1.	**Field of study**	**Materials Science and Engineering**
2.	Academic year of entry	2018/2019 (winter term)
3.	Level of qualifications/degree	first-cycle studies (in engineering)
4.	Degree profile	general academic
5.	Mode of study	full-time

Module: Applied mathematics 2

Module code: IM1_MAT2

1. Number of the ECTS credits: 5

2. Learning outcomes of the module

code	description	learning outcomes of the programme	level of competence (scale 1-5)
IM1A_MAT2_1	Students have the knowledge about complex numbers and linear algebra. Students know theorems of differential and integral calculus of a real function of many real variables as well as basics of the differential equations theory.	IM1A_W01	3
IM1A_MAT2_2	Students can think and act in a creative way.	IM1A_K01 IM1A_K05	3 3

3. Module description

Description	The Applied mathematics 2 module shall enable students learning those mathematical issues, which are the basis for the teaching of other general and field of study subjects in the next semesters of studies, and which are necessary to understand mathematical models and research methods used in the materials science. The accomplishment of this objective will require learning issues related to complex numbers and linear algebra, functional series, differential and integral calculus of a real function of many real variables as well as the differential equations theory.
Prerequisites	The knowledge of mathematics at the level of Applied mathematics 1 is required.

4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
IM1A_MAT2_w_1	Written examination	Verification of the knowledge based on the lectures content, recommended literature and attended laboratory classes.	IM1A_MAT2_1, IM1A_MAT2_2
IM1A_MAT2_w_2	Written test	Semestral checking of skills acquired during laboratory classes.	IM1A_MAT2_1, IM1A_MAT2_2
		A cyclical written verification of knowledge about resolving the mathematical problems being	

IM1A_MAT2_w_3	Test	the content of laboratory classes.	IM1A_MAT2_1, IM1A_MAT2_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	
IM1A_MAT2_fs_1	lecture	The lecture shall enable learning issues related to complex numbers and linear algebra, functional series, differential and integral calculus of a real function of many real variables as well as the differential equations theory. The lecture is delivered based on a selected set of handbooks.	30	The work with the recommended literature comprising independent acquisition of issues presented during the lectures.	45	IM1A_MAT2_w_1
IM1A_MAT2_fs_2	laboratory classes	Practical application of mathematical theorems and methods in the problems solving. Computer assisted classes will be delivered based on discussion and independent problems solving.	30	Preparation to classes through independent studying of recommended issues.	45	IM1A_MAT2_w_2, IM1A_MAT2_w_3