South Plains College - Levelland Campus

CETT 1303 – DC Circuits

Instructor Information

Instructor: Brandon Wickware
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Semester: Fall 2025
Location: Floydada Campus, Secondary Building/201-200
Meeting Times: Monday- Friday/ 9:44-10:32

https://www.southplainscollege.edu/syllabusstatements/

Course Description

A study of the fundamentals of direct current including Ohm's Law, Kirchhoff's Laws, and circuit analysis techniques.

Course Learning Outcomes

1. Apply safety protocols and proper shop/lab practices when working with electrical circuits and components.
2. Interpret color codes and component markings used in DC circuits.
3. Identify sources of electricity and analyze the characteristics of voltage, current, resistance, and power in DC circuits.
4. Use appropriate measuring instruments (multimeter etc.) to measure voltage, current, and resistance in DC circuits.
5. Analyze and solve basic DC circuit configurations using Ohm's Law, Kirchhoff's Laws, series/parallel combinations, and circuit analysis techniques.

Required Materials

- Textbook: *Electricity: Principles & Applications*, 8th Edition (by Richard J. Fowler) — or latest edition.
- Scientific calculator (TI-30Xa or equivalent)
- ANSI approved safety glasses
- Digital multimeter
- USB memory stick

- Laptop or desktop (Windows-based) with internet access
- Hard hat (Class G), hearing protection — as applicable

Attendance & Participation Policy

Students are expected to attend all lectures and labs; participation and punctuality are critical for success.
Excessive absences or tardies may result in administrative withdrawal from the course.
After six absences, the instructor may drop the student. Three tardies may equal one absence.
Official college policies for religious holy days, military service, and other excused absences apply.

Grading Policy

- Daily & Chapter Quizzes/Tests: 33%
- Lab Projects & Shop Performance: 33%
- Comprehensive Final Exam: 34%

A minimum average of 70% is required to pass. Lab grades may include safety behavior, shop cleanliness, attendance, and attitude.

Tentative Course Schedule

Week 1: Introduction to DC circuits; Safety & Workshop Procedures
Week 2: Ohm's Law; Series circuits
Week 3: Parallel circuits and Power
Week 4: Combination circuits; Circuit simplification
Week 5: Kirchhoff's Laws
Week 6: Voltage/Current Division; Network analysis
Week 7: Measurement of real components
Week 8: Midterm Exam & Safety Review
Week 9: Sources of electricity
Week 10: Thevenin/Norton introduction
Week 11: Instrumentation and measurement
Week 12: Complex Circuit Analysis
Week 13: Troubleshooting DC circuits
Week 14: Final Project due; Review
Week 15: Final Exam and Course Wrap-Up

Safety & Shop Policies

- Safety glasses must be worn in all lab/shop areas.
- No open-toed shoes or baggy clothing.
- Cell phones prohibited during lecture unless permitted.
- No tobacco or spitting in shop areas.

Academic Integrity & Disability Statement

Students must maintain honesty and integrity in all coursework.
Instances of plagiarism or cheating may result in disciplinary action.
Students requiring accommodations should contact the Disability Services Office at 806-716-2577 as early as possible.

Core Competencies

This course integrates critical thinking, problem solving, technology use, teamwork, and self-management.

Additional Notes

The instructor reserves the right to modify the syllabus as needed.
Students should verify registration and drop status via MySPC and use SPC email for all communications.
Participation in both lecture and lab is strongly recommended.