



Subject code: M-001	Subject name: Mathematics		
Study cycle: I	Year: I	Semester: I	ECTS credits: 6
Status: Mandatory		Contact hours: 60 Lectures: 30 Exercises: 30	
Assigned professors and assistants:	Lecturers and assistants selected for the field to which the course belongs		
Prerequisites:	/		
Subject objectives:	Preparing students for an introduction to mathematics.		
Teaching units:	1. Introduction. 2. Basic arithmetic operations. 3. Number sets and their properties. 4. Proportions. 5. Coordinate systems (Cartesian, Polar, Cylindrical, and Spherical). 6. Elementary functions. 7. Solving systems of linear equations: Gaussian method. 8. Determinants. 9. Solving systems of linear equations: Cramer's rule. 10. Matrices and matrix operations. 11. Elementary transformations on matrices. 12. Matrix equations. 13. Systems of linear equations as a matrix equation. 14. Least squares method. 15. Application of the least squares method in solving systems of linear equations.		
Learning outcomes:	Knowledge: The student acquires knowledge of the fundamentals of mathematics. Skills: Understanding mathematical concepts. Competencies: Application of mathematics in geography.		
Teaching methods:	Multimedia presentation. Mathematical software.		



UNIVERSITY OF SARAJEVO – FACULTY OF SCIENCE
SUBJECT DESCRIPTION

Form SP2

Page 2 of 2

	<i>Maximum Points</i>	<i>Minimum points</i>
Knowledge testing methods with grading structure¹:	Attendance	
	Participation on lectures	
	Tests	40
	Seminar paper	22
	Final exam	60
	TOTAL	100
	Assessment:	
	<i>Grade</i>	<i>ECTS grade</i>
	10	(A) excellent
	9	(B) very good
Literature²:	8	(C) good
	7	(D) satisfactory
	6	(E) sufficient
	5	(F, FX) insufficient

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

² The Senate of the higher education institution as an institution or a council of the organizational unit of the higher education institution as a public institution determines mandatory and recommended textbooks and manuals, as well as other recommended literature on the basis of which exams are prepared by a special act which is required to be published on its website before the beginning of the academic year in accordance with Article 56, paragraph 3 of the Law on Higher Education of the Sarajevo Canton.