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: FIRE 115 – HAZARDOUS MATERIALS I

UNIT VALUE: 3.0

MINIMUM NUMBER OF SEMESTER HOURS: 48.00

BASIC SKILLS REQUIREMENTS: Appropriate language skills.

ENTRANCE REQUIREMENTS:

PREREQUISITE: None

COREQUISITE: None

RECOMMENDED PREPARATION: None

SCOPE OF COURSE:

A review of basic chemistry; storage, handling, laws, standards, and fire fighting practices pertaining to hazardous materials.

SPECIFIC COURSE OBJECTIVES:

1. Students will be able to evaluate the dangers of flammable liquids, gasses, and oxidizing agents.
2. Students will be able to solve problems using scientific theory in handling dangerous materials and firefighting.
3. Students will be able to explain hazardous materials chemical notation.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

I. Explain the Chemistry and Physics of Fire
   A. Introduction to chemical terms and units of measure
   B. Matter, energy, and electron structure

C. The naming and forming of compounds
D. Chemical equations
E. Introduction to some pertinent laws of chemistry

II. Identify the Properties of Flammable liquids
A. Flammable liquids and their chemical structure
B. Bulk flammable liquids

III. Pressurized Industrial Gases
A. General Principles
B. Natural gas
C. Anesthetics

IV. Liquified Gases
A. Liquified petroleum
B. Refrigerants
C. Cryogenics

V. Flammable Solids
A. Volatile solids
B. Flammable elements and compounds

VI. Combustible Metals
A. Magnesium and alkaline earth metals

VII. Identify the Hazards of Manufacture and Use of Plastics

REQUIRED READING:

Lab Safety Supply, 2000 North American Emergency Response Guide Book.
Janesville: Lab Safety Supply, 2000.

SUGGESTED READING:

Hazardous Materials for First Responders, IFSTA, Fire Protection Publications, Fire Building, Oklahoma State University. Stillwater, Oklahoma. 1988.

Isman, C., Hazardous Materials. New York: Macmillan Publishing Company, 1980.

Meyer, Eugene. Chemistry of Hazardous Materials, Englewood Cliffs: Prentice Hall, 1983.

Schieler, Leroy, and Denis Pauze. Hazardous Materials, Albany: Delmar, 1983.

REQUIRED WRITING:

The student will organize and write the facts of a chemical spill, 4-6 pages in length.

OUTSIDE ASSIGNMENTS:

Approximately six hours per week is required for reading assignments. A minimum of 4-6 hours is necessary to complete a representative writing assignment.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:
_X_ 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):

10 quizzes	10%
3 one hour exams	30%
1 Original Paper	20%
Homework	15%
Final Exam	25%

90% and above = A grade

80% and above = B grade
70% and above = C grade
60% and above = D grade

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?
Yes ____ No X Number of times course may be taken for credit: 1

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

CONTACT PERSON: Brett Van Wey, Ext. 1703

SIGNATURES ON FILE: