Study Program: Informatics	
Type and level of studies: Bachelor studies	
Course name: Analytic geometry	
Lecturer: Stojanović S. Vladica	
Status: Compulsory	
ECTS: 6	
Attendance Prerequisites: High-school level mathematical knowledge	

Course aims
Introduction to the basic principles of analytic geometry.

Course outcome
Understanding basic notions of analytic geometry and the vector algebra theory, the curve and plane geometry, the affine and Euclidean plane.

Course content
Vecotrs and coordinate systems. Vectors and their producuts. Projections. Equations of basic curves. Space. Point, line, field and their relations. Transformation of the affine coordinates. Various coordinate systems. Analytic geometry of fields – an overview. Line and field. Conic section. Orientation. Orthogonal transformations. Linear and affine transformations. Algebraic curves and surfaces. Conic, cyllindrical and rotational surfaces. Investigating a second-order curve. Surfaces, ways of investigation, straight-line, rotating. Sphere geometry. Application of problem-solving software within the domain of analytical geometry.

Literature
1. Кочинац Љубиша, Линеарна алгебра и аналитичка геометрија, Универзитет у Нишу, 1997.
2. Н. Бокан, Н. Блажић, З. Лучић, З. Ракић: Аналитичка геометрија. Математички факултет Београд, 2002
3. G. Thomas, R. Finney: Calculus анд Analytic Geometry. Adison-Wesley Publishing Company, 1998

Number of active classes				Other classes
Lectures: 2	Practical classes: 2			

Teaching methods
Lectures (3 classes per week), calculation exercises (2 classes per week) and laboratory exercises (1 class per week).

Assessment (maximum 100 points)			
Course assignments	points	Final exam	Points
activity during lectures	**10**	written exam	**20**
practical classes		oral exam	**30**
term test(s)	**20**	....	
seminar(s)	**20**		
Total	**50**		**50**