

SYLLABUS

CLARENDON COLLEGE
Division of Science and Health

Wind Power Delivery System
Spring 2012

Course Name: *Wind 2459*
Section: *911, 923, 943*
Credit Hours: *4*

Instructor: *John Havens*
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Classroom Location: Pampa room V-04

Meeting Time: Friday (8:00AM – 1220 PM)

Office Hours: Monday thru Thursday: 1:30 – 4:30 PM

I. Course Description:

WECM: Components, equipment, and infrastructure used in the production and transmission of electricity as related to wind turbine power.

II. End of Course Learning Outcomes and Key Activities:

WECM: Explain the operation of power production; describe power transmission components; identify the operational relationship between the generator and convertor; compare the authority of local area, state, and national jurisdiction as reacted to the electrical grid; and interpret grid schematics.

Key Activities from the Wind Turbine Technician Skill Standards:

- (1.2) Startup wind turbine operations
- (1.3) Monitor wind turbine operations

Recognized by the Texas Skill Standards Board: <http://www.tssb.org>

Other Key Activities:

- Describe the theory and operation of wind generators
- Explain wind farm power collection, distribution of high voltage, underground transmission and sub-station
- Describe electrical power distribution/ transformers

- Illustrate the architecture of power electronics in frequency converters

III. Tentative Course Content and Activities:

Textbook(s) (Required):

1. Text book: Soelen, Wayne V. Electrical Essentials for Powerline Workers. 2nd edition, 2005 Thomson Delmar Learning; ISBN: 978-1-4018-8358-4

Tentative Fall Course Schedule	
Wind 1470 Wind Power Delivery Systems	
Week	Lecture Topics
1	Introduction, Course outline
2	Power Systems Overview
3	Review of Electricity
4	Review of Electricity
5	Circuits
6	Circuits and Protection Devices
7	Working in an Electrical Environment
8	Grounding
9	Conductors and Cables
10	Power Quality
11	Metering
12	Transformers
13	Prepare for Final Exam
14	Review
15	Final Exam

Final exam on date/time as posted on Final Exam Schedule on Clarendon College website

IV. Course Requirements

Course requirements include problems and exercises, unit tests and final examinations derived from lectures and labs. Assignments will be due one week from the day they are assigned unless special instruction is given by the instructor.

Pop Quizzes may be given.

Methods and components of evaluation and grading are listed in the following:

Problems and exercises:	20%
Quizzes	30%
Attendance	20%
Final	30%

The final semester grades will be determined based upon the accumulated points you earn from the above categories:

90% and above = A

80 - 89% = B

70 - 79% = C

60 - 69% = D

Below 60% = F

Other Requirements:

- Regular Class attendance is required
- No late homework will be accepted
- Personal tools and supplies include: three ring binder, a scientific calculator, pencils, paper (recommend graphing or engineering paper), etc...

A student's final grade will be made available through the Student Portal accessible through the Clarendon College website.

Classroom Policies:

Classroom Conduct

Failure to comply with lawful direction of a classroom instructor is a disruption for all students enrolled in the class. Cheating violations include, but are not limited to: (1) obtaining an examination, classroom activity, or laboratory exercise by stealing or collusion; (2) discovering the content of an examination, classroom activity, laboratory exercise, or homework assignment before it is given; (3) using an unauthorized source of information during an examination, classroom activity, laboratory exercise, or homework assignment; (4) entering an office or building to obtain unfair advantage; (5) taking an examination for another person; (6) completing a classroom activity, laboratory exercise, homework assignment, or research paper for another person; (7) altering grade records; (8) using any unauthorized form of electronic communication device during an examination, classroom activity, or laboratory exercise; (9) Plagiarism. Plagiarism is the using, stating, offering, or reporting as one's own, an idea, expression, or production of another person without proper credit.

Disciplinary actions for cheating in a course are at the discretion of the individual instructor. The instructor of that course will file a report with the Dean of Students when a student is caught cheating

in the course, whether it be a workforce or academic course. The report shall include the course, instructor, student's name, and the type of cheating involved.

Students who are reported as cheating to the Dean of Students more than once shall be disciplined by the Dean. The Dean will notify all involved parties within fourteen days of any action taken.

American with Disabilities Act Statement:

Clarendon College provides reasonable accommodations for persons with temporary or permanent disabilities. Should you require special accommodations, notify the Office of Student Services (806-874-3571 or 800-687- 9737). We will work with you to make whatever accommodations we need to make.

Dropping a Course:

A student who is enrolled in a developmental course for TSI purposes may not drop his/her only developmental course unless the student completely withdraws from the college. A student may drop any other course with a grade of "W" any time after the census date for the semester and on or before the end of the 12th week of a long semester, or on or before the last day to drop a class of a term as designated in the college calendar. The request for permission to drop a course is initiated by the student by procuring a drop form from the Office of Student Services. (Refer to other policies concerning this issue in the current college catalog online.)

Withdrawal from College:

When a student finds it necessary to withdraw from school before the end of the semester, he or she should obtain a withdrawal form from the Office of Student Services. Students may also withdraw from the college by sending a written request for such action to the Registrar's Office. The request must include the student's signature, the student's current address, social security number and course information details. Students who withdraw after the census date for the semester and on or before the end of the 12th week of a long semester, or on or before the last day to drop a class of a term as designated in the college calendar will be assigned a grade of "W."

Classroom requirements:

The operation of cell phones, MP3 type devices, personal computers, or any other such devices is strictly prohibited during class sessions. The result of such use will result in a zero grade for the event (quiz/test) for that day including final exam day. Cheating, plagiarism or other dishonest acts shall be dealt with to the extent of dismissal from the class permanently on a case by case basis. Under no circumstance will an individual be exonerated after a second incidence, but will be immediately dropped.

Any missed quizzes or exams must be taken within 1 week of the date missed. It is the student's full responsibility to make arrangements to make up a quiz or exam at a time agreeable to the instructor. The Final exam will be taken on the prescribed day or arranged day prior to the final exam.