

**Department:**

Electrical Technology

**Course Description:**

An introductory course on the use and interpretation of the current National Electric Code (NEC). This course of instruction is taught throughout the whole program but generally will be intensified during the latter part of the school term. The main focus is to introduce the student to the Block and Associates exam. The course focuses on what makes up the tests, best use of time, highlighting important text in the codebook, and many other helpful testing ideas. The student will spend time taking sample exams and identifying weaknesses and improvements needed.

**Course Competencies:**

The learning outcomes and competencies detailed in this syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups for this course as approved by the Kansas Board of Regents.

Upon completion of the course, the student should be able to:

**KBOR Core Competencies**

1. Explain the purpose and history of NEC and layout
2. Interpret and apply general requirements of the NEC
3. Interpret and apply wiring and protection requirements
4. Interpret and apply wiring methods and materials
5. Install equipment for general use

**Core Competencies**

6. Locate the articles of the NEC code
7. Interpret and use the NEC code book

**Course Content:**

- A. Electrical Theory
  - 1) Ohms law
  - 2) Alternating current
  - 3) Direct current
- B. NEC calculations
  - 1) Raceway fill
  - 2) Box fill
  - 3) Conductor size
- C. Advanced NEC calculations
  - 1) Dwelling units

- 2) Multifamily dwelling
- 3) Commercial and transformer
- D. Practice quizzes

## Learning Assessments:

The student will take a test after each chapter and at the end of the course

**TESTS:** Tests will cover one to two chapters. Test questions may be multiple choice, essay, or fill in the blank. You will be allowed to make up a test that was missed or failed, with the condition that it needs to be done in the week it was missed. Failed tests that are retaken will be averaged with the first test for your final score.

**QUIZZES:** The instructor may give unannounced and announced quizzes during the semester. These quizzes will be over either subject matter assigned or subject matter previously discussed. Students may not make up quizzes.

## Instructional Materials:

Illustrated Guide to Electrical Exam Preparation, NEC 2023 Edition, Mike Holt Enterprises Inc., ISBN: 978-1-95043-171-7

NFPA 70 National Electric Code 2023, Delmar Cengage Learning, ISBN: 978-1-45592-937-5

NEC Code Book Tabs 2023, Mike Holt, ISBN: 978-1-950431-79-3

NEC Keyword Index 2023, Tom & Tim Henry, ISBN: 979-8-98724-312-1

Ugly's Electrical References, Charles R. Miller, Jones & Bartlett LLC., 2023, ISBN: 978-1-28427-591-9

### **Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition**

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students **must** complete the "Disabilities Self-Identification Form" on our [Disability Services website](#).

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.

### **A Note on Harassment, Discrimination and Sexual Misconduct**

Highland Community College seeks to assure all community members learn and work in a welcoming and inclusive environment. Title VII, Title IX, and College policy prohibit harassment, discrimination and sexual misconduct. Highland Community College encourages anyone experiencing harassment, discrimination or sexual misconduct to talk to report to the Vice President for Student Services, the Human Resources Director or complete an [online report](#) about what happened so that they can get the support they need and Highland Community College can respond appropriately.

There are both confidential and non-confidential resources and reporting options available to you. Highland Community College is legally obligated to respond to reports of sexual misconduct, and therefore we cannot guarantee the confidentiality of a report, unless made to a confidential resource. Responses may vary from support services to formal investigations. As a faculty member, I am required to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident. For more information about policies and resources or reporting options, please review our [Equity Grievance Policy](#).