# Department of Environmental Science

# College of Science

# Salahaddin University-Erbil

# Subject: Industrial Hygiene

# Course Book – (Year 3)

# Lecturer's name MSc. Halala Rahman Qader

# Academic Year: 2022 – 2023

## Course Book

| | |
|---|---|
| **1. Course name** | **Industrial hygiene** |
| **2. Lecturer in charge** | **Laboratory** |
| **3. Department/ College** | **Environmental Sciences / Science** |
| **4. Contact** | **e-mail: Halala .qader@su.edu.krd**<br>**Mob:07504163847** |
| **5. Time (in hours) per week** | **practic: 8 hrs per week.** |
| **6. Office hours** | **3 hours per week.** |
| **7. Course code** | |

| | |
|---|---|
| **8. Teacher's academic profile** | I am Halala Rahman Qader. I have MSc. in plant physiology. I get it during 2013 at Biology Department in College of Science-Salahaddin University. In addition, I get Bachelor during 2008 at the biology department at the same university.I participated in different training courses such as, English course and Instruction source. |
| **9. Keywords** | |

**10. Course overview:**

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.

**11. Course Aim and Objectives:**

Upon completion of this course, you should be able to:

- 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, due to the coronavirus, all lectures will be available on Moodle electronically. As planned by the College, there will be an on-campus lecture to review and revise all lectures as well as to do Q&A session. Therefore, students are strongly encouraged to ask questions or otherwise engage the instructor and guest lecturers to clarify or augment

material under consideration. In addition, for each on-campus class, 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

One monthly exam = 20 % marks

Dialy quiz= 5%

Seminare-5%

Weekly activity=5%

The final grade at the end of the year would be 35%.

**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

| **17. The Topics:** | | **Lecturer's name** |
|---|---|---|
| **Week** | **Topics** | **Teaching staff:**<br>1. Halala Rahman Qader<br>Lecutres, 8 hours duration. |

**Environmental Health:**

**Week 1: Introduction to Industrial Hygiene**

**Week 2: Standards and Guidelines and Ethical Code of Conduct**

**Week 3: Industrial Hygiene Concepts**

**Week 4: Particulate Matter**

**Week 5: Gases and Vapors**

**Week 6: Noise**

**Week 7: Non-Ionizing Electromagnetic Radiation**

**Week 8: Exposure Assessment Concepts**

**Week 9: Air Sampling for Particulate Matter**

**Week 10: Air Sampling for Gases and Vapors**

**Week 11: Hierarchy of Controls**

**Week 12: Principles of Ventilation**

**Week 13: Personal Protective Equipment and Other Control Options**

**Week 14: Exam**

**Week 15: Revision Class**