SAN JUAN COLLEGE
Success Matters

ENGY 1210-INTRODUCTION TO ELECTRICITY 3 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This course introduces a basic and non-mathematical approach to understand the principles of electricity. The topics include electron theory, static electricity, electrons in motion, and magnetism. Covers basic methods of measuring current, voltage and resistance. Explains circuit components-conductors, insulators, resistors, capacitors – and simple ohm's law analysis for DC and AC circuits.

Prerequisites:N.A

Semester Offered: Spring, Summer, Fall

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…

BROAD AND SPECIALIZED LEARNING
Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING
Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT
Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION
Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY
Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES
Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to…

1. Explain the electron theory.
2. Explain the concept of static electricity.

3. Explain how batteries (cells) work.
4. Explain magnetism and its applications.
5. Explain the relationship between current, resistance and voltage.
6. Identify basic electrical symbols in an electric diagram.
7. Describe different ways of insulation.
8. State the difference between DC and AC
9. Solve simple electrical problem using Ohm's law.
10. Explore the career in electrical field.