

Study programmes: PhD – Mathematics				
Course name: Geometry in informatics				
Lecturers: Srđan N. Vukmirović				
Status: Optional				
ECTS: 9				
Attendance prerequisites: -				
Course aims: Acquisition of general and specific knowledge about notions of geometrical methods in informatics.				
Course outcome: Upon completion of the course, the student has necessary knowledge about: theory of curves and surfaces, projective geometry, using software packages for modelling. Student is qualified to individual understanding basic examples and solving problems from this area.				
Course content: Representation of point, line, segment, plane, triangle and polygon. Representation of polyhedral surfaces. Mutual relations of geometric figures. Methods of projections. Representation of curves and surfaces. Important geometric algorithms.				
Literature:				
<ol style="list-style-type: none"> 1. N. Bokan, S. Vukmirović, Projektivna geometrija, 2004, Matematički fakultet, Beograd. 2. N. Bokan, N. Blažić, Diferencijalna geometrija, 1996, Matematički fakultet, Beograd. 3. S. Vukmirović, Geometrija za informatičare, 2006, Matematički fakultet, Beograd, skripta. 4. P. J. Schneider, D. H. Eberly, Geometric tools for computer graphics, 2000, Morgan Kaufmann. 5. H. Pottmann, J. Wallner, Computational Line Geometry, 2001, Springer. 				
Number of hours: 10	Lectures: 4	Tutorials: -	Laboratory: -	Research: 6
Teaching and learning methods: Lectures/ Tutorials				
Assessment (maximal 100 points)				
Course assignments	points	Final exam		points
Lectures	-	Written exam		-
Exercises / Tutorials	20	Oral exam		40
Colloquia	-	Written-oral exam		-
Essay / Project	40			