. Textbook Required: N/A

4. Supplemental Materials Required: Internet and email access,

http://www.folkecenter.dk/en/presse/feedback_disaster_for_danish_RE.htm

5. Equipment Required:

Passport, luggage

6. General Course Outcomes:

Upon completion of this course, students should have:

- Assessed the benefits of different approaches to energy production utilized in Denmark.
- Compared and contrasted differences in the standards of living between the Danish and American cultures.

Course (Learner) Outcomes:

- The learner is expected to compare standards of living, energy use per capita, and the environmental impact of the American verses Danish citizens.

Specific Outcomes Competencies:

- The learner is expected to demonstrate personal responsibility by completing the requirements necessary to travel to and from Denmark.
- The learner is expected to demonstrate a respect for the Danish culture and laws.
- The learner is expected to be on time for all scheduled Sustainable Energy class field trips and class activities

Projects Required

- At A Glance-The United States and Denmark:

This project includes short answer, multiple choice and true/false questions regarding the energy, political, sociological, and geographic aspects of the United Stated and Denmark. Students will be given websites to use as reference. This project is posted in Web CT.

- A Comparison - Energy Use in the United States and Denmark:

This project is a 500- word (minimum) paper in which students compare and contrast energy use in the United States and Denmark. Students are given websites to reference and are encouraged to research references of their own. Project criteria posted in Web CT.

- What I hope to gain

Write a one to two page explanation of what you hope to gain from this course and the travel to Denmark.

- Daily Journal:

This project is a daily journal in which students' record impressions/reflections on their time in Denmark. This journal will be filled with experiences of the trip and may well be a most treasured souvenir as well as reference for the final paper.

- Final Paper - A Comparison Revisited

Final Paper: Using your first -hand experiences and new-found knowledge, write a three page paper comparing the Danish energy utilization/conservation to the US system. Include information

and observation of the public as well as private/domestic environment that you observed while in country.

- Delivery Alternatives, Internet: Pre & Post

7. Proposed Tentative Course Activities

a. Journal on observations of Danish energy use and conservation.

b. Individual energy use calculation.

c. Journal article summaries.

Unit conversion lab
Visit to solar energy research facility in Denmark.

d. Visit to wind mill development and production plant in Denmark.

e. Observe Danish travel alternatives.

f. Visit to biomass energy production plant.

g. A talk by an expert on Danish environmental concerns.

A talk by an expert on Danish political (in regards to energy) concerns.

8. Learning Strategies (Instructional Methods):

Experiential, observational, analytical and comparative learning

9. Assessment:

Students will be assessed upon the three Iowa Central Community College General Education outcomes:

Critical Thinking
Effective Communication
Personal Responsibility

10. Confirmed Travel Dates and Proposed Activities Schedule

Thursday, May 29	Depart USA for Denmark
Friday, May 30	Arrive in Copenhagen, train to Tommerup, YFU house and orientation.
Saturday, May 31	Youth For Understanding orientation, bus to Thy and the host families
Sunday, June 1	Folkcenter in Thisted
Monday, June 2	Folkcenter in Thisted - touring

Tuesday, June 3	Folkcenter in Thisted - touring
Wednesday, June 4	Day with host family
Thursday, June 5	Possible class instruction meeting/ Evaluation
Friday, June 6	Bus to Aarhus
Saturday, June 7	Host families
Sunday, June 8	Cooperative society Hjortshoej
Monday, June 9	Visit Danish Technological Institute
Tuesday, June 10	Visit Odense Municipal facilities, Waste Treatment, Steam Heat Reclamation
Wednesday, June 11	Aarhus County public health or some modification of these activities
Thursday, June 12	Site visits and possible exit exam and or evaluation
Friday, June 13	Travel to Copenhagen for city tour and Tivoli amusement park.
Saturday, June, 14	Return travel to USA

11. Possible subjects and Web Sites to explore prior to the Danish Visit:

- Compare and contrast the United States versus Denmark's:
    - energy policies
    - per-capita energy consumption
    - percentage of world oil production
    - percentage of world oil consumption
    - pollution
    - economic affects of these policies
    - quality of life
    - standard of living
- Environmental aspects of energy sources
- Percentage of world energy supplies:
    - Consumed
    - Still available
- Scientific aspects of energy
    - Compare all forms of energy from production, distribution, and consumption a physical standpoint. How many watts must be produced/consumed to deliver one end use watt of energy?

- Environmental aspects of various energy sources
- Scientific aspects of energy
- Compare all forms of energy from production, distribution, and consumption a physical standpoint. How many watts must be produced/consumed to deliver one end use watt of energy?