New Course Request

Undergraduate credit [ ] Graduate credit [✓] Professional credit [ ]

1. School/Division Medicine/Public Health
2. Academic Subject Code PBHL

3. Course Number A609 (must be cleared with University Enrollment Services)
4. Instructor Ritchie

5. Recommended Abbreviation (Optional) Air Pollution and Health

6. First time this course is to be offered (Semester/Year): Spring 2010

7. Credit Hours: Fixed at 3 or Variable from 0 to 0

8. Is this course to be graded S-F (only)? Yes [✓] No [ ]

9. Is variable title approval being requested? Yes [ ] No [✓]

10. Course description (not to exceed 50 words) for Bulletin publication: Air pollution and health provides an overview and foundation in the science and management of air quality with a focus on health impacts and strategies to reduce these impacts. Our focus is on the scientific technical aspects of air pollution through the study of the characteristics of the atmosphere and atmospheric pollutants, effects of meteorology on air pollution, urban air pollution, visibility, smog, acid deposition, stratospheric ozone depletion, global warming and indoor air pollution.

11. Lecture Contact Hours: Fixed at 3 or Variable from 0 to 0

12. Non-Lecture Contact Hours: Fixed at 0 or Variable from 0 to 0

13. Estimated enrollment: 30 of which 100 percent are expected to be graduate students.

14. Frequency of scheduling: one time per year. Will this course be required for majors? No

15. Justification for new course: Necessary component for the development of the Master of Public Health electives.

16. Are the necessary reading materials currently available in the appropriate library? Yes

17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by:

Carole Kacius Date 4.22.10
Department Chairman/Division Director

Approved by:

Date 6/8/2010
Dean

Date 
Chancellor/Vice-President

Date 
University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

UPS 724 University Enrollment Services Final—White; Chancellor/Vice-President—Blue; School/Division—Yellow; Department/Division—Pink; University Enrollment Services Advance—White
COURSE TITLE: Air Pollution and Health
COURSE NUMBER: PBEH-452
LOCATION: TBA
DATE: TBA

FACULTY: Ingrid Ritchie
Associate Professor/Public Health/Medicine
274-3752
ritchie@iupui.edu

COURSE DESCRIPTION

Air Pollution and Health provides an overview and foundation in the science and management of air quality, with a focus on health impacts and strategies to reduce these impacts. Our focus is on the scientific technical aspects of air pollution through the study of the characteristics of the atmosphere and atmospheric pollutants, effects of meteorology on air pollution, urban air pollution, visibility, smog, acid deposition, stratospheric ozone depletion, global warming and indoor air pollution.

MPH PROGRAM COMPETENCIES ADDRESSED IN THIS COURSE

The Environmental Health competencies addressed in this course include the following:
- Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.
- Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues.
- Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.
- Explain the general mechanisms of toxicity in eliciting a toxic response to various environmental exposures.

LEARNING OBJECTIVES

At the completion of this course, you should be able to demonstrate mastery of the following learning outcomes:
- Identify and characterize traditional and nontraditional air pollutants in the atmosphere
- Explain the effects of meteorology on air pollution
- Identify, compare and contrast the health and welfare effects of traditional and nontraditional air pollutants
- Summarize the strategies used to reduce traditional and nontraditional air pollutants in communities
- Compare and contrast contemporary air pollution problems including urban pollution, smog, haze, acid precipitation, ozone depletion, and global warming in terms sources in terms of sources, chemistry, controls and strategies for reduction on the local, regional, national, and global scales.
REQUIRED OR SUGGESTED TEXT AND/OR READINGS

Jacobson, Mark Z., Atmospheric Pollution History, Science and Regulation, most recent edition, Cambridge University Press.

Additional readings as assigned.

EVALUATION AND GRADING SCALE

The course grade will be based on the following:
✓ 2 exams plus a cumulative final exam (75%)
✓ Research Paper (25%)

The grading scale (in percent) for the final grade is:

A+ = 97-100  A = 93-96  A- = 90-92
B+ = 87-89  B = 83-88  B- = 80-82
C+ = 77-79  C = 73-76  C- = 70-72
D+ = 67-69  D = 63-66  D- = 60-62
F = below 60

ATTENDANCE

The course grade does not include attendance, however, because of the technical nature of the class, attending each session will ensure that you have ample opportunity to ask questions and ensure a solid understanding of the course material.

If you have an emergencies or work conflict when an exam is scheduled, contact me prior to class (via telephone or email) so we can schedule a make-up exam. Make-up exams must be scheduled prior to the next class meeting, unless there are extenuating circumstances beyond the student's control. I reserve the right to request supporting documentation as a condition of granting an excused absence. Such situations will be considered on a case-by-case basis, but all students will be treated equitably.

STUDENTS WITH DISABILITIES

Students needing accommodations because of disability will need to register with Adaptive Educational Services (AES) and complete the appropriate forms issued by AES before accommodations will be given. The AES office is located in CA 001E and you can reach the office staff by calling 274-3241.

STUDENT COURSE EVALUATION

The Department of Public Health evaluates all courses. Student course evaluations will be conducted in a manner that maintains the integrity of the process and the anonymity of respondents.

ACADEMIC INTEGRITY

Academic and personal misconduct by students in this class are defined and dealt with according to the procedures in the Student Misconduct section of the IUPUI Code of Student Rights, Responsibilities, and Conduct (available at http://live.iupui.edu/dcs/code/htm).
Personal integrity is an essential element of professionalism and a basic academic responsibility. Any student who violates the student code of conduct (this includes allowing another student to copy his/her work) will be subject to IUPUI's policy on academic misconduct. Unless specifically authorized, individual work is expected and required in this class.

Students are responsible for upholding and maintaining academic and professional honesty and integrity as delineated in Part II Student Responsibilities, G) of the IUPUI Code of Student Rights, Responsibilities, and Conduct (available at http://www.iupui.edu/code). All faculty have the responsibility of fostering the "intellectual honesty as well as the intellectual development of students" and part of this responsibility means that faculty must investigate cases of potential academic misconduct promptly and thoroughly. Faculty members also have the responsibility of taking appropriate action when academic misconduct occurs. The penalties for academic misconduct include but are not limited to lowering a grade on an assignment, lowering a course grade, or failing a student for a course. Significant violations of the Code can result in expulsion from the University.

Public Health faculty take their responsibilities seriously and do not tolerate cheating, plagiarism, or any other form of academic misconduct. If you have not done so, you should read about your responsibilities in the IUPUI Code of Student Rights, Responsibilities, and Conduct to ensure that you understand what these terms mean and what penalties can be issued for academic misconduct.

Plagiarism is the most common academic misconduct violation, and some students, who have been disciplined for plagiarism, have said they were not aware that they had plagiarized their work. Be aware that 'not knowing' does not excuse academic misconduct – every student is responsible for knowing the rules. If you have any questions about what constitutes academic misconduct for a course you are taking, be sure to ask the instructor for an explanation.

The IU School of Education's 'How to Recognize Plagiarism' is an on-line tutorial that can help you understand and avoid plagiarizing the work of others. It can be accessed at http://www.indiana.edu/~istd/. Another useful tool is an online originality checking service provided by Turnitin.com. This service is available to faculty through the IUPUI University Library; faculty who use this service can submit student papers to the online service to check for plagiarism.

The IUPUI Code of Student Rights, Responsibilities, and Conduct defines four areas of academic misconduct: cheating, fabrication, plagiarism, and interference. The prohibited activities and actions as given in the IUPUI Code of Student Rights, Responsibilities, and Conduct include the following:

1. Cheating. A student must not use or attempt to use unauthorized assistance, materials, information, or study aids in any academic exercise, including, but not limited to, the following:
   a. A student must not use external assistance on any "in-class" or "take-home" examination, unless the instructor specifically has authorized external assistance. This prohibition includes, but is not limited to, the use of tutors, books, notes, and calculators.
   b. A student must not use another person as a substitute in the taking of an examination or quiz.
   c. A student must not steal examinations or other course materials.
   d. A student must not allow others to conduct research or to prepare work for him or her without advance authorization from the instructor to whom the work is being submitted. Under this prohibition, a student must not make any unauthorized use of materials obtained from commercial term paper companies or from files of papers prepared by other persons.
   e. A student must not collaborate with other persons on a particular project and submit a copy of a written report which is represented explicitly or implicitly as the student's individual work.
   f. A student must not use any unauthorized assistance in a laboratory, at a computer terminal, or on field work.

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g. A student must not submit substantial portions of the same academic work for credit or honors more than once without permission of the instructor to whom the work is being submitted.

h. A student must not alter a grade or score in any way.

2. Fabrication. A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citations to the sources of information.

3. Plagiarism. A student must not adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. A student must give credit to the originality of others and acknowledge an indebtedness whenever he or she does any of the following:
   a. Quotes another person’s actual words, either oral or written;
   b. Paraphrases another person’s words, either oral or written;
   c. Uses another person’s idea, opinion, or theory, or
   d. Borrows facts, statistics, or other illustrative material, unless the information is common knowledge.

4. Interference.
   a. A student must not steal, change, destroy, or impede another student’s work. Impeding another student’s work includes, but is not limited to, the theft, defacement, or mutilation of resources so as to deprive others of the information they contain.
   b. A student must not give or offer a bribe, promise favors, or make threats with the intention of affecting a grade or the evaluation of academic performance.
### Tentative Schedule

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<th>Date</th>
<th>Topic</th>
<th>Textbook Reading</th>
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<td>Introductions; review course syllabus</td>
<td>Ch 1</td>
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<td></td>
<td>Basic History and Discovery of Atmospheric Chemicals</td>
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<td>Week 2</td>
<td>The Evolution, Structure and Composition of the Earth's Atmosphere</td>
<td>Ch 2, 3</td>
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<td>Week 3</td>
<td>Urban Air Pollution</td>
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<td>Week 4 and 5</td>
<td>Aerosol Particles in Smog and the Global Environment</td>
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<td>Week 6</td>
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<td>Week 7 and 8</td>
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<td>Week 9</td>
<td>Effects of Pollution on Visibility, Ultraviolet Radiation, and Atmospheric Optics</td>
<td>Ch 7</td>
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<td>Week 10</td>
<td>International Regulation of Urban Smog Since the 1940s</td>
<td>Ch 8</td>
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<td>Week 11</td>
<td>Indoor Air Pollution</td>
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<td>Week 12</td>
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<td>Week 15</td>
<td>The Greenhouse Effect and Global Warming</td>
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<td>Week 16</td>
<td>Final Comprehensive Exam</td>
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