

University of Florida
College of Public Health & Health Professions Syllabus
PHC 6937: Environmental toxicology applications in Public Health (3 credit hours)
Fall: 2016
Delivery Format: Online via e-learning in Canvas

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Preferred Course Communications: The “Inbox” in Canvas will be used for all email correspondence. Instructors and TAs will not be responsible for emails sent their “UFL” email addresses

Prerequisites

None

PURPOSE AND OUTCOME

Course Overview

This course is intended to introduce applications of environmental toxicology in the context of public health. Toxicology is the science that deals with the health effects that can result from exposure to chemical, biological, and physical agents in the environment. The course materials focus on the fate of chemicals in our environment, routes of exposure and measures taken to decrease these exposures, and approaches that are commonly used by public health officials when dealing with toxicants. Along with the scientific foundation of how chemicals cause adverse health effects, the role of public health is reinforced throughout the course with the goal of educating students on problem solving and decision-making required of public health practitioners.

Course Objectives and/or Goals

Upon completion of this course, students will be able to:

1. Describe the role of toxicologists in public health, methods used to quantify toxicity, regulations that govern toxic substances, and assessment of risks posed by exposure to toxicants
2. Defend the use of common environmental toxicology applications in the practice of public health disciplines
3. Differentiate the properties of chemicals, biological toxins, and physical agents that influence fate and toxicity in humans, animals, and the environment
4. Develop informed decisions regarding toxicity of pollutants in the environment, their origins, and mitigation strategies that are protective of the public

Relation to Program and Learning Outcomes

Competencies primarily gained in this course

1. Understanding of effects of toxic substances on humans and the environment

2. Diagnose and investigate health problems and assess risks using a community-centered framework
3. Inform, educate, and empower people about the potential hazards of toxic substances to environmental and human health
4. Understand laws and regulations that protect health and ensure safety
5. Communicate effectively with constituencies in oral and written forms

Competencies reinforced in this course

1. Recognition of the role of environmental sciences in the health of populations
2. Develop policies and plans that support individual, community, and population health
3. Conduct research for new insights and innovative solutions to health problems

Instructional Methods

1. Lectures: Students are responsible for all the material presented in the course and assigned readings. This will be the main source of content in this course.
2. Readings and Resources. In addition to the required text, supplementary readings and resources will be posted in the course. The reading list may be supplemented during the course.
3. Assessments: The primary assessments will be written assignments, a presentation, and a mid-term and final examination.

What is expected of you?

You are expected to watch weekly lectures and complete all readings, assignments, and exams. Additionally, you are expected to actively engage in the course throughout the semester. Your participation fosters a rich experience for you and your peers that facilitate overall mastery of the course objectives.

DESCRIPTION OF COURSE CONTENT

This course is taught as a series of modules, each covering one specific aspect of environmental toxicology. Each module may contain lectures, external links, videos, discussions and required readings as well as assignments. You are responsible for all course content regardless of the format. The topical Outline/Course Schedule below details the dates of content modules and assignments. Debates and Exams are also listed.

Getting Started

1. Visit <http://lss.at.ufl.edu> and login to e-Learning in Canvas using your Gatorlink ID and password.
2. Find our course website. It will be listed as PHC6397-Environmental Toxicology Applications in Public Health – Dr. Joseph Bisesi – Fall 2016
3. Complete the “Getting Started” Module under the Modules Tool (left menu). This will prompt you to download and review the syllabus, review the materials on plagiarism, and complete the syllabus quiz.

The remainder of the course materials will be locked and unavailable to you until you have completed the “Getting Started” Module. You **MUST** earn a 100% score on the quiz in this module for the course materials to open in the course site. If you do not receive a 100% score,

please review the feedback on your quiz attempt and retake as soon as possible. This is an important element to insure that all students are aware of the curriculum requirements for this course. If you have ANY difficulty with this quiz, please send an email in the course to using the Canvas "Inbox" as soon as possible.

Course Materials and Technology

Text book (Required):

Principles and Practice of Toxicology in Public Health, *2nd edition*

Ira Steven Richards and Marie Bourgeois, Jones & Bartlett Learning, 2014 ISBN 978-1-4496-4526-7

e-Learning in Canvas site:

There will be an online site for this course in Canvas, the learning management system supported by the University. Log in at <https://lss.at.ufl.edu/> and go to course site for PHC6397-Environmental Toxicology Applications in Public Health – Dr. Joseph Bisesi – Fall 2016

Here, I will post the syllabus, lecture slides, assignments and allow for communication between the students and course instructors. You will also turn in assignments through this site. Once the course begins, all communication will take place through the e-Learning in Canvas site. This includes all emails. This will eliminate any issues with students not getting emails due to connection problems. It will be your responsibility to check the site on a routine basis to keep up with announcements, emails, and course modifications.

For technical support related to course materials and links, please contact me and the online course coordinator.

For technical support for this e-Learning in Canvas, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

ACADEMIC REQUIREMENTS AND GRADING

General information

Assignments are to be turned in as a Word document or PowerPoint file as directed, unless otherwise indicated. They will be returned to you with comments. If you have unexpected issues with Canvas, you may email the assignment to the course TA and instructor directly. Assignments are normally intended as individual projects unless otherwise directed. Shared work may be treated as a form of plagiarism. Assignments may be required to be submitted via Turnitin in this course (this will be done automatically in the Canvas Assignment). This tool will pick up any passages in students' work that come from another source. Be sure to adequately cite your sources/references for these assignments to avoid plagiarism (see format below). Also please confirm that your work is not overtly plagiarized, the Turnitin system will give you a report. Some similarity is expected and unavoidable, however if large portions are copied from other sources, this will be as considered plagiarism.

The Canvas assignment tool will notify you confirming the submission of your assignment. PLEASE check your UFL email at <http://webmail.ufl.edu> on a regular basis for these and other email notices from the course site. If you do not receive an email confirmation within 2 hours of submission,

please return to the site and resubmit your assignment. It is a student's responsibility to verify that they turn in assignments on time and that they turn in the CORRECT assignment attachment. Please take a few moments to open your submitted attachment and verify that you have submitted to correct file.

You will be graded in the course through the use of written homework and exams.

Written Assignments

There will be 4 assignments (75 points each; Total 300 points). Typically these will be one to two single-spaced pages long. Detailed instructions will be provided with each assignment.

Assignments are to be turned in as a Word document in the Canvas Assignment tool, unless otherwise indicated. They will be returned to you with comments. If you have unexpected issues with Canvas, you may email the assignment to the course TA and professor directly. Assignments are normally intended as individual projects unless otherwise directed. Shared work may be treated as a form of plagiarism. Assignments may be required to be submitted via Turnitin in this course (this will be done automatically in the Canvas Assignment). This tool will pick up any passages in students' work that come from another source. Be sure to adequately cite your sources/references for these assignments to avoid plagiarism (see format below). Please check your Turnitin report by going back to the assignment and clicking on the colored box icon in the assignment (you want to achieve a blue or green indication) – anything yellow, orange or red should be adjusted and resubmitted BEFORE the assignment deadline. So, it is recommended that you submit EARLY to enable you to utilize this option of resubmission. Resubmissions after the due date may be subject to a late submission penalty. Written assignments will be due at 11:55 PM on the due date. Late submissions will be subject to the late assignment policy below.

Presentation

Each student will complete a presentation during the course (200 points). Each student will be assigned a topic in which to present on within the first two weeks of the course. Students are expected to choose a case study that falls under the topic and prepare a 10 minute presentation about the case study. These presentations will be recorded and posted for the rest of the course to see, which will foster discussion on the specific case. There is no limit on number of slides but students must use at least 10 primary references in the preparation of their presentation. More details about the presentation will be posted on the canvas site.

Discussions

Students will make discussion posts for each of the presentations (100 points total). Each presentation for the course will be posted on the canvas site for the rest of the class to view. Each student is expected to make at least one original discussion post as well as one reply to another student's discussion post for EACH presentation. The student whose presentation is being discussed is expected to reply to two discussion posts for that discussion. More details on the content of discussion posts will be posted on the Canvas site.

Exams

There will be two in class exams: a midterm and a final (200 points each; Total 400 points). The format for both exams will be **CLOSED BOOK**. The midterm exam will test your knowledge of the first series of modules, including material covered in lectures, in the news slides, and assigned

readings. The final exam will focus on material covered in modules from the midterm onward; however, as this material builds on concepts presented during the first half of the course, it will be imperative to have a good comprehension of material covered during the first part of the course. Both exams will be comprised of multiple choice, matching, and true/false questions, where you will be expected to interpret the material that is presented in the course and apply it to the scenarios or situations that the exam questions present. You will have 2 hours to complete each exam. Exams will be administered through the Canvas Online Learning System. We will utilize Proctor U proctoring service for all exams. More information on how to take exams will be provided on the course site. An exam review document will be posted the week before each exam. There will also be a discussion board in the course dedicated to student questions about the exam.

Grading

Requirement	Due date	Points
Written Assignments = 4 @ 75 points each	See Course Schedule	300
Presentation = 1 @ 200 points	See Course Schedule	200
Discussion posts = 100 points total	See Course Schedule	100
Midterm Exam = 1 @ 200 points	See Course Schedule	200
Final Exam = 1 @ 200 points	See Course Schedule	200
TOTAL		1000

Point system used (i.e., how do course points translate into letter grades).

Points earned	95-100%	90-94%	87-89%	83-86%	80-82%	77-79%	73-76%	70-72%	67-69%	63-66%	60-62%	Below 62%
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

Passing grades and Grade Points: Credit Earned

Passing Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0

Please be aware that letter grades of C-, D+, D, D- or E are not considered passing at the graduate level, although the grade points associated with these letter grades are included in grade point average calculations. In addition, a grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A.

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:

<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Late Assignments and Make Up Work

Assignments turned in up to 24 hours late will be discounted **10%** of the grade that they would otherwise receive. Assignments turned in more than 24 hours late will **not** be graded and will contribute zero points toward your final grade, unless arrangements have been made in advance with the instructor. Missed assignments will contribute zero points toward your final grade.

Special Circumstances. In the event of exceptional situations that may interfere with your ability to perform an assignment or meet a deadline, contact the instructor as soon in advance of the deadline as possible. Such special cases will be dealt on an individual basis, provided that you have sufficient documentation.

Please note: Any requests for make-ups due to technical issues **MUST** be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You **MUST** e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance

All faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

You are expected to maintain a civil tone and respect the opinions of other posters. While commenting on others' posts is encouraged, aggressive or patronizing tone and language are unacceptable and may result in the loss of your posting and discussion privileges.

Communication Guidelines

You are required to contact the professor by email using the "Inbox" in Canvas for clarification and assistance with the course material and the assignments, and for special issues that may arise. Weekday daytime (US Eastern Time) emails have the best chances of being answered quickly. Please only use the Canvas "Inbox" to communicate with the course instructor and/or TA. While the instructors and TAs will check their UFL email regularly, they will not be held responsible for email sent directly to their UFL addresses.

Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>
<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior. Plagiarism is especially damaging in an online learning environment and will be dealt with in an official way, according to University of Florida regulations. Incidents will be reported directly to the Office of Student Judicial Affairs and a formal procedure will be started in each and every case. There will be no informal incident resolution between student and instructor. Should you have any doubts on whether something constitutes plagiarism, please consult the many available resources on the topic, e.g. starting with <http://web.uflib.ufl.edu/msl/subjects/Physics/StudentPlagiarism.html>, or contact the instructor in advance. There is also a reference posted in the course site, in the Course Help link. As you submit assignments, you will have the opportunity to check it for unintentional plagiarism using Turnitin®, the same software that instructors will use to check your work. You are encouraged to take advantage of this option. If you turn in assignments that are plagiarized, you will receive zero points for that assignment.

You are expected to turn in original work in this course. This means that when answering assignment questions, writing papers, posting discussions, etc you will be expected to write your responses in your own words. You **MAY NOT** copy answers word for word from any course materials or outside sources. On occasion it may be useful to provide a quote from course materials or outside sources in which case you must properly cite the source and place the quote in quotation marks. That being said we urge you to avoid excessive quotation as it does little to demonstrate you understanding of course material.

Online Faculty Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:
Alachua County Crisis Center
(352) 264-6789
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Topical Outline/Course Schedule

Section I	Introduction to Toxicology
Week 1	Introduction and History of Toxicology
Week 2	What makes a chemical toxic?
Section II	Environmental Fate of Chemicals
Week 3	Air quality in urban environments
Week 4	Drinking water contaminants of concern
Week 5	Chemicals in soil and sediment; implications for food safety
Section III	Exposure to Toxicants
Week 6	Exposure dynamics
Week 7	Understanding relationships between exposure and toxicity
Week 8	Personal and occupational interventions to decrease exposure
<u>Week 9</u>	<u>Mid-term Exam</u>
Section IV	Applications for Public Health
Week 10	The role of toxicologists in public health, medicine, industry, veterinary medicine, environmental protection
Week 11	Toxicity testing techniques to predict toxicity
Week 12	Laws and Regulations Governing Toxicants
Week 13	Epidemiological Approaches to Toxicants
Week 14	Informed Decision Making and Public Safety
<u>Week 15</u>	<u>Final Exam</u>