

MSE-668

Non-destructive methods for industry and research

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Cursus	Sem.	Type
Materials Science and Engineering		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Oral presentation
Workload	60h
Hours	28
Lecture	28
Number of positions	

Frequency

Every year

Remark

Next time: November 16, 17, 20 and 21, 2023

Summary

Basic knowledge of the classical non-destructive testing methods as they are used today in industrial applications and the advanced (mostly imagined) technologies used for the analysis of materials and components in special applications. It covers several material groups and various applications.

Content

The course content is as follows:

- Probability of detection / human factors
- Visual, optical and thermal methods
- Penetrant and leak testing
- Electromagnetic methods: diverted magnetic flux, eddy current, microwaves
- Acoustic methods: ultrasonics, acoustic emission
- Radiography, radioscopy, computed tomography

Keywords

Radiography, Radioscopy, Computed Tomography, Ultrasonic Testing, Acoustic Emission, Electromagnetic Methods

Learning Prerequisites**Required courses**

Basic knowledge in materials science