

ENVR 726, Aerosols and Occupational Health Course Objectives, Grading, and Policies

Fall 2006

Monday 11:00 a.m. to 11:50 a.m.
Wednesday 11:00 a.m. to 12:40 p.m.

MRB Building 111
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Instructor: John Volckens

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Office Hours: Walk in or by appointment, Environmental Health building 153. If you have questions of any kind regarding the course or its contents, please raise them in class, send me an e-mail, call, or stop by any time.

Overview and Objectives

The objective of the course is to discuss aerosols and their relationship to problems in industrial hygiene, engineering, air pollution control, and atmospheric science. The course requires knowledge of calculus and college-level physics. Topics cover the physical and chemical principles underlying the behavior of particles suspended in air, including: particle size, aerodynamics, motion of particles in a force field, particle size statistics, optical and electrical properties, diffusion, condensation and evaporation, deposition in the respiratory system, bioaerosols, and measurement techniques. Upon completing this course, students will be able to (1) recognize and evaluate the generation, transport, and fate of natural and hazardous anthropogenic aerosols [EO6.2.1, 2], (2) employ state-of-the art techniques for aerosol measurement and exposure assessment [EO6.2.3], (3) identify significant gaps in our understanding of aerosol behavior [EO6.2.9], and (4) effectively communicate their knowledge of aerosol measurement techniques in a concise written format [EO6.2.10].

Grading

Grades for the course will be decided as follows:

1 st Exam:	20%
2 nd Exam:	20%
Final exam:	40%
Laboratory Reports:	15%
Class Participation:	5%

The date for the final exam will be Wednesday, 13 December from 7:00 until 9:00 a.m., in accordance with the CSU exam schedule for classes that meet MWF at 11:00 a.m.

Weekly Quizzes

Short, pop quizzes will be given approximately once per week at the beginning of each class and will cover the reading material *assigned from the text for that particular day*. Each quiz will be worth 1-5 percentage points of **extra credit** towards the next exam. A strong showing on the quizzes can advance each test score by 1 to 2 grade levels. Therefore, it is greatly in your interest to complete the assigned reading *before* each lecture and come to class prepared.

Homework

You should also work homework problems. The course syllabus indicates the relevant problems from the back of each chapter in the book. Additional problems/questions may be distributed to you from time to time. You can work on these problems by yourself, together with your classmates, or with students who took the course in previous years. If you have difficulty with any of these problems, please feel free to come in to discuss them with me. Historically, the amount you learn in this course will relate directly to your ability to work problems of these kinds. If you do the homework problems and understand them, you will be prepared well for the quizzes, exams, and the final exam. Students who work too few homework problems often do poorly in the course.

Laboratories

In addition to the lecture portions of this class, there will be three laboratory sessions as listed on the course schedule. During the week after our introduction to the lab, you will work together with a lab partner to do the experiment planned. The following week that you conduct the lab, we will meet again to discuss your results. You will then prepare a brief report of your findings, which will be due one week later at the beginning of our regular 11:00 a.m. class.