

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

Transfer course A.A. degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: AP SC 101 Introduction to the Sound &
Communication Trade Industry

UNIT VALUE: 4

MINIMUM NUMBER OF SEMESTER HOURS: 96

BASIC SKILLS REQUIREMENTS:

Appropriate language and computational skills.

ENTRANCE REQUIREMENTS:

PREREQUISITE:

1. A minimum grade of "C" in MATH 50.
2. Completion of designated tests with a passing grade determined by the appropriate committee.
3. Indentured Apprentice to the Riverside, San Bernardino, Mono, and Inyo Counties Sound & Communications Joint Apprenticeship Committee or the San Diego Sound & Communications Joint Apprenticeship Committee.

COREQUISITE: None.

RECOMMENDED PREPARATION: None.

SCOPE OF COURSE:

Introduction to the sound and communication industry, electrical code, fundamentals of wiring methods, fastening devices, electrical conductors, circuits, voltage and data communication.

SPECIFIC COURSE OBJECTIVES:

The student will be able to:

1. Identify the value of exhibiting a positive attitude in regard to apprenticeship training.
2. Explain and recognize the value of good study habits.

3. Identify specific hand tools used in the sound and communication trade.
4. Deduce valid conclusions employing formulas and arithmetic skills in solving problems related to conduit bending and circuit calculations.
5. Demonstrate ability to research and identify applicable sections of the Electrical Code.
6. Analyze basic theory of data transmission and protocols.
7. Explain the use of basic wiring methods and fastening devices.
8. Analyze and select electrical conductors for various environmental and load conditions.
9. Apply conduit bending principles while executing stub-up and offsets with hand benders.
10. Apply principles of CPR and First Aid.
11. Identify, select and install pic, coaxial, and fiber optic cable per job specifications.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Job Information
 - A. How to study for this course
 - B. Your apprenticeship
 - C. NECA apprenticeship
 - D. History of the International Brotherhood of Electrical Workers (IBEW)
 - E. National Electrical Contractors Association (NECA)
 - F. Marketing
 - G. Drug abuse
 - H. Communications
- II. Electrical Theory
 - A. World of electronics
 - B. Voltage and current
 - C. Resistors
 - D. Resistance and power
- III. Health and Safety
 - A. CPR
 - B. First aid
 - C. Safety with ladders
 - D. The work place
- IV. Conduit Bending
 - A. Introduction to trigonometry
 - B. 90-degree stubs
 - C. Kicks and offsets
 - D. Saddles

- V. Cabling
 - A. Types of cable including fiber optic
 - B. Selection of proper cable per job specification
 - C. Termination of various cable types

- VI. Data
 - A. Identification of various Local Area Networks (LANs) topology (star, ring, loop, etc.)
 - B. Identification of construction types of various LANs and hubs
 - C. Base band and broad band transmission
 - D. Institute of Electrical and Electronics Engineers (IEEE) interface standards 802.1-802.5

REQUIRED READING:

Cadick, John. Cables and Wiring. Albany, NY: Delmar Publishing Inc., 1993.

Cook, Nigel. Introductory DC/AC Electronics. 2nd edition. Englewood Cliffs, NJ: Prentice Hall, 1992.

Derfler, Frank J. Get a Grip on Network Cabling. Emeryville, CA: Ziff-Davis Press, 1993.

Hart, George V. Ugly's Electrical References. Houston, TX: United Printing Arts, 1990.

Herman, Stephen L. Delmar's Standard Text Book of Electricity (Revised). Albany, NY: Delmar Publishers, 1993.

IBEW History and Structure Of. Washington, DC: International Brotherhood of Electrical Workers, 1990.

Klein Tool Handbook. Chicago, IL: Klein Tools, Inc., 1990.

National Electrical Code. Quincy, MA: National Fire Protection Association, 1993.

NJATC First Year Student Workbook. Upper Marlboro, MD: National Joint Apprenticeship and Training Committee, 1991.

Proctor, T.E. and E.W. Sundberg. Building Trades Printreading Part 1. Homewood, IL: American Technical Publishers, 1989.

This is the NECA. Bethesda, MD: National Electrical Contractors Association, 1990.

SUGGESTED READING:

Croft, Terrell. American Electrician Handbook. New York: McGraw Hill, 1987.

REQUIRED WRITING:

Completion of written assignments in student workbook which are at least one paragraph in length.

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.

Completion of reading assignments, student workbook applications and attendance at union and JATC meetings as required.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

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

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

Yes No

If yes, check all that apply. (See guidelines for preparation for definitions.)

- telecourse
- mediated instruction
- computer assisted instruction

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

Homework/Participation	5%	100 - 90 = A
Quizzes/Workbook	30%	89 - 80 = B
Unit Exams/Final Exam	65%	79 - 75 = C
	100%	74 and below = F

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

Yes 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: 58161-1-C

CONTACT PERSON: Director, Vocational Programs, Ext. 2286