C O U R S E   G U I D E – s h o r t   f o r m

Academic year 2017 – 2018

Course name[1]	NUMERICAL METHODS					Course code		2SM06DF	
Course type[2]	**DF**	Category[3]	**DI**	Year of study	**2**	Semester	**3**	Number of credit points	**4**

Faculty	Materials Science and Engineering	Number of teaching and learning hours[4]					
Field	Materials engineering	Total	L	T	LB	P	IS
Specialization	Materials science	**96**	**28**		**14**		**54**

Pre-requisites from the curriculum[5]	Compulsory	Algebra, FORTRAN Language
	Recommended	Operating Systems and Programming Languages Mathematical Analysis

General objective [6]	Developing capacity of selection, analysis, syntesis and good working with specific knoliges for make coherents scientific arguments, eficients practical issues, decisions and concrets solutions in this area.
Specific objectives[7]	Students acquire theoretical and practical knowledge from courses and aplications, which allows them to correctly use the world libraries of performed programmes. Numerical Analysis should especially help students choose that software that best suits the problem they have to solve in the other subject matters from the curriculum. During the courses, the students will learn the basic theoretical notions on numerical methods used in the field of Materials Science and Engineering and during the laboratory courses the students will conduct practical experiments using the methods taught. Teaching is done by means of euristic conversation in order to engage the student in discussions on the methods used in numerical analysis.
Course description[8]	Cap. 1. Methods for solving algebric equations. Cap. 2. Methods for solving sistems of algebric equations . 2.1. Gauss methods. 2.2. Gauss-Jordan methods. 2.3. SOR method. Cap. 3. Optimisations methods for solving mathematical models. Cap. 4. Fiting a streit line with last squer. Cap. 5. Examin regresion equation. Cap. 6. Dispersional analysis. Cap.7. Numerical integration and derivation.

Assessment			Schedule[9]	Percentage of the final grade (minimum grade)[10]
Continuous assessment	Class tests along the semester		Weeks 1-14	10 %
	Activity during tutorials/laboratory works/projects/practical work			40 %
	Assignments			10 %
Final assessment	Final assessment form[11]	Exam	Week 16	40 %
	Examination procedures and conditions: 1. Exam (wraiting)		40 %	

Course organizer	Lecturer PhD CONSTANTIN BORIS	
Teaching assistants	Lecturer PhD CONSTANTIN BORIS	

[1]Course name from the curriculum
[2] DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)
[3] DI – imposed, DO –optional, DL – facultative (from the curriculum)
[4] Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)
[5] According to 4.1 – Pre-requisites - from the Course guide – extended form
[6] According to 7.1 from the Course guide – extended form
[7] According to 7.2 from the Course guide – extended form
[8] Short description of the course, according to point 8 from the Course guide – extended form
[9] For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period
[10] A minimum grade might be imposed for some assessment stages
[11] Exam or colloquium