Study Program: Informatics	
Type and level of studies: Bachelor studies	
Course name: Computer Graphics and Design	
Lecturer: Savić S. Milan	
Status: Compulsory	
ECTS: 6	
Attendance Prerequisites: /	

Course aims

Introducing students to the basic principles of computer graphics, as well as advanced 2D and 3D modeling techniques. Using AutoCAD 2D and 3D, Corel DRAW and Photoshop software, students gain practical knowledge of computer graphics.

Course outcome

Minimal

At the end of the course, each student will understand the basic principles of computer graphics and will be able to use simpler graphics systems for 2D modeling.

Desirable

Students are able to independently apply advanced 2D and 3D modeling techniques to real problems, as well as independently develop and customize computer graphics algorithms.

Course content:

Theoretical part

Visual communication. Computer graphics. Interactive computer graphics. Benefits of interactive computer graphics. Moving picture. The benefits of moving pictures. Dynamics in interactive computer graphics. Interactive computer graphics technologies. Dynamics of movement. Dynamics of updates. Application of computer graphics. WIMP user interfaces. Interactive drawing in business, science and technology. Office automation and electronic publishing. Computer supported design (CAD, CAE, CAM, CASE). Vector Graphics - Concepts and Techniques. AutoCAD 2D and 3D, Photoshop and COREL DRAW.

Practical part

Vector graphics, concepts and techniques. Iterative and recursive procedures for drawing polylines. Modeling and representation of geometric figures. 3D graphics: projections of convex polyhedra; transformations; display of wire model and shaded polyhedron. Using software packages: AutoCAD 2D and 3D, Photoshop and COREL DRAW.

Literature

1. Д. Машуловић, Увод у рачунарску графику, скрипта (одобрена на седници Научно-наставног већа ПМФ-а у Новом Саду 23. 09. 2004.).
2. J. D. Foley, A. Van Dam, S. K. Feiner, J. F. Hughes, Computer Graphics, Principles and Practice (2nd Ed.), Addison-Wesley Publishing Co., 2003.
3. Г. Омура, AutoCAD - 2000 Специјално издање-2006, Микро књига, Београд, 2000.
4. S. Bain, N. Wilkinson: CorelDRAW 12, Компјутер Библиотека, Чачак, 2005.
5. L. McCanna, Photoshop, Компјутер Библиотека, Чачак, 2003.

Lectures: 2	Practical classes: 2	Практична настава: 0

Teaching methods

Standard teaching methods are used during lectures, with a projector as teaching aid. During exercise classes, the principles presented, some typical problems and their solutions are analyzed. Students' knowledge is tested through two term-tests. Practical classes are planned so that with the help of an assistant, certain principles and techniques are practiced, solutions are discussed, etc. At the oral part of the exam, the student demonstrates a comprehensive understanding of the material presented.

Assessment (maximum 100 points)			
Course assignments	**points**	Final exam	**Points**
activity during lectures	**5**	written exam	**30**
practical classes	**10**		
term test(s)	**30**		
homework	**10**		
seminar(s)	**15**		
Total	**70**		**30**