Wind Power Project

RENG 202 – 5 Credits – January 2012

Class Description:

This class provides a hands-on experience with the development and construction of a 40-foot tall demonstration Wind Turbine. Students will use the knowledge gained in previous classes to construct a low cost and mobile Wind Turbine system for demonstrations in the community. The project includes; site assessment, preparation of a written system plan, acquisition of materials, and system assembly. This demonstration project is off-grid, mobile, and temporary in nature. All materials are to be recoverable for the next class year. This demonstration project may take successive class years to fully complete.

Location:

WEI Headquarters:
Haskell Business Center
1301 Fraser Street, Suite A3
Bellingham, WA 98229

Dates and Times:

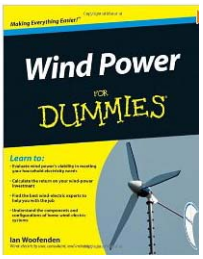
The class lectures are scheduled to run on **Monday and Wednesday evenings** at **6:00-9:00 PM** from **January 4th to January 25th**. This provides (8) classes to cover material for the course. Student teams may conduct fieldwork outside of class lecture times. Project teams will plan and schedule fieldwork outside of class lecture times as needed.

Tuition and Registration:

Tuition must be paid before the class begins. Program enrolled students have seniority for this class and should register online three-weeks before the class begins. Continuing education students may begin registering online two-weeks before the class begins. Students may also send class registrations by mail to the following address:

Washington Engineering Institute
1301 Fraser Street, Suite A3
Bellingham, WA 98229

School Provided Materials:



- **Lecture Notes:** The school provides lecture handouts as needed.
- **Project Reference Book: Windpower for Dummies ISBN: 0470496371.** by Ian Woofenden, Published by For Dummies. The textbooks must be returned at the end of class to gain a transcript grade. A fee of $30 shall be paid for damaged, lost, or destroyed books.

Student Provided Materials:

- 3 Ring Binder, calculator, engineer calculations pad (green sheets), and small straight edge for linework.
- Laptop computer with wireless capability
- Field work clothing
- Positive, motivated, respectful, and helpful classroom character

Instructor

Dave C. Bren, PE, MSCE
Program Instructor

Experience: 15 years of experience in the public and private civil engineering industry. Most recent experience was as the Assistant Public Works Director for the City of Blaine. Mr. Bren established and taught the Civil Engineering Technology program at Bellingham Technical College from 1997-2006 while continuing to consult in the industry.

Registration: Professional Engineer
State of Washington

Education: Master of Science in Civil Engineering
University of Washington

Bachelor of Science in Civil Engineering
University of Washington

Format:

Class Structure: Evenings will typically run in one-hour blocks as follows:

6:00 PM – Class setup and first hour
6:50 PM – Break
7:00 PM – Class
7:50 PM – Break
8:00 PM – Class last hour

Final Exam and Grades:

Students will be graded by lecture attendance (25%), fieldwork participation (25%) and final project grade (50%). The Instructor holds the sole authority to issue grades and shall issue grades based on a 4.0 schedule as follows.

Grading legend

4.0	A
3.7	A-
3.3	B+
3.0	B
2.7	B-

2.4	C+
2.0	C
1.7	C-
1.3	D+
1.0	D
0.7	D-

AU	Class audited with no grade earned
EXP	Experiential credit granted per policy
EDU	Prior education credit granted per policy
I	Incomplete – Instructor Allows Extra Time to Complete
W	Withdrawn from class

January 2012 – Wind Power Project – RENG 202

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
2 National Holiday	3	**4 System Planning I** **6:00-9:00 PM** ♦ Class Project Orientation o Turbine Team Leader o Tower Team Leader o Power Team Leader ♦ Purchasing ♦ Review Background Ch. 1-5	5	6	**7 System Planning II** **9:00-NOON** ♦ Team Reports ♦ Wind Maps, Local Data, Site Data ♦ Purchasing ♦ Review Background Ch. 1-5	8
9 Fabrication I **6:00-9:00 PM** ♦ Team Reports ♦ Fabrication Meetings ♦ Review Assessment Ch. 6-11	10	**11 Fabrication II** **6:00-9:00 PM** ♦ Team Reports ♦ Fabrication Meetings ♦ Review Assessment Ch. 6-11	12	13	14	15
16 National Holiday	17	**18 Assembly I** **6:00-9:00 PM** ♦ Team Reports ♦ Assembly Meetings ♦ Review Assembly Ch. 12-16	19	20	**21 Assembly II** **9:00-NOON** ♦ Team Reports ♦ Assembly Meetings ♦ Review Assembly Ch. 12-16	22
23 Report I **6:00-9:00 PM** ♦ Team Reports ♦ Assembly Meetings ♦ Review Installation Ch. 17-19	24	**25 Report II** **6:00-9:00 PM** ♦ Team Reports ♦ Prove operation, remove, and store for next years class. ♦ Review Installation Ch. 17-19	26 ♦	27	28	29

Washington Engineering Institute, 1301 Fraser Street Suite A3, Bellingham WA 98229
website: www.weiedu.org email: admin@weiedu.org phone: (360) 739-1428

PO Box 483
Custer WA 98240
admin@weiedu.org
(360) 739-1428

Class Registration Form
2010 v2.0

Returning students with a Student ID do not need to fill out the gray portions of this form.

Name	
Address	
Phone	
Email	

Class Requested	**RENG 202 – Wind Power Project**
Class Month / Date	**January 2012**

WAC 490-105-160 – State Licensed School Reporting Requirements:

Student ID #		
SSN #		
Date of Birth		
Gender		
Disability	☐ Yes ☐ No	
Race	☐ American Indian or Alaska Native ☐ Asian ☐ Black/African American ☐ Hawaiian Native or Pacific Islander ☐ Hispanic ☐ White/Caucasian ☐ Multi-racial ☐ Other	
Prior Education	☐ Less than high school graduation ☐ GED ☐ High School Graduate ☐ Post H.S., no degree or certificate ☐ Associate Degree ☐ Bachelor Degree ☐ Master or Doctorate Degree	GED Year _____ Graduation Year _____ Graduation Year _____ Graduation Year _____ Graduation Year _____
Name of Last School Attended		

_____ _____

Student Signature **Date**