COURSE INFORMATION FORM

DISCIPLINE  Technology
COURSE TITLE  Air Quality Management
CR.HR  3  LECT HR.  3  LAB HR  CLIN/INTERN HR.  CLOCK HR. 

CATALOG DESCRIPTION
This course serves as an introduction to all aspects of air pollution control and maintaining air quality. Major areas of study will include: nature and origin of air pollution, air pollution control methods and strategies, dispersion modeling, assessing/monitoring air quality and air quality programs and requirements.

PREREQUISITES
EHSS 203

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)
Upon completion of this course, the student will be able to:
1. Locate specific regulations in the Clean Air Standard.
2. Identify sources of air pollution.
3. Describe regulations regarding air quality.
4. Describe the practice and procedures regarding air quality monitoring and management.
5. Describe practices and procedures employed to control airborne pollutants.
GENERAL EDUCATION OUTCOMES (ESO)
Specify which general education outcomes, if any, are substantially addressed by the course. Numbers in parentheses identify the Expected Student Outcomes linked to the specific General Education Outcome.

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>ESO</th>
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PROGRAM-LEVEL OUTCOMES

CAREER AND TECHNICAL EDUCATION PROGRAM OUTCOMES
Specify which Career and Technical program outcomes, if any, are substantially addressed by the course by completing the “Career and Technical Education template” to show the relationship between course and program outcomes to assessment measures.

1. Students will demonstrate the ability to apply foundational skill in an industrial setting, safely and to industry guidelines.
2. Students will think critically and apply problem-solving skills.
3. The program will graduate individuals who exhibit competence in the entry-level skills of technical profession environmental health and safety technology.
4. The program will graduate individual who can interact and communicate with managerial, supervisory, labor and external public using a combination of skills for a clear exchange of ideas and information.

CLASS-LEVEL ASSESSMENT MEASURES
Student accomplishment of expected student outcomes may be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

1. Assignments, (1-5)
2. Written examinations, (1-5)
3. Student participation and in-class discussions, (1-5)
COURSE OUTLINE FORM

DISCIPLINE: EHSS

COURSE TITLE: Air Quality Management

Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. History/Overview of air quality
   A. Natural pollution
      1. Origins
      2. Amounts
   B. Man-made pollution
      1. Origin
      2. Amounts

II. Air quality standards
   A. History
      1. Coal burning 1273
      2. Soft coal
      3. United States 1940s
   B. Air Pollution Control Act 1955
      1. Research
      2. Technical assistance
      3. Training
   C. Air Pollution Control Amendments 1960/1962
      1. Surgeon General oversight
      2. Studies
      3. Set stage for Clean Air Act
   D. Clean Air Act 1963
      1. Matching grants for states/local
      2. Development of air quality criteria
      3. Abatement interstate air pollution
      4. Control of air pollution at federal facilities
      5. Motor Vehicle Air Pollution Act 1965
      6. Adoption of California automobile standards
   E. Air Quality Act 1967
      1. Establishment of 8 specific areas in the U.S. based on met, top, and climate
      2. Designation of air quality regions
      3. Time requirements for state and local agencies at the mall
F. Clean Air Act Amendments 1970
   1. NAAQS
   2. New performance standards
   3. Additional research training funding*
   4. Additional grants*
   5. State implementation plans
   6. Imposed fines and criminal penalties
   7. Aircraft emission standards*

IV. Air pollution control methods and strategies
   A. MACT/RACT
   B. Dispersion modeling
   C. Stack testing/opacity
   D. Strategies
   E. Required/voluntary

V. Air pollution monitoring
   A. SLAMS/NAMS/SPMs
   B. Tribal
   C. IMPROVE monitoring
   D. CASTNET monitoring
   E. Indoor air
   F. HAPs
   G. Air toxics
   H. Criteria pollutants
   I. VOCs/PAH