

# Operational safety and ergonomics - course description

General information	
Course name	Operational safety and ergonomics
Course ID	06.2-WE-AutP-OSE-Er
Faculty	<a href="#">Faculty of Computer Science, Electrical Engineering and Automatics</a> .
Field of study	Automatic Control and Robotics
Education profile	academic
Level of studies	First-cycle Erasmus programme
Beginning semester	winter term 2019/2020

Course information	
Semester	1
ECTS credits to win	1
Course type	obligatory
Teaching language	english
Author of syllabus	<ul style="list-style-type: none"><li>dr inż. Sławomir Piontek</li></ul>

Classes forms					
The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Lecture	15	1	-	-	Credit with grade

## Aim of the course

Skills and references in range of: hazard/risk categories for working on energized electrical equipment.

## Prerequisites

Fundamentals of electrical engineering.

## Scope

*Industrial safety.* Electrical Hazard Classifications. Hazard/risk categories for working on energized electrical equipment.

*Effects of electrical energy on humans.* Shock hazards. Flash hazards. Radio Frequency (RF) and Microwave (MW) exposures. Contact thermal hazards.

*Electrically safe work condition.* Wiring systems of electric network. Electric hazard protection. Security precautions. Research and analysis of hazard protection.

*Hazard related to Static Electricity.* The discharge of static electricity. Electrostatic discharge (ESD) on human body.

*Electric equipment exploitation.* Electric shock protection. Electric arc protection. Surge protection. Protection of hazard in electric network. Electrical equipment conditions of approval and use.

*General safety regulations in the CE marking directives.* Certification. Standards.

## Teaching methods

Lecture

## Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
Can define hazards related to electric devices maintenance		<ul style="list-style-type: none"><li>an evaluation test</li></ul>	<ul style="list-style-type: none"><li>Lecture</li></ul>

## Assignment conditions

## Recommended reading

1. Strojny J. *Safety of electrical equipment exploitation*, AGH, Kraków, 2003.
2. Matula E., Sych M. *Prevention electric shock in industry*, WNT Warszawa 1980.
3. URE (), *Energy Law*, [www.gip.pl](http://www.gip.pl), Warszawa 2004.

## Further reading

Environment, safety, and health, *manual*, [www.llnl.gov](http://www.llnl.gov) university of california, 2007optional reading:

Lewis W.: CCNA Exploration Companion Guide LAN Switching and Wireless. Pearson Education Inc. 2009.

# Notes

Modified by dr hab. inż. Wojciech Paszke, prof. UZ (last modification: 29-04-2020 09:20)

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