1.	**Field of study**	**Materials Science and Engineering**
2.	Faculty	Faculty of Science and Technology
3.	Academic year of entry	2019/2020 (winter term), 2020/2021 (winter term), 2021/2022 (winter term), 2022/2023 (winter term), 2023/2024 (winter term), 2024/2025 (winter term)
4.	Level of qualifications/degree	second-cycle studies (in engineering)
5.	Degree profile	general academic
6.	Mode of study	full-time

Module: Engineering materials

Module code: IM2A_MI

1. Number of the ECTS credits: 3

2. Learning outcomes of the module

code	description	learning outcomes of the programme	level of competence (scale 1-5)
IM2A_MI_1	Students have an expanded knowledge in the field of structure and basic properties as well as of advanced groups of engineering materials useful to choose a material at manufacturing of technical products.	IM2A_W07 IM2A_W08 IM2A_W10 IM2A_W12	4 2 2 3
IM2A_MI_2	Students have the skill to compare materials mechanical, technological and operational properties and also to choose engineering materials for technical applications; they can assess economic conditions of various engineering materials use.	IM2A_K05 IM2A_U11 IM2A_U13 IM2A_U18 IM2A_U19 IM2A_W17	1 2 3 2 2 1
IM2A_MI_3	Students know development trends in the area of individual material groups.	IM2A_W07 IM2A_W18	4 2
IM2A_MI_4	Students show readiness to cooperate with designers and process engineers.	IM2A_U12	2

3. Module description

Description	

	The module Engineering materials shall enable that students are freely knowledgeable about basic and advanced groups of engineering materials in view of the structure, properties, the way of shaping and rules of selection for specific technical products. This will allow to deepen the skill of proper choice of structural materials for specific technical applications.
Prerequisites	It is required to achieve effects of level I modules education in rudiments of materials science or materials science.

4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
IM2A_MI_w_1	Credits in the form of a test	Verification of the knowledge based on the lectures content, recommended literature and an own work.	IM2A_MI_1, IM2A_MI_2, IM2A_MI_3, IM2A_MI_4
IM2A_MI_w_2	Test	Assessment of own work effects in the field of selected issues.	IM2A_MI_1, IM2A_MI_2

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_MI _fs_1	lecture	The lecture shall enable mastering the issues related to basic and advanced groups of engineering materials and their importance in the civilisation progress. The lecture is delivered with the use of multimedia, presentations and software from the field of "Materials engineering".	45	Reading of the recommended literature. Deepening the knowledge of selected issues, preparation to get credits.	60	IM2A_MI_w_1, IM2A_MI_w_2