

Introduction to the course: Electrical and machinery safety second semester 2020-2021

School: Health Department: Occupational Health

* Course Name and Number: Electrical and Machinery Safety 2 Units 1.5 Theory 0.5 Practical

* Field and degree: Bachelor of Occupational Health and Occupational Safety, semester 6

* Day and time: Sunday 12-10

* Venue: School of Health

* Name of the person in charge of the course (course instructor): Dr. Kakai

* Prerequisite courses: Familiarity with industries and knowledge of industrial techniques

* Office address: School of Health - Department of Occupational Health

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General Objective of the lesson: Familiarity with the principles of machine safety and electrical safety and its application in industry

* **Specific or partial objectives of the lesson:** The specific objective is better to be written in a behavioral way.

1. Identify danger points in machines

2- Familiarity with different types of safety systems in machines

3- Familiarity with safety with various machine tools such as presses and saws

4- Familiarity with the principles of electricity generation

5- Familiarity with the dangers of electricity in industry

6- Familiarity with the principles of protection against electrical hazards

• **Student duties (student homework during the semester):**

Student participation in theoretical and practical class activities, solving assigned tasks and assignments, regular attendance in theoretical and practical classes, performing relevant laboratory projects

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

Applied safety in industry, Dr. Habibi

Safety of machine Dr. Adl's machines

Electrical safety Abdul Khaleq Mojiri

Teaching methods and teaching aids used: teaching methods including, lectures, feedback lectures, conference questions and answers, group discussions, projects, - other methods (Whiteboard and video projector)

- Lecture, problem solving, project + laboratory (for the practical part of the course) as an experiment by the student
- Practical part: visiting workshops and industrial factories and power plants
- 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 Semester	In each lesson
Midterm exam	4	-	12-10
Final exam (final)	14	-	--

Session	Time	Topic	Lecturer	Necessary preparation of students before the start of the class
1	10-12	Introduction and acquaintance, expression of rules and topics, lesson plan and expression of points related to identification of danger points in machines (operational area, propulsion equipment, etc.	Dr. Kakai	-----
2	10-12	Continuation of the topic: Identification of danger points in machinery (operational area, propulsion transmission equipment, etc.		Study the topics of the previous sessions
3	10-12	Familiarity with the strategic foundations of protection in systems		Study the topics of the previous sessions
4	10-12	Familiarity with different types of safety systems in machines		Study the topics of the previous sessions
5	10-12	Use distance and distance, loading and unloading and, Lock out, Tag ou		Study the topics of the previous sessions
6	10-12	Familiarity with the safety of machine tools such as presses, woodworking machines, circular saws, lathes, milling machines, drills, sandpaper and ...		Study the topics of the previous sessions

7	10-12	Familiarity with the safety of machine tools such as presses, woodworking machines, circular saws, lathes, milling machines, drills, sandpaper and ...		Study the topics of the previous sessions
8	10-12	Familiarity with the safety of machine tools such as presses, woodworking machines, circular saws, lathes, milling machines, drills, sandpaper and ...		Study the topics of the previous sessions
9	10-12	midterm exam		Study the topics of the previous sessions Study the topics of the previous sessions
10	10-12	Principles of electricity generation (alternating - direct - strong and weak voltage)		Study the topics of the previous sessions
11	10-12	Understanding power supply networks and electrical circuits		Study the topics of the previous sessions
12	10-12	Insulated systems and power cables		Study the topics of the previous sessions
13	10-12	Permissible current of low voltage wires and cables		Study the topics of the previous sessions
14	10-12	Understanding the conditions of electric shock		Study the topics of the previous sessions
15	10-12	Devices, tools and equipment necessary for protection against electrical hazards (fuses, ground connection system, relays, etc.)		Study the topics of the previous sessions
16	10-12	Personal protective equipment in electrical work		Study the topics of the previous sessions