ELE120 National Electrical Code I Syllabus

Course Information

Credits 4
Campus Washburn Institute of Technology
Address 5724 SW Huntoon
City/State/Zip Topeka, Kansas 66604
Office Fax 785-273-7080

Description
National Electrical Code I is an introductory course on the use and interpretation of the current National Electrical Code, chapters 1-4. The student will develop a working knowledge of the code which will permit them to apply it to everyday applications. The course will include the requirements for electrical installation; wiring design and protection; methods and materials used; equipment for general use; special occupancies equipment; and condition.

Textbooks

Student Learning Outcomes:
A. Communicate effectively
B. Integrate technology
C. Learn effectively
D. Demonstrate cooperative teamwork skills
E. Apply safety in the workplace
F. Think critically and creatively
G. Demonstrate responsible work ethics

Competencies
1. Explain the purpose and history of the National Electrical Code and layout.
2. Interpret and apply general requirements of the National Electrical Code.
3. Interpret and apply wiring and protection requirements.
4. Interpret and apply wiring methods and materials.
5. Install equipment for general use.
6. Describe the purpose of the National Electrical Manufacturers Association and the NFPA.
7. Explain the role of nationally recognized testing laboratories.
8. Describe the different types of nonmetallic and metallic boxes.
9. Calculate the National Electrical Code fill requirements for boxes under 100 cubic inches.
10. Select the appropriate box type and size for a given application.
11. Demonstrate the appropriate method for mounting a given box.
12. From the cable markings, describe the insulation and jacket material, conductor size and type, number of conductors, temperature rating, voltage rating, and permitted use.
13. Determine the allowable capacity of a conductor for a given application.
14. Identify the National Electrical Code requirements for color coding of conductors.
15. Explain the role of the National Electrical Code in residential wiring.
16. Determine electrical service requirements for dwellings.
17. Determine the grounding requirements of a residential electrical service.
18. Calculate service-entrance equipment requirements.
19. Select the appropriate service-entrance equipment.

Guidelines for Success

Assessment Plan
Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution's technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

Grading Rationale
Student progress is evaluated by means that include, but not limited to: exams (60%), written assignments/labs (30%), and attendance/class participation (10%).

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<th>Grade</th>
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<tr>
<td>A</td>
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Attendance
Classroom attendance is required. Material missed must be made up with instructor.

Disability
The Special Support Services (SSS) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST register and provide documentation with the office to be eligible for services. New requests for accommodations should be submitted two months or more prior to the date services should begin; however, contact the SSS Office as soon as a need may arise. Depending on the accommodation request, four to eight week lead time may be needed for timely and effective provision of services. SSS coordinates and assist in arranging services it deems appropriate of eligible students on a case-by-case basis.

If you are a student with a disability that may substantially limit your ability to participate in this class and believe you will need accommodations, it is your responsibility to contact: