

Syllabus

Materials News

<i>Faculty of Materials Science and Ceramics</i>	Field of study:	materials science/engineering/chemistry
	Specialisation:	
	Level of study:	graduate/master (2 nd level)
	System of education:	traditional

Proszę wpisać propozycje semestru (semestrów) w których przedmiot powinien być realizowany.

Course optional				ECTS points: 5			
Semester	No. of hours	L	C	P	Lab	Seminar	Completion/Exam
<i>fall</i> 1							
<i>spring</i> 2	45	15				30	C + E

Course content (Lecture)
Spring semester: nanomaterials and nanostructures, manufacturing techniques of nanopowders, bulk nanostructured materials and coatings, far-from-equilibrium processing of nanostructured materials, mechanical properties, testing and characterization

Course content (Classes)
Fall semester
Spring semester

Course content (Project)
Fall semester
Spring semester
Course content (Laboratory)
Fall semester
Spring semester

Course content (Seminar)
Spring semester: functional materials/coatings for modern technologies: thermal, electrical, thermoelectric, electrochemical, optical, biomedical and other applications.

References (Basic):
Coatings Technology, Fundamentals, Testing, and Processing Techniques, Ed. Tracton A.A. CRC Press(2006); Ceramic matrix composites, Microstructure, properties and Applications, ED. Low I.M. CRC Press (2006); Composite Materials Materials. Functional Materials for Modern Technologies, Chung D.D.L., Springer (2002); lecture notes

References (Additional):
scientific journals

Expected learning outcome:	Students acquire knowledge on the interrelations between the manufacturing methods, structure and properties of materials and unique properties possible to develop by novel manufacturing and/or processing techniques.
Language of instruction:	English
ERASMUS subject code:	06.7, 06.3
Prerequisites:	basics of materials chemistry, physics and characterization methods
Assessment method:	continuous assessment/final test
Unit:	
Lecturer:	Prof. Elzbieta Godlewska
Lecturer (Project / Laboratory):	
Modified:	