UNIVERSITY OF SARAJEVO – FACULTY OF SCIENCE
SUBJECT DESCRIPTION

Subject code: *M-001*	Subject name: Introduction in matematics		
Study cycle: *I*	**Year:** *I*	**Semester:** *I*	**ECTS credits:** *2*
Status: *chosen*	**Contact hours:** *30* *Lectures: 15* *Exercises: 15*		
Assigned professors and assistants:	*Teachers and associates with expertise in the field to which the subject belongs*		
Prerequisits:	/		
Subject objectives:	Introducing students to elementary calculus		
Teaching units:	1. Introduction. 2. elementary calculus. 3. Sets of numbers and their properties. 4. Proportions. 5. Coordinate systems (Cartesian, Polar, Cylindrical and Spherical) 6. Elementary functions. 7. Solving systems of linear equations. Gauss method. 8. Determinants. 9. Solving systems of linear equations. Kramer's the rule. 10. Matrices and operations with matrices. 11. Elementary transformations on matrices. 12. Matrix equations.		

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	13. System of linear equations as a matrix equation. 14. Method of least squares. 15. Application of the method of least squares to solving Systems of linear equations.
Learning outcomes:	`Knowledge:` The student acquires knowledge from elementary calculus `Skills:` understanding of mathematical concepts - `Competencies:` Applications of mathematics in geography.
Teaching methods:	Multimedia presentation. Mathematical software
Knowledge testing methods with grading structure[1]:	_Points_ _Attendance_ _5_ _Participation on lectures_ _5_ _Partial exam_ _40_ _Seminar paper_ _10_ _Final exam_ _40_ _TOTAL_ _100_ **Assessment:** _Grade_ _ECTS grade_ _Points scale_ _10_ _(A) excellent_ _95 - 100_ _9_ _(B) very good_ _85 - 94_ _8_ _(C) good_ _75 - 84_ _7_ _(D) satisfactory_ _66 - 74_ _6_ _(E) sufficient_ _55 - 64_

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[1] The structure of points and point criteria for each subject is determined by the Council of the organizational unit before the beginning of the academic year in which the subject is taught in accordance with Article 64, paragraph 6 of the Law on Higher Education of Sarajevo Canton

	5 (F, FX) insufficient *55*
Literature[2]**:**	**Mandatory:** **Recommended:**