Course title:	**Quality Control of Materials**
Institute/Division:	Institute of Materials Engineering, Faculty of Materials Engineering and Physics
Number of contact hours:	30 hours
Course duration:	1 semester
ECTS credits:	5

Course description:

Nowadays, nondestructive testing (NDT) has become the leading product testing standard. Condition assessment and characterization of materials and structures by means of NDT methods is a priority need around the world to meet the challenges associated with the durability, maintenance, rehabilitation, retrofitting or renewal of new and existing infrastructures.

The course covers topics on:

discontinuities – origins and classification
visual testing,
magnetic particle testing,
penetrant testing,
ultrasonic testing,
radiography testing,
eddy current testing,
thermal infrared testing
hardness measurements.

Literature:

1. Authors: Büyüköztürk, Oral, Taşdemir, Mehmet Ali, Editors: Güneş, Oğuz, Akkaya, Yılmaz (Eds.) Nondestructive Testing of Materials and Structures 2013 Springer
2. Baldev Raj, T. Jayakumar, M. Thavasimuthu, Practical Non-Destructive Testing, Publisher: Alpha Science International
3. Paul E. Mix Introduction to Nondestructive Testing: A Training Guide 2005 John Wiley & Sons
4. Charles Hellier Handbook of Nondestructive Evaluation 2001

Course type:	lectures (15 hours), classes (15 hours)
Assessment method:	oral answer, report on classes exercises
Prerequisites:	none
Primary target group:	Materials Science
Lecturer:	dr hab. inż. Marek Hebda, prof. PK
Contact person:	Marek Hebda, e-mail: mhebda@pk.edu.pl