COURSE SYLLABUS FOR

DC-AC CIRCUITS

CETT 1409

INSTRUCTOR: Danny Bailey Office Phone: 335-6832 Cell Phone:352-9030 Office Hours: As Posted

COURSE NUMBER: CETT 1409

CREDIT HOURS: 4 (3/3)

PREREQUISITE: NONE

CATALOGUE DESCRIPTION:
A study of the fundamentals of direct current including Ohm's law, Kirchoff's laws and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements. Lab fee required. (ICO's 1,2,3,4)

TEXTBOOK: *Basic Electronics by Grob* LAB MANUAL: *Basic Electronics by Grob*

SUPPLIES:
1. Calculator
2. Digital VOM meter
3. Other

LEARNING OUTCOMES:
After completing this course, the student should be able to demonstrate competency in:
- The effective and efficient use of various meters; including volt, amp, and ohm meters
- The use and understanding of power supplies, breadboards and other equipment
- The use and understanding of a wide range of electrical circuits

COURSE REQUIREMENTS:
- Complete all scheduled homework
- Complete all scheduled labs
- Complete written\lab tests
- Complete a written\lab final test

METHODS OF EVALUATION:

GRADING SCALE

POINTS	GRADE
90-100	A
80-89	B
70-79	C
65-69	D
0-64	F

WEIGHT OF COURSE REQUIREMENTS

AREA	GRADE WEIGHT
LAB ASSIGNMENTS	25%
TESTS	25%
FINAL TEST	25%
PROFESSIONALISM	25%
TOTAL	100%

ATTENDANCE POLICY\PROFESSIONALISM POLICY
Attendance is the greatest predictor of your success. Your attendance at EVERY ONE of the classes and labs is important and expected. A substantial grade penalty will be assessed to late work; including homework, lab assignments, and test. The "Professionalism Grade" will be determined by such factors as attendance, tardiness, class participation, and other classroom factors.

AC-DC CIRCUITS
SYLLABUS CHART

Lesson #	Topic	Specific Topic	Labs\ Tasks\Info
1	Intro Syllabus Review Numbers	☐ Numbers	☐Number Info Sheet ☐ LAB
2	RESISTORS	☐ COLOR CODES	Color Code Chart ☐ LAB
3		☐RESISTANCE IN SERIES ☐ BREADBOARDS	☐ Lesson Questions ☐ LAB
4	SERIES CIRCUITS	☐ AMPERAGE ☐ OHMS LAW ☐ AMP METERS	Ohms Law Chart ☐ LAB
5		☐AMPERAGE ☐DECADE BOX ☐OHMS LAW ☐AMP METERS	☐ Lesson Questions ☐ LAB
6		☐AMPERAGE ☐OHMS LAW ☐AMP METERS	☐ LAB
7		☐VOLTAGE DROP ☐ METERS	☐ Lesson Questions ☐ LAB 7.1
8		☐ANALOG METERS Build an analog volt meter	☐ LAB 8.1
9		☐ Solve for unknown resistor values using meter readings	☐ LAB 9.1
10		☐ Fuses and Switches	☐ LAB 10.1
T E S T 1			
11	PARALLEL CIRCUITS	☐PARALLEL CIRCUITS Basic Concepts	☐LAB 11.1
12		☐PARALLEL CIRCUITS	☐LAB 12.1
13		☐PARALLEL CIRCUITS	☐LAB 13.1
14		☐PARALLEL CIRCUITS	☐LAB 14.1
15	WATTAGE	☐Wattage Descriptions ☐Limitations on Resistors	☐LAB 15.1
16	VOLTAGE DROP	☐ Solve for voltage drops using NEC 310-16 and Table 8	☐ Lab 16.1 ☐Questions
17	COMBINATION CIRCUITS	☐ OHMS LAW ☐ SERIES\PARALLEL CIRCUITS	☐ LAB 17.1
18	AMP METER	☐ Construct an amp meter	☐ LAB 18.1
19	POTS\RHEOSTATS	☐ Basics	☐ lab 19.1

20	Combination Circuits	☐Construct an Ohm Meter	☐LAB 20.1
		IN CLASS TEST 2	
T E S T 2			
21	SOLDERING	☐ Soldering Basics	☐ Video\Soldering Projects
22	COMPLEX CIRCUITS	Bridge Circuits\Galvanometer	LAB 22.1
23	MULTISIM	☐ Multisim Basics	LAB 23.1
24	MULTISIM	☐ Multisim	LAB 24.1
25	AC VOLTAGES	☐Basic Oscilloscope Use ☐ Basic Function Generator	☐ LAB 25.1
26		☐ Scope Use in Circuits	☐ LAB 26.1
27		☐ Scope\Voltmeter Measurements (Peak, PP, RMS)	☐ LAB 27.1
28		☐ Transformers	☐ LAB 28.1
29	CATCH UP\REVIEW FOR FINAL		
30	FINAL		
31			

Expectations for Engagement – Face to Face Learning

To help make the learning experience fulfilling and rewarding, the following Expectations for Engagement provide the parameters for reasonable engagement between students and instructors for the learning environment. Students and instructors are welcome to exceed these requirements.

Reasonable Expectations of Engagement for Instructors

1. As an instructor, I understand the importance of clear, timely communication with my students. In order to maintain sufficient communication, I will
    - provided my contact information at the beginning of the syllabus;
    - respond to all messages in a timely manner through telephone, email, or next classroom contact; and,
    - notify students of any extended times that I will be unavailable and provide them with alternative contact information (for me or for my supervisor) in case of emergencies during the time I'm unavailable.

2. As an instructor, I understand that my students will work to the best of their abilities to fulfill the course requirements. In order to help them in this area, I will
    - provide clear information about grading policies and assignment requirements in the course syllabus, and
    - communicate any changes to assignments and/or to the course calendar to students as quickly as possible.

3. As an instructor, I understand that I need to provide regular, timely feedback to students about their performance in the course. To keep students informed about their progress, I will
    - return classroom activities and homework within one week of the due date and
    - provide grades for major assignments within 2 weeks of the due date or at least 3 days before the next major assignment is due, whichever comes first.

Reasonable Expectations of Engagement for Students

1. As a student, I understand that I am responsible for keeping up with the course. To help with this, I will
    - attend the course regularly and line up alternative transportation in case my primary means of transportation is unavailable;
    - recognize that the college provides free wi-fi, computer labs, and library resources during regular campus hours to help me with completing my assignments; and,
    - understand that my instructor does not have to accept my technical issues as a legitimate reason for late or missing work if my personal computer equipment or internet service is unreliable.

2. As a student, I understand that it is my responsibility to communicate quickly with the instructor any issue or emergency that will impact my involvement with or performance in the class. This includes, but is not limited to,
    - missing class when a major test is planned or a major assignment is due;
    - having trouble submitting assignments;
    - dealing with a traumatic personal event; and,
    - having my work or childcare schedule changed so that my classroom attendance is affected.

3. As a student, I understand that it is my responsibility to understand course material and requirements and to keep up with the course calendar. While my instructor is available for help and clarification, I will
    - seek out help from my instructor and/or from tutors;
    - ask questions if I don't understand; and,
    - attend class regularly to keep up with assignments and announcements.

Special Needs

Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

Learning Resource Center (Library)

The Library, known as the Learning Resources Center, provides research assistance via the LRC's catalog (print books, videos, e-books) and databases (journal and magazine articles). Research guides covering specific subject areas, tutorials, and the "Ask a Librarian " service provide additional help.

Student E-mail

Please access your Odessa College Student E-mail, by following the link to either set up or update your account: http://www.odessa.edu/gmail/. **All assignments or correspondence will be submitted using your Odessa College email.**

Student Portal

Please access your Odessa College Student E-mail, by following the link to either set up or update your account: http://www.odessa.edu/gmail/. **All assignments or correspondence will be submitted using your Odessa College email.**

Technical Support

For Blackboard username and password help and for help accessing your online course availability abd student email account contact the Student Success Center at 432-335-6878 or online at https://www.odessa.edu/dept/ssc/helpdesk_form.htm.

Important School Policies

For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the Odessa College Student Handbook.

Odessa College's Institutional Core Objectives (ICOs):

1) Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

2) Communication Skills - to include effective development, interpretation and expression of ideas through written, oral and visual communication

3) Empirical and Quantitative Skills – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

4) Teamwork - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

5) Personal Responsibility - to include the ability to connect choices, actions and consequences to ethical decision-making

6) Social Responsibility - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities