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School of Public Health

Course Title: *Occupational Safety and Workplace Risk Mitigation*

Course Number: ENOH-0*654J 030*

Course Pre- and Co-requisite(s): *None*

Course Location: *Rutgers School of Public Health*

Course Date & Time: *Spring 2023: 6:00PM to 8:00PM*

Course Instructor: *Koshy Koshy, PhD, Rutgers School of Public Health*
300 Atrium Drive, Somerset, New Jersey, 08873

Office Hours: *Please e-mail me at koshyko@rutgers.edu for appointment (Monday's 3-5PM)*

Course Assistant: *None*

Course Website: *Add course website (i.e., canvas.rutgers.edu)*

Required Course Text: A partial list of reading assignments is included with the course schedule. Additional materials will be assigned.

Course Description: Developing and maintaining an effective safety management system is vital for reducing workplace injuries and illnesses. Essential concepts necessary for integrating health and safety for industry will be covered in this course. Students will have the opportunity to review the extensive literature related to workplace injuries, examine the environmental and labor standards designed to reduce them, discuss the research and issues related to this field, and prepare an occupation injury mitigation paper based on an industry of their choice.

Selected Concentration Competencies Addressed: The competencies addressed in this course for the Department of *Environmental and Occupational Health* (Occupational Safety and Health Concentration) includes:

OSH Competencies:

1. Identify occupational safety and health issues in the workplace and as applicable the related exposure risks to the general public as well as to vulnerable communities or susceptible sub-populations

2. Describe the federal and state regulatory programs that relate to environmental (community) and worker (occupational) protection

3. Develop a testable model of workplace exposures (one or more agents) and adverse health outcomes (causing injury, disability, other measure of morbidity or mortality)
4. List current quantitative risk assessment and methods for specific occupational safety and other health hazards

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Please visit the Concentration webpages on the School of Public Health's website at sph.rutgers.edu for additional competencies addressed by this course for other degrees and concentrations.

Course Objectives: By the completion of this course, students will be able to:

a. understand historical reasons that led to the development of modern safety and health management regulations
b. comprehend the mission of the Occupational Safety and Health Administration (OSHA) and the significance of the OSH Act.
c. locate and apply OSHA Safety and Health Standards, Policies, and Procedures.
d. identify global challenges to worker safety in industries with high hazard and fatality rates.
e. define the significance and impact of state health and safety standards versus federal standards
f. identify methods for assessing safety and health training needs for diverse environments
g. assess the impact of worker injury in the workplace

Course Requirements and Grading:

Assessment
1. Exam (35%)
2. Project (35%)
3. Discussion Board and assignments (30%)

Project:
The purpose of the project is to implement the principles and techniques learned in the classroom to an actual worksite. Students will select an industry and develop a project plan for conducting workplace hazard assessment. Students will submit a technical report as well as present their findings and recommendations.   Technical report will include standards (local, state, and federal) applicable to the worksite, methodology for implementing Job Hazard Analysis (JHA) and a review of pending legislation (state and federal) related to the industry.

Competency	Course Objectives(s)	Lessons	Assessment(s)
1	a, d, e	1, 2, 3, 4, 5	assignments, exam
2	a, b, c, e	4, 5, 10, 11	assignment, project
3	f, g	2, 6, 9	assignment, project
4	e, f, g	8, 14	assignment, project

Grading Policy: 94 – 100   *A*
90 – <94   *A-*
87 – <90   *B+*
84 – <87   *B*
80 – <84   *B-*
77 – <80   *C+*
70 – <77   *C*
<70   *F*

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Course Schedule: *Include week by week listing of each class session:*

WEEK #	DATE	Topic, activities	Resources
1	1/23/2023	Syllabus and Course Overview Occupational Safety and Health (OSH) Act- History	Reflections on OSHA's History (PDF) Gochfeld, M. "Chronologic history of occupational medicine." *Journal of occupational and Environmental Medicine* 47.2 (2005): 96-114.
2	1/30/2023	Impact of IR and EMR Worker protection, Labor Movement The Janus Decision (Readings TBD)	Dong, X. et al., 2004. Effects of Safety and Health Training on Work-Related Injury Among Construction Workers Lipscomb, H.J., 2013. Safety, Incentives, and the Reporting of Work-Related Injuries Among Union Carpenters: "You're Pretty Much Screwed If you Get Hurt at Work"
3	2/6/2023	OSH Act and Unique Worker Populations	Muhammed, K et al., 2021. Age and Influence on Workplace Safety. *Professional Safety* Oschner, M.et al., 2008. Immigrant Latino Day Laborers in New Jersey: Baseline Data from a Participatory Research Project. *New Solutions.* Vol 18(1)
4	2/13/2023	Overview of 1910 and 1926 standards	Excerpts: 29CFR1910 OSHA Mancomm Publishing
5	2/20/2023	Overview of 1910 and1926 standards (continued) Federal vs. State/Local Jurisdiction	Case Study: NYC Training Requirements https://www1.nyc.gov/site/buildings/safety/site-safety-training.page

6	2/27/2023	Safety and Health Management Systems Injury and Illness Prevention Programs (IIPP)	Koshy, K. et al., Systems of Safety Applied to Hazards. 2011. https://www.osha.gov/harwoodgrants/grantmaterials/fy2010/sh-21005-10 Haight, M., et. Al., 2014. Safety Management Systems: Comparing Content & Impact. Professional Safety, May 2014. (additional readings to follow)
7	3/06/2023	Exam	
	3/13/2023	Spring Break	
8	3/20/2023	Behavior-Based safety	Hersfeld, H.E., 2011. Future self-continuity: how concepts of the future self transform intertemporal choice.
9	3/27/2023	Inter-agency Cooperation for Worker Protection Case Study: Process Safety Management Standard	Case Study on PSM https://www.osha.gov/Publications/osha3132.pdf EPA/OSHA Joint Chemical Accident Investigation Report, Napp Technologies, Lodi, New Jersey https://archive.epa.gov/emergencies/docs/chem/web/pdf/napp.pdf Additional supplemental materials
10	4/3/2023	Process Safety Management (Cont.)	
11	4/10/2023	Role of Enforcement in Worker Safety Guest presenter: TBD	USDOL-OSHA Enforcement
12	4/17/2023	Project Presentation	Student Presentation
13	4/24/2023	Project Presentation	Student Presentation
14	5/01/2023	Virtual Site Visit	
15	5/08/2023		Final Assignment

Learning Management System: Canvas will be used extensively throughout the semester for course syllabus, assignments, announcements, communication and/or other course-related activities. It is the student's responsibility to familiarize themselves with Canvas and check it regularly. If you have difficulties accessing Canvas, please inform the instructor and Canvas Support (help@canvas.rutgers.edu). Canvas is accessible at canvas.rutgers.edu.

School of Public Health Honor Code: The School of Public Health Honor Code is found in the School Catalog (sph.rutgers.edu/academics/catalog.html). Each student bears a fundamental responsibility for maintaining academic integrity and intellectual honesty in his or her graduate work. For example, all students are expected to observe the generally accepted principles of scholarly work, to submit their own rather than another's work, to refrain from falsifying data, and to refrain from receiving and/or giving aid on examinations or other assigned work requiring independent effort. In submitting written material, the

writer takes full responsibility for the work as a whole and implies that, except as properly noted by use of quotation marks, footnotes, etc., both the ideas and the works used are his or her own. In addition to maintaining personal academic integrity, each student is expected to contribute to the academic integrity of the School community by not facilitating inappropriate use of her/his own work by others and by reporting acts of academic dishonesty by others to an appropriate school authority. It should be clearly understood that plagiarism, cheating, or other forms of academic dishonesty will not be tolerated and can lead to sanctions up to and including separation from the Rutgers School of Public Health.

Students with Disabilities: Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student must apply for Services by first completing a Registration Form with the Rutgers Office of Disability Services (ODS) at ods.rutgers.edu. The student will also be required to participate in an ODS intake interview and provide documentation. If reasonable accommodations are granted, ODS will provide you with a Letter of Accommodations which should be shared with your instructors as early in your courses as possible.

Commitment to Safe Learning Environment: The Rutgers School of Public Health is committed to helping create a safe learning environment for all students and for the School as a whole. Free expression in an academic community is essential to the mission of providing the highest caliber of education possible. The School encourages civil discourse, reasoned thought, sustained discussion, and constructive engagement. Provocative ideas respectfully presented are an expected result. An enlightened academic community, however, connects freedom with responsibility. The School encourages all students to disclose any situations where you may feel unsafe, discriminated against, or harassed. Harassment or discrimination of any kind will be not tolerated and violations may lead to disciplinary actions.

Reporting Discrimination or Harassment: If you experience any form of gender or sex-based discrimination or harassment, including sexual assault, sexual harassment, relationship violence, or stalking, know that help and support are available. You may report such incidents to the RBHS Title IX Office or to the School of Public Health's Office of Student Affairs. Rutgers University has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. If you experience any other form of discrimination or harassment, including racial, ethnic, religious, political, or academic, please report any such incidents to the School's Office of Student Affairs. The School strongly encourages all students to report any incidents of discrimination or harassment to the School. Please be aware that all Rutgers employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers as listed in Appendix A to Policy 10.3.12) are required to report information about such discrimination and harassment to the School and potentially the University. For example, if you tell a faculty or staff member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty or staff member must share that information with the RBHS Title IX Coordinator. If you wish to speak to a confidential employee who does not have this reporting responsibility, you can find a list of resources in Appendix A to University Policy 10.3.12. For more information about your options at Rutgers, please visit Rutgers Violence Prevention and Victim Assistance.

Graduate Student Computer Policy: Students are required to possess a personal laptop, no older than approximately two years, that must meet minimum requirements which may be found online at: sph.rutgers.edu/student-life/computer-support.html

Policy Concerning Use of Recording Devices and Other Electronic Communications Systems: When personally owned communication/recording devices are used by students to record lectures and/or classroom lessons, such use must be authorized by the faculty member or instructor who must give either oral or written permission prior to the start of the semester and identify restrictions, if any, on the use of mobile communications or recording devices.

Policy Concerning Use of Turnitin: Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com (directly or via learning management system, i.e. Canvas) for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site. Students who do not agree should contact the course instructor immediately.

Withdrawal/Refund Schedule: Students who stop attending their course(s) without submitting a completed Add/Drop Course form will receive a failing grade. Furthermore, students dropping to zero credits for the semester are considered withdrawn and must submit a completed Leave of Absence form from the School of Public Health's Office of Student Affairs. The School of Public Health refunds tuition only. Administrative and technology fees are non-refundable. You may find the Withdrawal/Refund Schedule on the School of Public Health website at:
sph.rutgers.edu/academics/academic-calendar.html