



Department of Environmental Science & Health

College of Science

Salahaddin University-Erbil

Subject: Industrial Hygiene

Course Book – (Year 3)

Lecturer's name Dr. Shelan Mustafa Khudhur

Academic Year: 2022 – 2023

Course Book

1. Course name	Health, Safety and Environment (HSE)
2. Lecturer in charge	Theory: Shelan Mustafa Khudhur
3. Department/ College	Environmental Sciences & Health / Science
4. Contact	e-mail: shelan.khudhur@su.edu.krd Mob:
5. Time (in hours) per week	Theory: 2 hrs per week.
6. Office hours	2 hours per week.
7. Course code	
8. Teacher's academic profile	<p>I am Shelan Mustafa Khudhur, I have PhD. in Aquatic Invertebrate/ Water Quality & Pollution. I get it during 2020 at Environmental Science and Health Department in College of Science-Salahaddin University.</p> <p>I published more than 6 articles in Scientific Journals. I am working and Teaching in College of Science.</p> <p>The process of teaching a joint operation between the teacher and the student, must involve them and assist them in acquiring the analytical methods and skills necessary to help them see things as they should be, and encourage them to outstanding scientific production and make the learning process more fun linking the topics Article operation life of local and international issues, and to involve students in discussions in order to encourage them to express their point of view.</p>
9. Keywords	
10. Course overview:	<p>Principles of Industrial Hygiene provides an introduction to the field of industrial hygiene and to occupational health in general. The instructor focuses on introducing concepts, terminology, and methodology in the practice of industrial hygiene and identifies resource materials. The class would benefit those wishing to pursue a Master's degree in industrial hygiene, those wishing to complete a certificate in occupational health, or for students in allied health fields needing a basic understanding of industrial hygiene.</p>
11. Course Aim and Objectives:	<p>Upon completion of this course, you should be able to:</p>

- Describe the legal, professional, and ethical framework for the practice of industrial hygiene.
- Define basic terms and technical concepts integral to the practice of industrial hygiene.
- Explain the differences between chemical (gases/vapors, dusts/mists/fumes), physical, and biological agents in the workplace.
- Calculate time-weighted averages.
- Convert between various units of exposure (for example, mg/m³ to ppm).
- Calculate and interpret noise exposures and doses.
- Identify the basic concepts of workplace exposure assessment.
- Describe the hierarchy of controls and how it applies to hazard control.
- Integrate various concepts into a broader occupational/ environmental health practice.
- Provide a basis for advanced course work in occupational safety and health.

12. Student's obligation

There is one lectures per week, and all lectures will be available on Moodle electronically. The students are strongly encouraged to ask questions or otherwise engage the instructor and guest lecturers to clarify or augment material under consideration. In addition, we recommend the students to take the lecture hand-out before attending the classroom.

13. Forms of teaching

A student must read the lecture before the class. In the class, the lectures were power-point present at the first hour of the class, inconspicuous points are clear on whiteboard, difficult idioms and tough words are also clear for the students, and then medium talk with teacher will make to discuss the theoretical aspects of the subjects. At the end of the class a short review of the lectures will make by the students while the data-show projector is switch-off in order to remind them the critical points from the lectures each week. Finally, a slide of question mark is present in order the students to ask the teacher about inconspicuous points from each lecture. The lectures will be presented mainly in English language as well as Arabic and Kurdish languages will be used if it's necessary.

14. Assessment scheme

Two monthly exam = 7.5 marks

The final grade at the end of the year would be 15%.

15. Student learning outcome:

Students shall have the necessary knowledge about Industrial Hygiene to ensure their own and other people's safety during their study this course at SUE. This includes knowledge of the Industrial Hygiene-concept, objectives for the Industrial Hygiene work and how to behave safely in laboratories and during field work. The theoretical and practical basic training on Industrial Hygiene shall provide the students with a basis for correct handling of unsafe act, unsafe condition or accident situation.

16. Course Reading List and References:

1. Fundamentals of Industrial Hygiene (5th edition), National Safety Council Chicago, IL
2. FRANK R. SPELLMAN, 2006. Industrial Hygiene Simplified: a guide to anticipation, recognition, evaluation, and control of workplace hazards. Government Institutes

17. The Topics:

Lecturer's name

Environmental Health:

Week 1: Introduction to Industrial Hygiene

Week 2: Industrial Hygiene Concepts

Week 3: Particulate Matter

Week 4: Gases and Vapors

Week 5: Week 6: Noise

Week 6: Exam

Week 7: Exposure Assessment Concepts

Week 8: Air Sampling for Particulate Matter

Week 9: Air Sampling for Gases and Vapors

Week 10: Hierarchy of Controls

Week 11: Principles of Ventilation

Week 12: Personal Protective Equipment and Other Control Options

Week 13: Non-Ionizing Electromagnetic Radiation

Week 14: Standards and Guidelines and Ethical Code of Conduct

Week 15: Second Exam