

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

X Transfer Course X A.A. Degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** CI 105 Electrical Codes I

**UNIT VALUE:** 3

**MINIMUM NUMBER OF SEMESTER HOURS:** 48

**BASIC SKILLS REQUIREMENTS:** Appropriate language and computational skills.

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** None.

**COREQUISITE:** None.

**RECOMMENDED PREPARATION:** None.

**SCOPE OF COURSE:**

The basic rules pertaining to electrical installations for light, heat, and power in residential, commercial, and industrial applications. National Fire Protection Association (NFPA).

**SPECIFIC COURSE OBJECTIVES:**

Students will be able to:

1. Identify electrical installation methods used in general construction.
2. Explain the purpose of the National Electrical Code and its relationship to the other building codes.
3. Identify code-complying installations.
4. Analyze electrical grounding for basic safety.
5. Circuit a residential installation.
6. Explain the function of electrical inspection in the construction industry.

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

- I. History of Building Codes/Electrical Codes
- II. Introduction
- III. Definitions
- IV. Requirements for Electrical Installations
- V. Grounded Conductors

- VI. Branch Circuits
- VII. Branch Circuits and Feeder Calculations
- VIII. Services
- IX. Overcurrent Protection
- X. Grounding
- XI. Wiring Methods
- XII. Temporary Wiring
- XIII. Conductors for General Wiring

**REQUIRED READING:**

National Fire Protection Association. National Electrical Code. 1999 edition. Quincy: National Fire Protection Association, 1998.

**SUGGESTED READING:**

Stallcup, James. Electrical Design Book. 1999 edition. Fort Worth: Grayboy Publishers, Inc., 1999.

McPartland, J. The National Electrical Code Handbook. New York: McGraw-Hill Publishers, 1998.

**REQUIRED WRITING:**

Students are required to submit a one-page written analysis on a topic assigned by instructor.

**OUTSIDE ASSIGNMENTS:**

**Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.**

Review lecture notes and code sections from assigned text, and read the upcoming code sections prior to class. Prepare written analysis.

**INSTRUCTIONAL METHODOLOGY:**

**Check all that apply:**

- lecture
- laboratory
- lecture-laboratory combination
- directed study

**DISTANCE LEARNING:**

**This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.**

Yes  No

**If yes, check all that apply:**

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

**GRADING POLICY AND STANDARDS** (include methods of determining whether the stated objectives have been met by students):

Exams=	25%	A = 90 - 100
Participation=	20%	B = 89 - 80
Midterm=	25%	C = 79 - 70
Final=	25%	D = 69 - 60
Analysis Paper=	<u>5%</u>	F = below 60
	100%	

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes X No  Number of times course may be taken for credit: 2

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable: 58161 (C) (2) (A)

**CONTACT PERSON:** Director, Vocational Programs, Ext. 2286

**SIGNATURES ON FILE**