INSTRUCTOR

NAME: Charlie Miller

OFFICE LOCATION: WWCC - Vocational Technology Building
Office 340b

OFFICE HOURS: Monday - Friday
By appointment only. Office

PHONE NUMBER: (509) 529-2233
Cell (509) 386-4295

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COURSE INFORMATION

IDENTIFIER: EST 240

TITLE: INTRODUCTION TO ELECTRONICS

TEXTBOOK: Amatrol Log in

CREDITS: 5

HOURS PER WEEK: 6 HRS QTR: 60 LECTURE: 40 LAB: 20

FORMAT: Lecture/Demonstration/Lab

LOCATION: WWCC - Vocational Technology Building Room 340

DAY/TIME: Mon, Wed, Fri 8:30 - 10:20am

COURSE DESCRIPTION

This course introduces students to solid state theory and basic electronic components. Students will study solid state theory, the operation, and testing of solid state components and devices to include diodes, thermistors, transducers, photo cells, transistors, SCR's, diac, triac, SS relays, and photoelectric and proximity controls. Prerequisites: EST 131 or instructor permission.

STUDENT LEARNING ASSESSMENTS

Participation 50% Throughout the quarter you will be assigned various chapter questions as homework that will be graded on a pass/fail basis.

Homework

Labs Full completion of these assignments accounts for 50% of your overall grade.

Quizzes 25% Each week a QUIZ will be given on the material covered throughout the week and CANNOT be made up or retaken.

Final 25% One cumulative final will be given at the end of the quarter covering all pertinent information from lectures, assignments and quizzes and will account for 25% of your overall grade.
COURSE SYLLABUS - ENERGY SYSTEMS TECHNOLOGY
Master Course Section Syllabus & Assessment of Student Learning

GRADING POLICY

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<th>GRADE</th>
<th>PERCENTAGE</th>
<th>NOTES:</th>
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<tr>
<td>A</td>
<td>100% to 93.5%</td>
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<td>A-</td>
<td>93.4% to 89.5%</td>
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<td>B+</td>
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<td>B</td>
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<td>F</td>
<td>&lt;69.4%</td>
<td>Fail  No Credit, goes against your GPA, course will need to be retaken</td>
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<td>Withdraw</td>
<td>No Credit, does not affect your GPA</td>
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*****ATTENDANCE IS MANDITORY*****

- Two excused absences are allowed. Each additional absence results in a 3% deduction of overall grade.

- Being late results in a 1% deduction of your overall grade

- An absence is considered excused when you give at least one hour notice via phone text or e-mail.

- Textbook and Calculator (Texas Instruments TI-30xa) is required to receive attendance credit.

- Work Shirt (tucked in and on your outer most layer – shirt should be showing while you are in class)

* NOTE: Grade reduction will be calculated at the end of the quarter for tardy and absences.

- Excessive (six) absences in a quarter will result in failing of the respective course, and at the departments discretion may be dropped from the training program.

- Absences may be forgiven at the instructor’s option due to illness providing a doctors letter explaining the illness is provided, and missing work is made up, or a grade of “Z” may be given, and course repeated.

PREREQUISITE REQUIRED: EST 131 or instructor permission.

OTHER SPECIAL INSTRUCTIONS & INFORMATION:

TOOL and INSTRUMENTS Requirement: This course requires PPE Safety glasses when applicable, Long-nose (needle-nose) pliers, digital multi-meter with VDC, Ohm, Diode, and mA or µA function.

Note: a magnifying glass and flashlight may be helpful, but is not required. Some labs require closed toe shoes or boots, full length pants. Dress should meet student handbook guidelines.
CLASSROOM INSTRUMENTS: A calculator (Texas Instruments TI-30xa), clear plastic ruler, colored pencil set, pen and pencil will be used in this course. This is a web enhanced course; computer access is required for this class. *A Laptop computer or notebook is recommended but not required.* If you do not own a computer, there are lab computers are available on campus for use on web assignments.

ETIQUETTE: Student is expected to show respect to others, and follow the student hand book. Cell phones need to be turned to silent or off during classroom and lab. Lap top computers used during class are to be used only for instruction related materials, email, or surfing the web will result in the computer being off during class period.

EXTRA CREDIT: Variable point extra credit projects are available but cannot exceed 10% of your grade points.
INTENDED COURSE LEARNING OUTCOMES:

- Describe Solid-state Theory
- Describe and identify types of semi-conductor components
- Identify and draw semi-conductor schematic symbols
- Demonstrate using a schematic to wire components into a solid-state device
- Describe and demonstrate the wiring of solid-state devices
- Demonstrate wiring, evaluate, and describe the function of a solid-state device
- Demonstrate the use of measuring instruments to evaluate solid-state components or device(s)

OTHER SPECIAL INSTRUCTIONS & INFORMATION

Students are required to have their own PPE.

WORK SHIRT: **On buttoned up and tucked in and worn as the outermost layer** when class starts. You will be considered late if you do not have this done.

WORK BOOTS: **On and laced up** when class starts. You will be considered late if you do not have this done.

SAFETY GLASSES: **On your person** when class starts. You will be considered late if you do not have this done.

SIDE SHIELDS are acceptable for prescription glass wearers.

WORK GLOVES: Optional but recommended.

COURSEWORK SCHEDULE

See last page.
**WORK ASSIGNMENT SUBMITTAL INSTRUCTIONS**

Weekly chapter review questions and Amatrol quizzes are due the Sunday of that week at 11:59 PM.

**LAB ASSIGNMENT SUBMITTAL INSTRUCTIONS**

The following requirements must be met to receive credit:

- On lined paper or Instructor provided lab sheet
- Name(s) and date
- Name of workbook and skill number(s)
- Instructors initials on it stating that the work was done
- Multiple pages must be stapled together

Due the Friday of that week at 5:00 PM.
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COURSE OUTLINE
See attached work
Schedule.