

COURSE DESCRIPTION
THE HIGHER VOCATIONAL STATE SCHOOL IN WLOCLAWEK

Course: Computer Graphics

Field of study:	Information Technology						Course code:
Unit supervising the course:	Information Technology Unit						
Course orientation:	practical profile						
Language of instruction:	English						
Course type:	general						
Course status:	obligatory						
Level: 1st degree	Year: I			Semester: I			
The number of teaching hours on the full-time programme:							
Total	lecture	classes	laboratory	projects	tutorials	seminars	practicum
30	15		15				
The number of teaching hours on the part-time programme:							
Total	lecture	classes	laboratory	projects	tutorials	seminars	practicum
Learning outcomes:			<p>Knowledge: Students know basic principles of 2D computer raster and vector graphics, color models and most popular graphical image formats, they also gain basic knowledge about 3D computer graphics principles.</p> <p>Skills: Students are able to design and create basic projects involving 2D graphics and internet applications using popular commercial graphics software and . Students gain basic skills in 3D graphics design using most popular commercial 3D graphics and CAD software.</p> <p>Social competence: Students gain social competence in cooperative team work and are aware of the significance of meeting the pre-determined work schedule.</p>				
Full description of the course:			<p>Lecture</p> <ul style="list-style-type: none"> - Basic concepts and applications of computer graphics - Raster and vector graphics 				

	<ul style="list-style-type: none"> - Light and color: color models, color management in computer systems - Graphics design, the use of color transformations, contrast and filtering, retouching, composition basics - Graphics file formats and image compression methods - Selected graphics application programming interfaces, the basics of graphics applications programming - Basic animation techniques and principles graphical user interfaces - Basics of 3D graphics and graphical design <p>Laboratory</p> <ul style="list-style-type: none"> - Raster Graphics – basic digital photo processing photo retouching and photomontage techniques - Vector graphics - vectorization of raster images, logotype design - 3D graphics design – creating 3D object models, texturing - Photorealistic 3D graphics – simple photorealistic scene design with the use of chosen 3D scripting language 				
Methods:	<ul style="list-style-type: none"> - lecture with multimedia presentation - laboratories – projects design and implementation with the use of most popular 2D and 3D commercial and non-commercial software 				
The student’s workload/ ECTS credits:	Forms of activities	Average number of hours to complete activities			
		Full-time		Part-time	
		Lecture	Classes	Lecture	Classes
	Contact hours with academic instructor	15	15		
	Hours without academic instructor				
	1. Preparation for the classes, including reading assignments	15	30		
2. processing the quantitative data /preparation for the exam, evaluation tests, etc.	20	50			

	3. Preparation of a report, presentation, discussion				
	Total	50	95		
	Total number of ECTS for the conducted form of classes	2	4		
	Total number of ECTS points for the entire course	6			
The type and mode of obtaining the credit and marking criteria or requirements:	The type: - lecture examination - laboratory project assignments				
	The mode: - lecture examination takes the form of an open questionnaire consisting of three open questions regarding the presented lecture material - laboratories consist of three obligatory out four practical tasks, where two tasks of the highest difficulty level are mutually optional				
	Basic assessment criteria: - final lecture grade is the one obtained for the lecture exam - final laboratory grade is the arithmetic mean of the partial grades obtained from each of the obligatory laboratory tasks.				
Literature:	Prescribed reading: - J. D. Foley et. al., Computer Graphics: Principles and Practice, Addison-Wesley Professional, 1995. - Kelly L. Murdock, 3D Studio Max R3 Bible, IDG Books Worldwide, 2000 - P. Andrews, Adobe Photoshop CS3 A-Z - Tools and features illustrated ready reference, Focal Press 2007 - Lecture notes and demonstration materials Recommended reading: - J. Vince, Mathematics for Computer Graphics, Springer-Verlag, 2010				
Course instructor: Kamil Stokfiszewski, Ph.D.					