OEHS 6751 – Advanced Industrial Hygiene

Instructor: Darrah K. Sleeth, PhD, MPH, CIH
Meeting Times: Tues/Thurs, 9-11:30am
Room: IH Teaching Lab (1701)

Course Learning Objectives

Apply principles of data management to the collection and analysis of industrial hygiene data, including development of data management plans, record keeping and standard operating procedures
Interpret the validity of exposure monitoring data
Select appropriate equipment and methodologies for the measurement of exposure to chemicals, biological agents and aerosols
Apply the industrial hygiene decision making and process framework to an occupational health challenge, including consideration for legal requirements and ethical principles
Communicate technical information through written reports and oral presentation
Utilize statistical and other software to manage and analyze industrial hygiene data

Course Assignments:

- Lab Assignments (n=12; can miss/drop one) (50%)
- Wikipedia Project (25%)
- Oral Presentation (25%)

Grades

  100 – 93.0%   A

  90.0 – 92.9%   A-

  89.9 – 87.0   B+

  86.9 – 83.0   B

  80.0 – 82.9%   B-

Course Outline

Week	Date	Lecture Topic	Reading	Assignments
1	11-Jan	Introduction; Ethics; Chemical Hygiene Plans	Chemical Hygiene Plan Wikipedia Articles ABIH Code of Ethics Ethics Case Studies	Chemical Hygiene Training Wikipedia Week #1 – occupational hygiene Wikipedia articles
1	13-Jan			Ethics case study; Wikipedia Project Introduction (Dr. Morata @10am)
2	18-Jan	Qualitative Methods (Dr. Ahonen)		
2	20-Jan			Lab 1: Collecting and Analyzing Qualitative Data (Dr. Ahonen)
3	25-Jan	IH Statistics		
3	27-Jan			Lab 2: Data management; IH Statistics
4	1-Feb	Sampling Strategies	Chapter 3 – Rappaport & Kupper	
4	3-Feb			Lab 3: Exposure assessment plans; Pump flow calibration
5	8-Feb	Chemistry Review		
5	10-Feb			Lab 4: Integrated gas/vapor sampling - sorbent tubes, colorimetric tubes, whole air samples
6	15-Feb	Analytical Methods		
6	17-Feb			Lab 5: Real time gas/vapor sampling – PID; 4-gas meter
7	22-Feb	Aerosol Physics		
7	24-Feb			Lab 6: Integrated particle sampling – cassettes, cyclones, etc; gravimetric analysis (Dr. Morata check in)
8	1-Mar	Ambient Air		
8	3-Mar			Lab 7: Real time particle sampling – Grimm, Sidepak, low cost sensors; IAQ?
9	8-Mar	SPRING BREAK - NO CLASS		
9	10-Mar			
10	15-Mar	Dermal Exposure/BEIs		IH Skin Perm
10	17-Mar			Lab 8: Wipe Sampling; XRF

11	22-Mar	PPE Standards		
	24-Mar			Lab 9: Respirator Fit Testing
12	29-Mar	Biological Hazards		
	31-Mar			Lab 10: Bioaerosol sampling
13	5-Apr	Hazard/Risk Assessment		
	7-Apr			Lab 11: Develop an SOP
14	12-Apr	Control Banding/Bayesian Statistics		
	14-Apr			Lab 12: Case Study in IH decision making
15	19-Apr	Technical Communication/CBPR		
	21-Apr			Oral Presentation (Wikipedia Project) (Dr. Morata)
16	26-Apr	Emerging Issues		