

PUBH 6170

Introduction to Occupational Health and Safety

Fall 2018 (Version 9/11/18; red font denotes changes from the original syllabus)

COURSE & CONTACT INFORMATION

Credits: 3

Meeting Day(s): Wednesdays

Meeting Time: 2:30 pm – 5:30 pm

Meeting Place: Mayo 1250

Instructor: Pat McGovern, Ph.D., MPH

Bond Professor of Occupational and Environmental Health Policy

Division of Environmental Health Sciences

Email: pmcg@umn.edu

Office Phone: 612-625-7429

Office Hours: e-mail to make an appointment

Office Location: 1112 Mayo

COURSE DESCRIPTION

This class will provide a survey of the major concepts and issues in occupational health and safety practice. Class participants will develop a conceptual framework for applying course content and public health principles to worker populations across industries to facilitate knowledge of occupational exposures, health outcomes and risk management approaches. Work-related hazards will be described in terms of recognition, evaluation and control. The course relies on a synthesis of knowledge from the behavioral sciences, occupational medicine and nursing, industrial hygiene, injury prevention and safety, toxicology and epidemiology and will be applied to program development and management. Students will participate in a site visit to a manufacturing plant.

COURSE PREREQUISITES

Environmental health major or instructor permission is required.

COURSE GOALS & OBJECTIVES

- Demonstrate the ability to critically review a peer-reviewed paper relevant to occupational health and safety and facilitate an inclusive class discussion
- Recognize the interrelatedness of public health, management, employees and the government to the goals of occupational health and safety
- Demonstrate a base of knowledge in the recognition and assessment of health and safety hazards in the workplace and across major industries
- Apply a conceptual framework to the practice of occupational health and safety
- Discuss the roles and functions of the occupational health and safety professional in practice and relative to a conceptual framework.
- Identify education, engineering, and enforcement controls for the prevention of occupational health and safety problems.

METHODS OF INSTRUCTION AND WORK EXPECTATIONS

This course combines lectures, in-class activities, writing assignments, journal article discussions, a group project and presentation, and a tour of a manufacturing worksite. Experts who work in the field of occupational health and safety will give several lectures that emphasize real-life applications of key course content. Students will be expected to contribute, ask questions and seek more information when the activities are not clear. It is expected that the academic work required of graduate and professional students will equal four hours per credit per week. All students must prepare and participate in the assignments listed before a passing grade is given. Each assignment is associated with its percent of the course grade. Note that grading percentages are based on total performance on the assignments.

- Presentation of a journal article and facilitation of discussion 10% (Attachment 1, and the course website)
- Written occupational health and safety needs assessment by industry 20% (Attachment 2, and the course website)
- Team presentation of a critique of TLV documentation 40% (Attachment 3, and the course website)
- Class-specific written assignments on journal articles and videos and participation in related discussions 30% (2.5 points *12 activities highlighted in yellow and denoted with an asterisk* on the class weekly schedule).

Attendance and Participation– Please be on time for class as a courtesy to our guest speakers and your fellow students. We will be covering a broad range of topics in this course, and it is important that you attend every class. Please be respectful and contact me by email at least 24 hours prior to class, if you know you will be absent. All students must attend class on Wednesday, December 12 when final team presentations will be given.

Course Website and Assignments–The course web page contains documents (e.g., course syllabus), the weekly schedule and a discussion forum. The web link can be found at “MyU” in association with the class number, PubH 6170. All assignments must be uploaded to the class website by the required due date to meet course expectations.

Norms for a Learning Community

School of Public Health courses ask students to discuss frameworks, theory, science, policy, and more, often in the context of past and current events and policy debates. Many of our courses also ask students to work in teams or discussion groups. We do not come to our courses with identical backgrounds and experiences and building on what we already know about collaborating, listening, and engaging is critical to successful professional, academic, and scientific engagement with topics.

In this course, students are expected to engage with each other in respectful and thoughtful ways.

In group work, this can mean:

- Setting expectations with your groups about communication and response time during the first week of the semester (or as soon as groups are assigned) and contacting the instructor if scheduling problems cannot be overcome.
- Setting clear deadlines and holding yourself and each other accountable.
- Determining the roles group members need to fulfill to successfully complete the project on time.
- Developing a rapport prior to beginning the project (what prior experience are you bringing to the project, what are your strengths as they apply to the project, what do you like to work on?)

In group discussion, this can mean:

- Respecting the identities and experiences of your classmates.
- Avoid broad statements and generalizations. Group discussions are another form of academic communication and responses to instructor questions in a group discussion are evaluated. Apply the same rigor to crafting discussion posts as you would for a paper.
- Consider your tone and language, especially when communicating in text format, as the lack of other cues can lead to misinterpretation.

Like other work in the course, all student to student communication is covered by the Student Conduct Code (<https://z.umn.edu/studentconduct>).

Course Text & Readings

The primary course text is by Levy, B.S. et al (2018). A secondary text is by Anna. D.H. (2011). These texts are noted below with an asterisk and they are available online or in hard copy and available through the biomedical library, Diehl Hall as “reserve” readings. The texts also are available for purchase through Amazon or professional associations. Additional texts below are specific to various disciplines and are complimentary to the required readings for those who are interested. They are available through course reserves in digital or paper form as noted.

To access texts available in digital form use the following link: <https://reserves.lib.umn.edu/> You must log in with your U of M internet ID and password to view the page (this is the same information you would enter to log in to your U of M email). If you have any problems accessing the page or logging in, please contact biomrsv@umn.edu

Additionally there will be selected research papers and reports to read and websites to review that are listed under each lecture, along with information on how to access them. All readings should be read before each class.

Texts

*Levy, B. S., Wegman, D. H., Baron, S. H. and Sokas, R. K., Editors. *Occupational and Environmental Health: Recognizing and Preventing Disease and Injury* (Seventh Edition). New York, NY: Oxford University Press, 2017. ISBN 978-0-19-539788-8.

This text is available for” online access and there is a hard copy available at the TC Bio-Medical Library Course Reserve (2nd Floor Circulation Desk) (WA440 L101 2011),

*Anna, D.H., Editor. *The Occupational Environment - Its Evaluation, Control, and Management*. AIHA, Fairfax, Virginia, 2011. ISBN 978-1-935082-15-6. There is “multiple user” online access to the text in addition to a hard copy available at the TC Bio-Medical Library Course Reserve.

LaDou, J. and Harrison, R., Editors. *Current Diagnosis & Treatment: Occupational and Environmental Medicine* (5th Edition). McGraw-Hill Education, New York, 2014. ISBN 978-1-25-925145-0. There is “multiple user” online access to the text.

P.V. Moore, R. L. Moore, Editors. *AAOHN Core Curriculum* (4th Edition) Editors: AAOHN Academy. Pensacola, 2014. ISBN 978-0-9848861-2-8. This text is only available in hard copy at the TC Bio-Medical Library Course Reserves.

Hagan, P.E., Montgomery, J.F., and O’Reilly, J.T., Editors. *Accident Prevention Manual for Business and Industry: Administration and Programs* (13th Edition). National Safety Council, 2009. ISBN 978-0-87912-280-5. WA 485 H1 2009. This text is only available in hard copy at the TC Bio-Medical Library Course Reserves.

Week	Topic	Readings and Websites	Activities/Assignments
Week 1 Wednesday, September 5	<ul style="list-style-type: none"> • Course overview • Introduction to Occupational Health & Safety (OHS) • Case study 	<p><u>Watch the video:</u> “Critical Challenges Facing Occupational Health and Safety – Today and Tomorrow” by John Howard, MD, MPH, JD, LLM, Director of the National Institute for Occupational Safety and Health (NIOSH), May 2016. Accessed 8/8/18 at: http://www.mcohs.umn.edu/nora-symposium/</p> <p><u>Review web pages:</u></p> <ul style="list-style-type: none"> • American College of Occupational and Environmental Medicine (Ed.). (n.d.). <i>What is OEM?</i> Retrieved August 22, 2018, from http://www.acoem.org/OccMed.aspx • American Association of Occupational Health Nursing, Inc. (2015). <i>Competencies in Occupational and Environmental Health Nursing</i>. Retrieved August 23, 2018. (Accessible on Course Website) • American Board of Industrial Hygiene (2018). <i>Industrial Hygiene (IH) Defined</i>. Retrieved August 24, 2018, from http://www.abih.org/content/ih-defined • AcademyHealth (n.d.) <i>About Us</i>. Retrieved August 24, 2018, from https://www.academyhealth.org/about • Board of Certified Safety Professionals (BCSP). (2018) <i>Certified Safety Professional (CSP.)</i> Retrieved August 24, 2018, from https://www.bcsp.org/CSP • Bureau of Labor Statistics, U.S. Department of Labor (2018) Occupational Outlook Handbook, <i>What Epidemiologists Do</i>. Retrieved August 24, 2018, from https://www.bls.gov/ooh/life-physical-and-social-science/epidemiologists.htm#tab-2 • Council of State and Territorial Epidemiologists (CSTE). <i>Environmental Health/Occupational Health/Injury</i>. Retrieved August 24, 2018, from Health/Injury https://www.cste.org/page/EHOHI 	<p>Activity -Introduction to needs assessment project; form groups</p> <p>Assignments (for next week) -Upload a summary of Dr. Howard’s video* to the website, ideally by 9/11 but no later than noon, September 18. (See instructions on course website) -Upload summary of Calvert, et al.’s* OR Luckhaupt, et al.’s* articles, ideally by 9/11 but no later than noon, September 18.</p>
Week 2 Wednesday, September 12	<ul style="list-style-type: none"> • Overview of Occupational Medicine • Guest lecture, Steve Kirkhorn, MD, Minneapolis VA Health System 	<p><u>Read the text:</u></p> <ul style="list-style-type: none"> • Levy, BS et al. (2018). Chapters:(1) Twenty-first century challenges and opportunities, (4) Recognizing and preventing occupational and environmental disease and injury, (6) Occupational and environmental surveillance, and (10) Clinical occupational and environmental health practice. <p><u>Read the articles available through the libraries e-journals:</u></p> <ul style="list-style-type: none"> • Calvert, GM., Luckhaupt SE, Sussell, A. et al. (2013) The Prevalence of selected potentially hazardous workplace exposures in the US: Findings from the 2010 National Health Interview Survey. <i>American Journal of Industrial Medicine</i>. 56 (6):635-646. • Luckhaupt SE, Dahlhamer JM, Ward BW, Sweeney MH, Sestito JP, Calvert GM. (2013) Prevalence and work-relatedness of carpal tunnel syndrome in the working population, United States, 2010 National Health Interview Survey. <i>American Journal of Industrial Medicine</i>.56(6):615-24. 	<p>Activity -Discussion #1 of journal articles (Students #1, 2)</p> <p>Assignment -Upload summary of Goldman et al’s (2017)*& Blinder et al’s (2017)* articles by noon, September 18 -Start data collection for needs assessment</p>

<p>Week 3 Wednesday, September 19</p>	<p>Americans with Disabilities Act & Accommodation Guest lecturer Dave Cossi, JD Adjunct Assistant Professor, EnHS</p>	<p><u>Review web pages</u></p> <ul style="list-style-type: none"> • U.S. Equal Employment Opportunity Commission. <i>Facts about the Americans with Disabilities Act</i>. Retrieved August 11, 2018, from https://www.eeoc.gov/eeoc/publications/fs-ada.cfm • U.S. Department of Labor, Office of Disability Employment Policy. <i>Accommodations</i>. Retrieved August 11, 2018, from https://www.dol.gov/odep/topics/Accommodations.htm <p><u>Read the articles listed below available online through the University's libraries</u></p> <ul style="list-style-type: none"> • Goldman, T. R. (2017). Working with a chronic disease. <i>Health Affairs</i>, 36(2), 202-205. • Blinder, V., Eberle, C., Patil, S., et. al. (2017) Women with breast cancer who work for accommodating employers more likely to retain jobs after treatment. <i>Health Affairs</i>, 36(2),274-281. 	<p>Activity -Discussion #2 of journal articles (Students #3-5)</p> <p>Assignments -Upload summary of Besen et al.'s* & Morano et al.'s* articles by noon, September 25</p> <p>-Check team members for status of needs assessment data collection; start writing report</p>
<p>Week 4 Wednesday, September 26</p>	<p>Workers Compensation, occupational injuries and opioid use</p> <p>Guest lecturer Beth Baker, MD, Canadian Pacific Railway</p>	<p><u>Read the text:</u></p> <ul style="list-style-type: none"> • Levy, B.S., et al., <i>Occupational and environmental health: Twenty-first century challenges and opportunities</i>. Chapters:(19) Injuries and Occupational Safety, and (20) Musculoskeletal Disorders. <p><u>Read these articles available online through the University's libraries</u></p> <ul style="list-style-type: none"> • Besen, E., Harrell, M., and Pransky, G. (2016) Lag times in reporting injuries, receiving medical care and missing work: Associations with the length of work disability in occupational back injuries. <i>Journal of Occupational & Environmental Medicine</i>, 58(1):53-60. • Morano, L.H., Steege. A.L., Luckhaupt, S.E. (2018) Occupational patterns in unintentional and undetermined drug involved and opioid involved deaths – United States, 2007-2012. <i>Morbidity and Mortality Weekly Report (MMWR)</i>, 67(33):925-930. <p><u>Review the web pages:</u></p> <ul style="list-style-type: none"> • Minnesota Department of Health. State Plans Opioid Misuse, Substance Use Disorder, and Overdose Prevention. (n.d.) Retrieved 8/10/18, http://www.health.state.mn.us/divs/healthimprovement/working-together/state-plans/opioidstateplan.html • Centers for Disease Control, National Institute for Occupational Safety & Health (2018, August 7). <i>NIOSH confronts the opioid epidemic</i>. Retrieved 8/10/18 from https://www.cdc.gov/niosh/topics/opioids/default.html 	<p>Activity -Discussion #3 of journal articles (Students #6-8)</p> <p>Assignment -Check with group on status of needs assessment; draft final report</p>

Week 5 Wednesday, October 3	Threshold Limit Values (TLVs) Guest Instructor: Susan Arnold, PhD, CIH, Assistant Professor	<u>Read the text:</u> <ul style="list-style-type: none"> • Anna, D.H.(Ed) (2011)<i>The Occupational Environment: - Its Evaluation, Control and Management</i>. Chapter (4) Occupational exposure limits. <u>Read the articles (Access pending)</u> <ul style="list-style-type: none"> • Kennedy GL JR. (2001). Setting a threshold limit value (TLV): The Process. <i>Chemical Health & Safety</i>, July/August: 13-15. • Weisburger EK. (2001) History and background of the Threshold Limit Value Committee of the American Conference of Governmental Industrial Hygienists. <i>Chemical Health & Safety</i>, July/August, pp 10-12. 	Activity N/A Assignments -Assignment to TLV team project; instructions provided -Brief assignment on TLVs* due by noon, October 9 (See website) -Needs assessment final report due by noon, October 10.
Week 6 Wednesday, October 10	Hazard Recognition Guest instructor, Kim Anderson, PhD, Assistant Professor	<u>Read the text:</u> <ul style="list-style-type: none"> • Levy, B. S. (Ed.). (2018). <i>Occupational and environmental health: Recognizing and preventing disease and injury</i>. Chapters (11) <i>Chemical hazards</i> and (13) <i>Biological hazards</i> <u>Review web pages:</u> <ul style="list-style-type: none"> • U.S. Department of Labor. Occupational Safety and Health Administration.(n.d) <i>Chemical Hazards</i>. Retrieved 8/28/18 from https://www.osha.gov/SLTC/hazardoustoxicsubstances/ • U.S. Department of Labor. Occupational Safety and Health Administration. (n.d) <i>Biological Agents</i>.https://www.osha.gov/SLTC/biologicalagents/index.htmlhttps://www.osha.gov/SLTC 	Activity N/A Assignment N/A
Week 7 Wednesday, October 17	Hazard Evaluation Guest instructor, Kim Anderson, PhD, Assistant Professor	<u>Read the texts:</u> <ul style="list-style-type: none"> • Anna, D.H. (2011) <i>The Occupational Environment: - Its Evaluation, Control and Management</i> Chapter (9) <i>Comprehensive Exposure Assessment</i>. • Levy, B. S. (Ed.). (2018). <i>Occupational and environmental health: Recognizing and preventing disease and injury</i>. Noise exposure and hearing disorders (Chapter 12A), Vibration (Chapter 12B), Ionizing and non-ionizing radiation(Chapter 12D) 	Activity N/A Assignment - Upload summary of Kurowski et al.'s* article by noon, October 23
Week 8 Wednesday, October 24	Ergonomics Guest Instructor, Breca Tschida, MSPH, CPE, Ergonomics Program Coordinator/ Industrial Hygienist, MNOHSA	<u>Read the text:</u> <ul style="list-style-type: none"> • Levy BS (Ed). (2018) <i>Occupational and environmental health: Twenty-first century challenges and opportunities</i>. Chapter (9) Occupational ergonomics: promoting safety and health through work design. <u>Read the article available online through the University's libraries</u> <ul style="list-style-type: none"> • Kurowski, A., Pransky, G., & Punnett, L. (2018) Impact of a safe resident handling program in nursing homes on return to work and re-injury outcomes following work injury. <i>Journal of Occupational Rehabilitation</i>. Retrieved 8/28/18 from https://doi-org.ezp1.lib.umn.edu/10.1007/s10926- 	Activity - Discussion #4 of Kurowski et al.'s article (Students #9-10) -TLV groups meet (#1); Assign sections for research on TLV Assignment N/A

<p>Week 9 Wednesday, October 31</p>	<p>Controls Guest instructor, Pete Raynor, PhD, Associate Professor</p>	<p><u>Read the text</u> Anna, D.H. (2011) <i>The Occupational Environment: - Its Evaluation, Control and Management</i>. Chapters (39). <i>Personal Protective Clothing</i></p>	<p>Activity N/A Assignment -Upload summary of the selected paper (either Olson et al.'s* OR Anger et al.'s papers* uploaded by noon, November 6</p>
<p>Week 10 Wednesday, November 7</p>	<p>Total Worker Health (TWH) Guest instructor, Tammy Schult, PhD, Veterans Health Care Administration</p>	<p><u>Read the articles which are available online through the University's libraries</u></p> <ul style="list-style-type: none"> Olson, R., Thompson, S.V., Elliot, D.L., et. al. (2016) Safety and health support for home care workers: The Compass Randomized Controlled Trial. <i>AJPH</i>.16(10):1823-1832, OR Anger, K., Kyper-Yano, J., Vaughn,, K., et al.(2018) Total Worker Health intervention for construction workers alters safety health, well-being measures <p><u>Review the web pages</u></p> <ul style="list-style-type: none"> National Institute for Occupational Safety & Health (NIOSH). (July 21, 2017) Total Worker Health. © Retrieved 8/28/18 from https://www.cdc.gov/niosh/twh/totalhealth.html 	<p>Activity -Discussion #5 of one selected journal article (Students # 11-13) -TLV Work group session (#2); check progress on draft materials on sections and review responsibilities for slide presentation Assignment -Upload written assignment on papers by Desilver,* and Jou et al's* by noon, November 14</p>
<p>Week 11 Wednesday, November 14</p>	<p>Family and Medical Leave Act (FMLA) Guest instructor; David Cossi, JD, MS Adjunct Assistant Professor</p>	<p><u>Read the articles which are available online through the University's libraries</u></p> <ul style="list-style-type: none"> Desilver, D. (March 23, 2017) Access to paid family leave varies widely across employers, industries. Pew Research Center. Retrieved 8/28/18 from http://www.pewresearch.org/fact-tank/2017/03/23/access-to-paid-family-leave-varies-widely-across-employers-industries/ Jou J, Kozhimannil KB, Abraham JM, et al. (2018) Paid Maternity Leave in the United States: Associations with Maternal and Infant Health. <i>Maternal Child Health Journal</i>. 22(2):216-225 <p><u>Review the web pages</u> US Department of Labor (DOL). Family and Medical Leave Act. (n.d.) Retrieved 8/28/18 from https://www.dol.gov/whd/fmla/</p>	<p>Activity -Discussion #6 of journal articles (Students # 14-15) Assignment -Prepare slides for TLV presentation</p>

Week 12 Wednesday, November 21 No in- person class	Work-related violence and civility	<u>Watch the videos:</u> <ul style="list-style-type: none"> • “Workplace Harassment: Ensuring Respect, Combating Harassment, and Improving Organizational Performance” by Fran Sepler – President, Sepler & Associates May 2018. Accessed 8/28/18 at http://www.mcohs.umn.edu/nora-symposium/ 	Activity No class Assignment -Watch video and upload summary *by noon November 27 (See website for instructions)
Week 13 Wednesday, November 28	Business Skills Guest instructor Lucy Carlson, MPH, 3M	<u>Review web pages</u> <ul style="list-style-type: none"> • Medtronic (August 2018) Retrieved 9/2/2018 from http://www.medtronic.com/us-en/index.html (More specific links pending) 	Activity -Discussion of videos -Preparation for Worksite Tour -Final TLV group session
Week 14 Wednesday, December 5	Worksite Tour (3:00-5:00 pm)	Logistical information is pending.	Activity Worksite Tour Assignment -Upload presentation slides by noon, December 12
Week 15 Wednesday, December 12	Final TLV Presentations		Activity Final TLV Presentations

SPH AND UNIVERSITY POLICIES & RESOURCES

The School of Public Health maintains up-to-date information about resources available to students, as well as formal course policies, on our website at www.sph.umn.edu/student-policies/. Students are expected to read and understand all policy information available at this link and are encouraged to make use of the resources available.

The University of Minnesota has official policies, including but not limited to the following:

- Grade definitions
- Scholastic dishonesty
- Makeup work for legitimate absences
- Student conduct code
- Sexual harassment, sexual assault, stalking and relationship violence
- Equity, diversity, equal employment opportunity, and affirmative action
- Disability services
- Academic freedom and responsibility

Resources available for students include:

- Confidential mental health services
- Disability accommodations
- Housing and financial instability resources
- Technology help
- Academic support

EVALUATION & GRADING

[Enter a detailed statement of the basis for grading here. Include a breakdown of course components and a point system for achieving a particular grade. Include expected turnaround time for grading/feedback. Please refer to the University's Uniform Grading Policy and Grading Rubric Resource at <https://z.umn.edu/gradingpolicy>]

Grading Scale

The University uses plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following, and you can expect the grade lines to be drawn as follows:

% In Class	Grade	GPA
93 - 100%	A	4.000
90 - 92%	A-	3.667
87 - 89%	B+	3.333
83 - 86%	B	3.000
80 - 82%	B-	2.667
77 - 79%	C+	2.333
73 - 76%	C	2.000
70 - 72%	C-	1.667
67 - 69%	D+	1.333
63 - 66%	D	1.000
< 62%	F	

- A = achievement that is outstanding relative to the level necessary to meet course requirements.
- B = achievement that is significantly above the level necessary to meet course requirements.
- C = achievement that meets the course requirements in every respect.
- D = achievement that is worthy of credit even though it fails to meet fully the course requirements.
- F = failure because work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I (Incomplete).
- S = achievement that is satisfactory, which is equivalent to a C- or better
- N = achievement that is not satisfactory and signifies that the work was either 1) completed but at a level that is not worthy of credit, or 2) not completed and there was no agreement between the instructor and student that the student would receive an I (Incomplete).

Evaluation/Grading Policy	Evaluation/Grading Policy Description
<p>Scholastic Dishonesty, Plagiarism, Cheating, etc.</p>	<p>You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis (As defined in the Student Conduct Code). For additional information, please see https://z.umn.edu/dishonesty</p> <p>The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: https://z.umn.edu/integrity.</p> <p>If you have additional questions, please clarify with your instructor. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.</p> <p>Indiana University offers a clear description of plagiarism and an online quiz to check your understanding (http://z.umn.edu/iuplagiarism).</p>
<p>Late Assignments</p>	
<p>Attendance Requirements</p>	
<p>Extra Credit</p>	
<p>Duo Security</p>	<p>If you use Duo Security to sign in to University applications, YOU ARE STRONGLY ENCOURAGED to set up back-up devices in Duo Security so that you are prepared in the event that your primary Duo device is unavailable (you forgot it, it was stolen, it's broken, the battery is dead, etc.). Learn about back up devices at z.umn.edu/backupdevices.</p> <p>As a Duo user, it is your responsibility to come prepared to sign in to applications necessary for class activities, including exams and quizzes. If you are unable to sign in, you may lose points for the class activity. Failure to bring your Duo device or a back-up is not an excused absence or a valid reason for make up work.</p> <p>Learn more about Duo Security at z.umn.edu/duosecurity.</p>

COUNCILON EDUCATION FOR PUBLIC HEALTH (CEPH) COMPETENCIES

Competency	Learning Objectives	Assessment Strategies
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	<ul style="list-style-type: none"> • Practice leading and participating in a journal club discussion of a peer reviewed papers • Research regional occupational health and safety hazards and chronic conditions by industry 	<ul style="list-style-type: none"> • Informed class participation in discussions and effectiveness in leading one session • Written report summarizing findings
21. Perform effectively on interprofessional teams	<ul style="list-style-type: none"> • Practice working as an interdisciplinary team to evaluate the science supporting threshold limit values of occupational exposures and create and present your findings 	<ul style="list-style-type: none"> • Effective team presentation on an assigned occupational exposure limit

ENVIRONMENTAL HEALTH SCIENCES COMPETENCIES

Competency	Learning Objectives	Assessment Strategies
Determine what hazards exist in specific environments	<ul style="list-style-type: none"> • Practice searching different data sources to write a report of regional occupational health and safety hazards and chronic conditions by industry 	<ul style="list-style-type: none"> • Written a report summarizing findings
Propose risk management strategies, such as education, policy, and technology, directed toward environmental health stakeholders, including government, employers, employees, and community groups	<ul style="list-style-type: none"> • Evaluate the potential health impact of various occupational risk management strategies 	<ul style="list-style-type: none"> • Written feedback on worksite tour