Las Positas College
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Course Outline for RADS 40B

EMERGENCY RESPONSE & MONITORIN

Effective: Fall

I. CATALOG DESCRIPTION:
RADS 40B — EMERGENCY RESPONSE & MONITORIN — 1.00 units

A modularized course designed to provide basic radiation safety instruction. Includes identification of the sources of radiation and radioactive materials, the nature of ionization radiation, biological effects, risk assessment, protection strategies, environmental impacts, and waste handling.

1.00 Units Lecture

Prerequisite
RADS 40A - Radiation Safety
with a minimum grade of C

Grading Methods:

Discipline:

	MIN
Lecture Hours:	18.00
Total Hours:	18.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering the course a student should be able to:

A. RADS40A

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

A. analyze situations involving radiation by:
   1. being knowledgeable of the nature of hazards associated with radiation;
   2. monitoring and collecting information from the environment and the workplace;
   3. evaluating data from radiation measurement equipment;
   4. interpreting data and comparing to regulations;
B. identify and be familiar with assistance resources at the federal, state, international, industry and professional level;
C. describe elements and factors in emergency planning.

V. CONTENT:
A. Measurement techniques
   1. qualitative versus quantitative
   2. data evaluation
   3. field equipment and techniques
   4. laboratory equipment and techniques
B. Assistance resources
   1. federal state
   2. international
   3. industry
   4. professional
C. Emergency planning
   1. general content
   2. spills
   3. injuries
   4. exposures

VI. METHODS OF INSTRUCTION:
A. **Lecture** -
B. **Demonstration** - (classroom)
C. **Discussion** - (group)
D. Role playing
E. Practical exercises, e.g., using equipment and personal protection equipment

F. group reports
G. **Audio-visual Activity** - Video and overhead presentation
H. **Guest Lecturers** - Guest presenters from industry and/or field trips
I. Students, working in groups, solve problems by collecting and interpreting data
J. peer interaction

VII. TYPICAL ASSIGNMENTS:
A. Reading: Read Gollnick Chapter 9 (pages 330-350). B. Problem solving, writing and critical thinking: 1. Gollnick (page 327); solve problems #18 and 24 and answer the following: a. What are the most important two things to remember when checking for alpha contamination using an alpha meter? b. What is the difference between a "contamination monitoring" and "radiation survey" instrument? c. Name three checks you should perform on an instrument before use?

VIII. EVALUATION:
A. **Methods**

1. Exams/Tests
2. Class Participation
3. Class Work

B. **Frequency**

IX. TYPICAL TEXTS:
1. Gollnick, Daniel *Basic Radiation Protection Technology.* Latest ed., Pacific Radiation Press, 0.
2. - *Nuclides and Isotopes: Chart of Nuclides.* Latest ed., GE Nuclear Energy, 0.

X. OTHER MATERIALS REQUIRED OF STUDENTS: