Instructor:
Drs. David B. Kaber and Boyi Hu
Office: 352-294-7700 for Appointment
(Weil Hall, Room 301)

Teaching Assistants:
Please contact through course Canvas website.

Course Description:
This course will provide advanced coverage of risk assessment and management methods in the context of systems safety engineering. The course will cover different types of hazard exposure, including chemical, fire, radiation, asbestos, lead, and hazardous waste. Risk measurement and mitigation strategies will be identified for each hazard along with emergency response operations. Case studies will be delivered for summary and discussion. The term project will require application of a risk assessment method to a specific hazard exposure situation.

Course Pre-Requisite:
EIN6215 System Safety Engineering with a C.

Course Objectives:
To:
(1) analyze the elements risk assessment and methods for application;
(2) assess chemical hazard exposures in the workplace;
(3) assess workplace fire hazards;
(4) analyze the elements of risk management and methods for application;
(5) analyze workplace radiation hazards and laser safety; and
(6) analyze hazardous waste management practices and emergency response methods.

Materials and Supply Fees:
N/A

Required Textbooks and Software:
Lecture notes will be supplied by the instructor.

Course Schedule:

WEEK	DATE	ASSIGNMENT
1	01/8/20	Introduction and overview of assignments
2	01/15/20	Risk assessment methods
3	01/22/20	Hazards seminar - chemical hazards
4	01/29/20	Risk assessment methods
5	02/05/20	Hazards seminar – fire hazards
6	02/12/20	Risk assessment methods
7	02/19/20	Exam (in-class)
8	2/26/20	Hazards seminar – radiation hazards and laser safety
	03/04/20	Spring break
9	03/11/20	Hazards seminar – asbestos and lead hazards
10	03/18/20	Risk management methods
11	03/25/20	Hazards seminar - hazardous waste and emergency response
12	04/01/20	Exam (in-class)
13	04/08/20	Risk management methods
14	04/15/20	Term project reports
15	04/22/20	Term project reports

Assignments:

This course will require four (4) reading assignments on applications of risk assessment and management techniques to hazard exposures in industrial workplaces. Case studies will be assigned with a focus on those hazards addressed through the lecture sessions. Students will be required to review and summarize the studies. In addition, some class time will be allocated for group discussion of the readings. Each reading summary will be worth 50 points.

Exams:

One mid-term and one final exam will be required as part of the course. Each exam will include questions on risk assessment and management concepts and methods. Quantitative problems will include calculation of various hazard exposures and risk levels. Additional questions will focus on types of controls for specific hazards. Each exam will be worth 200 points.

Term project:

The course will require all students to complete a term project involving application of one or more risk assessment methods for an actual industrial workplace hazard analysis. The course instructor will arrange for student contact with local companies in need of safety consultations. Students will be expected to communicate with the corporate clients to identify specific hazard analysis needs. Students will engage in site visits for worker exposure measurements and quantification of risk of occupational injuries and illnesses. This information will provide a basis for report preparation including the following sections: problem statement, analysis methodology, results and inferences, and control recommendations and conclusions. Students will also be required to provide a class presentation on the project work during the last two class meetings as part of the course. The project report and presentation will be worth 200 points.

Attendance Policy, Class Expectations, and Make-Up Policy:

Attendance to the course is strongly recommended to support student preparation for exams and other assignments. The course roll will only be called during the first two class meetings to confirm enrollment. No penalties are assigned for class absence or tardiness. Use of cell phones during class is not permitted. Students are encouraged to use laptops and tablet computers for note taking and studying course information during class.

Excused absences are consistent with university policies in the graduate catalog (http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance) and require appropriate documentation.

Evaluation of Grades

Assignment	Points	Approx. Percent of Grade
Reading Assignment Summaries (4 @ 50 pts.)	200	25%
Exams (2 @ 200 pts.)	400	50%
Project	200	25%
Total	**800**	**100%**

Grading Policy

Percent	Grade	Grade Points
90.0 - 100.0	A	4.00
87.0 - 89.9	A-	3.67
84.0 - 86.9	B+	3.33
81.0 – 83.9	B	3.00
78.0 - 80.9	B-	2.67
75.0 - 77.9	C+	2.33
72.0 – 74.9	C	2.00
69.0 - 71.9	C-	1.67
66.0 - 68.9	D+	1.33
63.0 - 65.9	D	1.00
60.0 - 62.9	D-	0.67

0 - 59.9	E	0.00

More information on UF grading policy may be found at:
http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu/evals. 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/.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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." The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see:
 http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html

Campus Resources:

Health and Wellness

U Matter, We Care:
If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)
Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: http://www.distance.ufl.edu/student-complaint-process.

Commitment to a safe and inclusive learning environment
The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination.
It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@ufl.edu

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the Office of Title IX Compliance, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu