Instructor: Jim Lopes, MSPH, CIH  
Message Phone: 278-5090  
Office Hours: Arranged  
E-mail: jlopes@csufresno.edu

Catalog Statement: General principles of investigation for chemical and physical hazards commonly encountered in the occupational environment (3 units).

Course Objective: Through lectures and demonstrations, investigate theoretical principles and methods as they apply to real world sampling and evaluation techniques for chemical and physical agents in the occupational environment.

Course Grade: Final grade will be based on two exam scores (40%), two research/written assignments (40%) and four homework assignments (20%). Research/written assignment and homework assignment due dates will be announced at the time they are assigned.

Exam I: March 22, 2004 - 18:00-20:00  
Exam II/Final: Monday May 117, 2004 - 20:00-22:00 (covers only material from second half of semester)

Exams will be presented as a combination of multiple choice, true/false, matching, essay/short answer and practical calculations and conversions.


Required Reading: Specific journal articles related to the topics covered during lecture are on reserve in the library. These articles are required reading for exams.

**** Late exams or homework/written assignments will be considered only in the event of medical or personal emergency.

**** Students with disabilities need to identify themselves to the university and their instructor so reasonable accommodation for learning within this course can be made.

**** Specifics related to student conduct for issues such as cheating and plagiarism, please refer to the Policies and Regulations Section of the CSUF 2003-2004 General Catalog.

**** Last day to drop the class without a serious & compelling reason is February 4, 2004.

**** Last day to drop the class with a serious & compelling reason without a grade of "W" listed on the official University transcript is February 19, 2004.
COURSE AGENDA

Week 1.) review emergency procedures and course outline, introduction to industrial hygiene, brief history of industrial hygiene & occupational medicine, review of applicable industrial hygiene terminology

Week 2.) basic review of industrial toxicology, basis for occupational health standards, description of state and federal regulations that apply to the evaluation of occupational environments, research/written assignment I(a) handed out

Week 3.) concept of monitoring, types of air sampling applicable to vapors, gases and particulates in the occupational environment, description of the basic steps used to conduct an occupational health evaluation

Week 4.) HOLIDAY

Week 5.) air sampling documentation, laboratory analysis, components of an occupational health evaluation written report, statistical considerations, research/written assignment I(a) due, I(b) handed out

Week 6.) ideal gas law, calculations associated with the concept of concentration of contaminants in air, homework assignment 1 handed out

Week 7.) concept of calibration for air sampling pumps and direct reading instruments, homework assignment 1 due

Week 8.) methods to evaluate occupational exposure to vapors and gases, introduction to confined spaces, homework assignment 2 handed out

Week 9.) methods to evaluate occupational exposure to particulate matter including fibers and biological/viable particulate, review for Exam I, homework assignment 2 due, research/written assignment I (b) due

Week 10.) Exam I

Week 11.) Exam I results reviewed, introduction to occupational noise evaluation, research/written assignment II handed out

Week 12.) Spring Recess

Week 13.) occupational noise evaluation, homework assignment 3 handed out

Week 14.) introduction to occ non-ionizing and ionizing radiation, homework assignment 3 due

Week 15.) introduction to occupational heat/thermal stress evaluation, introduction to occupational ergonomics, homework assignment 4 handed out
Week 16.) introduction to industrial hygiene controls, **homework assignment 4 due**, 

Week 17.) industrial hygiene controls, review for Exam II, **research/written assignment II due** 

Week 18.) Exam II (Exam II/Final covers only material described in weeks 11 through 17)