



Course Code CVEE-464	Course Title Air Pollution Engineering	ECTS Credits 6
Department Engineering	Semester Fall, Spring	Prerequisites CVEE-260, CHEM-120
Type of Course Elective	Field Civil & Environmental Engineering	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 4 th	Lecturer(s) Dr Michalis Loizides
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

- Provide information on the different types of air pollutants and their effects on materials, humans, animals, vegetation, etc.
- Identify sources (stationary and mobile) of air pollution
- Explain the effects of meteorology on air pollution
- Introduce mathematical/statistical models of atmospheric dispersion (horizontal, vertical, etc) of air pollutants
- Suggests control methods for different types of air pollutants (e.g. gasses, vapors, sulfur oxides, nitrogen oxides, etc)
- Introduce emissions from various mobile and stationary sources

Learning Outcomes:

After completion of the course students are expected to:

- Identify among different types of air pollutants and their effects on the environment and human beings
- Identify stationary and mobile sources of air pollution
- Apply mathematical/statistical model to predict dispersion of air pollutants in the atmosphere
- Suggest and apply control techniques to restrict air pollution from stationary and mobile sources
- Explain the interaction of meteorology with air pollution
- Apply methods to control air pollution from sulfur oxides, nitrogen oxides, acid gases, and hazardous vapors

Course Contents:

- Air pollutants: sources and effects
- Regulations and legislature
- Meteorology and air pollution

- Dispersion of pollutants in the atmosphere
- Particulate control
- General control of gasses and vapors
- Control of sulfur oxides and other acid gases
- Control of nitrogen oxides from stationary sources
- Emissions from mobile sources based on different types of engines

Learning Activities and Teaching Methods:

Lectures, in-class examples and exercises, discussion, projects

Assessment Methods:

Homework, exams, final exam, project reports

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
K. Wark, C. F. Warner, W. T. Davis	Air Pollution: Its origin and Control, 3 rd Edition	Prentice Hall	1998	978- 0673994165

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
J. J. Peirce, P. A. Vesilind, R. Weiner	Environmental Pollution and Control, 4 th Edition	Butterworth -Heinemann	1997	978- 0750698993