

Theoretical and practical course plan form - Ilam University of Medical Sciences

Introducing the course of fire safety and chemicals in the second semester of the year 2020-2021

School: Health Department: Occupational Health Engineering

- * Course name and number: Fire and chemical safety 3 units, 2 theoretical units and 1 practical unit
- * Field and degree: Continuing bachelor's degree in the 4th semester of occupational health and safety engineering
- * Day and time: Monday 12-10 in the morning
- * Venue: School of Health
- * Name of course manager (course instructor): Dr. Kakai
- * Prerequisite courses: Familiarity with industries and industrial techniques
- * Office address: School of Health - Department of Occupational Health
- * Email address: hojatkakaiei@gmail.com

General purpose of the lesson:

Familiarity with the safety of chemicals and related processes, learning the theoretical and practical aspects of fire and its control

• **Behavioral goals** (behavioral goals have an audience, behavioral verb, degree and criteria and conditions of performance)

At the end of the course the student will be able to:

- 1- Know the types of classification of chemicals
- 2- Know the types of hazards classification of chemicals
- 3- Be familiar with chemical safety data sheets (MSDs), safety labels, placards, etc.
- 4- Be aware of safety issues related to the storage of chemicals (such as safety shelves, storage, etc.).
- 5 - Must know the types of personal protective equipment needed to work with different chemicals.
- 6- Know the principles of combustion, the factors that cause fire and concepts such as the four aspects of fire and the details of each aspect.
- 7- Know the different categories of fire and types of combustible materials.
- Be aware of fire safety principles in various places, including buildings.
- 9- To know the types of fire detection and notification equipment, which includes manual and automatic systems.
- 10- Know the types of fire extinguishing equipment, which include manual and automatic systems.

11- To be familiar with the basics of designing fire detection, alarm and extinguishing systems.

• **Main sources** (observing the principles of source writing and giving an address for their preparation, including library, bookstore, internet ...)

1. Fire Engineering, Rostam Golmohammadi
2. Fire technology, Ali Asghar Shimi
3. Fire Prevention. Handbook. NFPA. Latest Ed

• **Teaching methods and teaching aids used:**

Teaching methods include, lecture, feedback lecture, conference Q&A, group discussion, project, problem solving - other methods (Whiteboard and video projector)

-Methods and time of assessment and evaluation of the student and the bar related to each assessment:

Method	Score	Date	Time
Questioning and answering students orally and performing activities requested of students	2	During	in each lesson session
midterm exam	4		12-10
Final exam (final)	14		

Lesson rules and expectations from students

1. Regular attendance in the classroom and active participation of students in class activities and solving problems and tasks assigned to them
2. Students' mobile devices are turned off in the classroom

Schedule of fire safety and chemicals curriculum for the second semester 2020-2021

Session	Time	Topic	Lecturer	Necessary preparation of students before the start of the class
1	10-12	Familiarity with the dangers of chemicals	Dr. Kakai	
2		Types of chemical classifications		Read the contents of the previous sessions
3		Familiarity with MSDS, immunological labels, placards, safety posters, etc.		

4		Storage of chemicals (containers, safety racks and storage)		
5		Safety in ordering, purchasing, handling and transporting chemicals and their transportation		
6		Familiarity with personal protective equipment when working with chemicals		
7		Introduce the basic concepts of combustion, combustion principles and combustion factors		
8		Midterm exam		Exam preparation
9		Introducing the basic concepts of combustion, principles of combustion and combustion-causing factors		
10		Familiarity with different types of combustible materials as well as safety principles in fire prevention in different places		
11		Familiarity with different types of fire classification		
12		Familiarity with various types of fire detection and notification equipment (manual and automatic systems)		
13		Familiarity with the basics of designing fire detection, alarm and extinguishing systems		
14		Necessary reaction in case of fire and required equipment		
15		Questions and answers and an overview of the content		