

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**CREDIT COURSE NOT APPLICABLE TO THE A.A. DEGREE**

(Use this form only for courses which do not apply to the A.A. Degree)

**COURSE NUMBER AND TITLE:** ECHT 20 Supplemental Instruction for Electronics and Computer Hardware Technology

**UNIT VALUE:** 1.5

**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:**

Instructor coordinated informal peer assisted study sessions in which students compare notes, discuss readings, review homework, perform laboratory experiments, and work on projects that are associated with any ECHT course. Instructor will provide mini-lessons in direct response to small group assessed needs.

**SPECIFIC COURSE OBJECTIVES:**

Successful students will be able to:

1. Apply principles of scientific notation, prefix conversion, and basic algebraic manipulation applied to electronic properties.
2. Solve basic electronic problems involving current, voltage resistance, and power (Ohm's Law).
3. Compare and contrast the relationship between electricity, electronics, and magnetism.
4. Use a schematic diagram to construct DC, AC transistor, and integrated circuits with components such as resistors, relays, switches, lamps, batteries, inductors, capacitors, transformers, diodes, transistors, and IC's.
5. Demonstrate the safe effective operation of measuring and testing equipment.
6. Demonstrate basic safety procedures designed to protect the students, components, and equipment.

7. Apply developed troubleshooting techniques to solve electronic circuit problems utilizing electronic test equipment and computer simulated programs.
8. Demonstrate the basic techniques of soldering in the construction of an electronic project.
9. Demonstrate the ability to participate effectively in a peer study group arrangement for the purpose of understanding or solving electronic problems or concepts that were not satisfied in the core ECHT course.
10. Assess their current core course deficiencies in order to pass that course.

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

As established through the ECHT course the student is enrolled in.

**REQUIRED READING:**

As established through the ECHT course the student is enrolled in.

**SUGGESTED READING:**

None.

**REQUIRED WRITING:**

As established through the ECHT course the student is enrolled in.

**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.**

None.

**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 X

**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):

Peer Group Written Self Evaluation	50%
Class Participation	50%

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

Yes X No \_\_\_ Number of times course may be taken for credit: 4

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:** George Hershman ext. 2563

<b>SIGNATURES ON FILE</b>
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