

Course title:	Computational Geometry
Institute/Division:	F-3, Institute for Computer Science
Course code:	F3-CG
Erasmus subject code:	Informatics, Computer Science
Number of contact hours:	45 hours
Course duration:	1 semester
ECTS credits:	6
Course description:	N-dimensional analytical geometry, simplexes, barycentric coordinates, Dirichlet tessellation, Voronoi diagrams, intersections of fundamental geometric entities, triangulation of set of points, Delaunay triangulation of set of points, monotone polygons, algorithm of triangulation of monotone polygons, monitoring of art gallery, Algorithm of Delaunay triangulation of set of points, Delaunay triangularization of multiconnected polygons with mesh size parameter.
	<ol style="list-style-type: none">1. Literature: Computational Geometry : algorithms and applications / Mark de Berg [et al.] .2. Computational Geometry : an introduction / Franco P. Preparata, Michael Ian Shamos .
Course type:	Lectures and laboratories
Assessment method:	Attendance, evaluation of small projects, exam
Prerequisites:	programming languages, operating systems
Primary target group:	3-rd – 4-th year computer science students
Lecturer:	Jan Kucwaj, PhD, DSc
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