

Epidemiology of Occupational Injuries
Spring 2016
OEH:6530 / EPID:6530

Time/Location: Lecture on Tuesdays, 9:30-10:50am, Room C301 CPHB
Lab on Thursdays, 9:30-10:50am, Room C201 CPHB

Instructors:	Carri Casteel, MPH PhD S314 CPHB (319) 384-4388 carri-casteel@uiowa.edu	Marizen Ramirez, MPH, PhD S318 CPHB (319) 335-4425 marizen-ramirez@uiowa.edu
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Office Hours: By appointment only By appointment only

Department Head: Peter Thorne, PhD
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Course Description: This course will introduce students to the principles of occupational injury epidemiology, study designs used in occupational injury research, and epidemiologic concepts used in designing, analyzing and interpreting occupational injury studies. The course will include colloquial-style lectures, small group activities, student-led discussion, and a STATA lab.

Course Objectives and Competencies: The objectives of the course are to provide students with: (1) an understanding of injury prevention principles and epidemiologic methods used in occupational injury research, (2) an understanding of the epidemiology and prevention of occupational injuries, and (3) experience in applying epidemiologic methods through class activities, analyzing a dataset, and conceptualizing and writing sections of a manuscript. At the end of the course, students will be able to:

- (1) Describe epidemiologic and injury prevention principles used in occupational injury research.
- (2) Understand epidemiologic principles to examine injury outcomes associated with exposure to occupational hazards.
- (3) Apply biostatistical methods to examine associations between exposures and injury outcomes in an occupational cohort.
- (4) Apply epidemiologic concepts to understand the significance and public health relevance of the peer-reviewed literature in occupational injury.
- (5) Demonstrate in writing and through oral presentation a knowledge of epidemiologic concepts used in occupational injury research.

Expectations of Student Attendance and Performance:

1. Regular class attendance is required. Attendance will be taken during each class period. For classes/labs missed, students will be given an assignment to complete and turn in to ensure they do not fall behind. **Students are also asked to mute or turn cell phones off during class.**
2. Students are expected to complete all readings before class and actively participate in class discussions. The readings and subsequent class discussion are essential to achieve the objectives of this course. Readings will be posted on the ICON course site.
3. Assignments must be turned in on time at the beginning of the class, unless otherwise stated or negotiated with the course instructors.

4. Class communication will be handled through the ICON course site. Students are expected to regularly check the site for updates, schedule changes and announcements. If you use an e-mail address other than that listed in ICON, please provide it to the instructors.
5. You may call or email either instructor using the contact information above. A typical response time will range between 1 and 3 days.

Expectations of Course Assignments:

All assignments will be evaluated using the following criteria:

1. The extent to which the stated requirements of the assignment are met; students will receive an outline for each assignment that articulates the required components of the assignment.
2. Clarity and quality of organization and writing; written assignments should be double-spaced with 1-inch margins and proofread for typographical, spelling and grammatical errors.
3. Appropriate application, analysis and synthesis of course content.
4. Use of citations, where appropriate, to avoid plagiarism. If you are not sure how to properly cite material, please consult with the course instructors.

Grading: Grading will be based on assignments, projects and presentations, and class participation. Letter grades will be assigned as follows: A= 90-100%, B= 80-89%, C= 70-79%, D= 60-69%, F= < 60%. A final exam will not be given.

<u>Assignment</u>	<u>Percentage</u>
Manuscript Results Sections	
Assignment 1	10
Assignment 2	15
Assignment 3	10
Assignment 4	15
Final Paper / Presentation	40
Class Participation and Professionalism	10

Availability of Accommodations for Students with Disabilities

Any student eligible for and needing academic adjustments or accommodations under the Americans with Disabilities Act is requested to notify the instructor as soon as possible to make appropriate arrangements. For more information please visit: [Student Disability Services - The University of Iowa](#)

Schedule of Topics

WEEK	DATE	TOPICS	ASSIGNMENTS
1	January 19	<u>Lecture</u> Review of syllabus, introductions and background in epidemiologic concepts and applications	
	January 21	<u>Lecture</u> Magnitude, nature and mechanisms of occupational injuries	
2	January 26	<u>Lecture</u> Epidemiologic and injury prevention principles in occupational injury	
	January 28	<u>Lab</u> Introduction to course dataset Introduction to STATA Importing data into STATA	
3	February 2	<u>Lecture</u> Occupational injury surveillance	
	February 4	<u>Lab</u> Data cleaning Univariate and bivariate distributions	Assignment 1 distributed
4	February 9	<u>Lecture</u> Populations Epidemiologic study designs	
	February 11	<u>Lab</u> Graphing and describing occupational exposures and outcomes	
5	February 16	<u>Lecture</u> Epidemiologic study designs	Assignment 1 due
	February 18	<u>Lab</u> Class Discussion: Review of Assignment 1	
6	February 23	<u>Lecture</u> Confounding Dr. Shabbar Ranapurwala Post Doctoral Fellow, Injury Prevention Research Center, University of Iowa	Assignment 2 distributed
	February 25	<u>Lecture</u> Effect Measure Modification Dr. Shabbar Ranapurwala	
7	March 1	<u>Lecture</u> Cross-sectional studies	
	March 3	<u>Lab</u> Estimation	

8	March 8	<u>Lecture</u> Class Discussion: Assignment 2 Case-control studies	Assignment 2 due
	March 10	<u>Lab</u> Stratification; examining confounding and EMM	
9	March 15, 17	Spring break	
10	March 22	<u>Lecture</u> Regression modeling Model fit and diagnostics	
	March 24	<u>Lab</u> Introduction to regression modeling	Assignment 3 distributed
11	March 29	<u>Lecture</u> Coding injury and occupation Dr. Kari Harland Associate Research Scientist, Emergency Medicine, University of Iowa	
	March 31	<u>Lab</u> Introduction to regression modeling	Assignment 4 distributed
12	April 5	<u>Lecture</u> Pesticide poisoning Dr. Diane Rohlman Associate Professor, Occupational and Environmental Health, University of Iowa	
	April 7	<u>Lab</u> Class Discussion: Assignment 3	Assignment 3 due
13	April 12	<u>Lecture</u> Musculoskeletal injuries and ergonomics Dr. Nate Fethke Associate Professor, Occupational and Environmental Health, University of Iowa	
	April 14	<u>Lab</u> Open lab time	
14	April 19	<u>Lab</u> Class Discussion: Assignment 4	Assignment 4 due
	April 21	<u>Lecture</u> Biases	Final assignment distributed
15	April 26	<u>Lecture</u> Journal article writing	
	April 28	<u>Lab</u> Special topic or open lab time	
16	May 3	Student Presentations	
	May 5	Student Presentations	
Finals Week	May 10		Final assignment due

Additional Required UI and Policy and Procedures

Administrative Home

This course is given by the College of Public Health. This means that class policies on matters such as requirements, grading and sanctions for academic dishonesty are governed by the College of Public Health. Students wishing to add or drop this course after the official deadline must receive the approval of the Associate Dean for Academic and Student Affairs in the College of Public Health. Details of the University policy of cross enrollments may be found at: [Cross-Enrollment Policy](#)

Electronic Communication

University policy specifies that students are responsible for all official correspondences sent to their standard University of Iowa e-mail address (@uiowa.edu). Students should check this account frequently.

Academic Misconduct

Academic misconduct is defined by the University of Iowa in its Code of Student Conduct located here: [Policies & Regulations Affecting Students](#). Please take the time to read this short description. Academic misconduct refers primarily to plagiarism or cheating. **It is the student's responsibility to seek clarification from the course instructor of any situation in which he/she is uncertain whether academic misconduct is/has been involved.**

Plagiarism includes but is not limited to the following:

- presentation of ideas of others without credit to the source;
- use of direct quotations without quotation marks and without credit to the source;
- paraphrasing without credit to the source;
- participation in a group project which presents plagiarized materials;
- failure to provide adequate citation for material obtained through electronic research;
- downloading and submitting work from electronic databases without citation;
- submitting material created/written by someone else as one's own, including purchased term/research papers;

Cheating includes but is not limited to the following

- copying from someone else's exam, homework, or laboratory work
- allowing someone to copy or submit one's work as his/her own;
- accepting credit for a group project without doing one's share;
- submitting the same paper in more than one course without the knowledge and approval of the instructors involved;
- using notes or other materials during a test or exam without authorization;
- not following the guidelines specified by the instructor for a "take-home" test or exam.

Academic misconduct is a serious matter and is reported to the departmental DEO and to the Associate Dean for Education and Student Affairs. Instructors and DEOs decide on appropriate consequences at the departmental level while the Associate Dean enforces additional consequences at the collegiate level. For example, an incident involving plagiarism will result in consequences to the student ranging from a grade of 0 for that assignment to being terminated from his/her graduate program. Egregious acts of misconduct, such as cheating on a final exam, may result in the course grade being reduced to an F. Additional details concerning the consequences associated with acts of plagiarism, including a student appeals process, is provided in the Graduate College Manual section IV.F.

Concerns about Faculty Actions

At the beginning of each course, students should be informed of departmental and collegiate complaint procedures and services of the Office of the University Ombudsperson. Complaints should be initiated at the faculty or departmental level. If a complaint cannot be resolved at faculty, departmental and/or collegiate level, students may file a formal complaint utilizing the procedure specified in the Operations Manual (II-29.7).

Students who have a concern about a faculty action should first address the issue with the instructor, then the course supervisor (if there is one), and then the departmental DEO. Students may also contact the Associate Dean for Education and Student Affairs in the College of Public Health. Another resource for students is the Office of the University Ombudsperson. If a complaint cannot be resolved at the departmental and/or collegiate level, students may file a formal complaint utilizing the procedure specified in the [Operations Manual \(II-29.7\)](#)

Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. The policy in its entirety may be found at [II-4 Sexual Harassment | Operations Manual](#).

If you or someone you know may be a victim of sexual assault, sexual harassment, dating/domestic violence, stalking, or any other behaviors prohibited under this policy, you are strongly encouraged to seek assistance and support. Assistance is available 24 hours a day, 7 days a week, from:

- Rape Victim Advocacy Program (RVAP) -- confidential, certified victim advocacy services, 319-335-6000
- Domestic Violence Intervention Program (DVIP) -- confidential, certified victim advocacy services, 319-351-1043 or 800-373-1043
- Emergency Department, University of Iowa Hospitals and Clinics -- confidential medical services, 319-356-2233
- University of Iowa Department of Public Safety -- law enforcement services, 319-335-5022, or 911 from any campus phone

During business hours, you may also seek assistance from the University of Iowa Office of the Sexual Misconduct Response Coordinator at 319-335-6200.

Reacting Safely to Severe Weather

In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit [Hawk Alert](#).