

1.	<b>Field of study</b>	<b>Materials Science and Engineering</b>
2.	Academic year of entry	2018/2019 (summer term)
3.	Level of qualifications/degree	second-cycle studies
4.	Degree profile	general academic
5.	Mode of study	full-time

**Module:** Monographic lecture 1. Intelligent materials

**Module code:** IM2A\_WM1\_SAMO

**1. Number of the ECTS credits:** 2

<b>2. Learning outcomes of the module</b>			
code	description	learning outcomes of the programme	level of competence (scale 1-5)
IM2A_WM1_SAMO_1	Extending the knowledge about diverse modern intelligent materials, i.e. capable of reacting to external stimuli through a significant change of their properties for the required and effective response to those stimuli.	IM2A_W07	5
IM2A_WM1_SAMO_2	The skill to determine phenomena occurring in intelligent materials, with particular emphasis on their existing or potential application in practice.	IM2A_K05 IM2A_U01 IM2A_U05	1 5 5
IM2A_WM1_SAMO_3	Development of the awareness of the need to affect the structure to change materials properties.	IM2A_K01 IM2A_K02	5 5

<b>3. Module description</b>	
<b>Description</b>	The module Intelligent materials shall extend students knowledge about particular properties of materials reacting to external stimuli. It will allow becoming knowledgeable about types of intelligent materials, learning mechanisms causing appropriate material reactions and also their applications. Owing to that students shall acquire broader knowledge about modern materials.
<b>Prerequisites</b>	It is required to achieve effects of education of physics, chemistry, materials science, and biomaterials modules.

<b>4. Assessment of the learning outcomes of the module</b>			
code	type	description	learning outcomes of the module
IM2A_WM1_SAMO_w_1	Test	Assessment of mastering basic knowledge from the field of intelligent materials.	

			IM2A_WM1_SAMO_1, IM2A_WM1_SAMO_2, IM2A_WM1_SAMO_3
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**5. Forms of teaching**

code	form of teaching			required hours of student's own work		assessment of the learning outcomes of the module
	type	description (including teaching methods)	number of hours	description	number of hours	
IM2A_WM1_SAMO_fs_1	lecture	The lecture shall enable understanding issues related to the structure of intelligent materials, phenomena, and mechanisms enabling their properties shaping.	30	The work with the recommended literature comprising independent acquisition of knowledge related to basic issues.	35	IM2A_WM1_SAMO_w.