COURSE SYLLABUS

LAST REVIEW   Fall 2022

COURSE TITLE   <mark>Electrical</mark> Print Reading

COURSE NUMBER   ELET 0104

DIVISION   Career and Technical Education

DEPARTMENT   ELET

CIP CODE   46.0302

CREDIT HOURS   2

CONTACT HOURS/WEEK   Class: 1   Lab: 2

PREREQUISITES   None

COURSE DESCRIPTION
This class will educate the student on: how to read and interpret blueprints, lay out a job from blueprints, calculate materials for a job from blueprints, draw electrical requirements a blueprint conforming to NEC, locate components on a wiring schematic, draw a schematic diagram, and learn work ethics.

PROGRAM ALIGNMENT
This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit:
https://kansasregents.org/workforce_development/program-alignment

PROGRAM LEARNING OUTCOMES

1. The Student will be able to identify workplace safety issues in accordance with OSHA standards.
2. Upon successful completion of this course, the student should be able to identify the job skills necessary to have a successful career in the Electrical Profession.
3. Inspect electrical circuit connections in accordance with the N.E.C. standards of compliance.

TEXTBOOKS
http://kckccbookstore.com/

METHOD OF INSTRUCTION
A variety of instructional methods may be used depending on content area. These include but are not limited to lecture, multimedia, cooperative/collaborative learning,

labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE

I.   Common architectural and electrical symbols
II.   Calculations for various scales per dimension
III.   Materials and Construction calculations
IV.   Understanding electrical prints for residences and industrial drawings

COURSE LEARNING OUTCOMES AND COMPETENCIES
Upon successful completion of this course, the student will:

A. Identify standard electrical symbols and notations.
    1. Interpret the function of electrical symbols.
    2. Identify receptacles symbols for power needs.
    3. Identify lighting and switch symbols.
    4. Identify AFCI and GFCI receptacles notations.
    5. Identify lighting symbols and notations.
    6. Identify limit symbols and notations.
    7. Identify control relay symbols.
    8. Identify motor starters and transformer symbols.

B. Interpret dimensions using scales.
    9. Determine footage on a quarter inch per foot basis.
    10. Determine footage on an eighth of an inch per foot basis.
    11. Determine footage on a one-sixteenth of an inch per foot basis.
    12. Determine the scale as per architectural drawings.
    13. Determine the scale as per electrical engineering drawings.

C. Identify basic layout of drawing set.
    14. Identify the plumbing layout.
    15. Identify the heating and cooling duct work.
    16. Identify the electrical distribution of power.
    17. Identify the location for main service panel.
    18. Identify the layout rough in construction.
    19. Identify the layout for lighting circuits.
    20. Identify basic layout for ceiling fans.
    21. Identify outdoor perimeter lights.
    22. Identify basic layout for transformers.

D. Identify site plans, floor plans, one-line diagrams and detail drawings.
    23. Identify site plans for first or second floor.

24. Identify site plans elevations for electrical components.
25. The student will be able identify and explain one line diagrams layout.
26. Identify and explain detail legends for site plans.
27. Identify and explain power circuits diagram.
28. Explain the function of components in an one-line diagram.

ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook
https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf

College Catalog
https://www.kckcc.edu/academics/catalog/index.html

College Policies and Statements
https://www.kckcc.edu/about/policies-statements/index.html

Accessibility and Accommodations
https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html.