

Subject card

Subject name and code	Computer Animation , PG_00047979							
Field of study	Informatics							
Date of commencement of studies	October 2025		Academic year of realisation of subject			2028/2029		
Education level	first-cycle studies		Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies		Mode of delivery			at the university		
Year of study	4		Language of instruction			Polish		
Semester of study	7		ECTS credits		2.0			
Learning profile	general academic profile		Assessme	Assessment form		assessment		
Conducting unit	Department Of Intelligent Interactive Systems -> Faculty Of Electronics Telecommunications And Informatics -> Wydziały Politechniki Gdańskiej							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Jacek Lebiedź					
	Teachers		dr inż. Jacek Lebiedź					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0		0.0	30
	E-learning hours included: 0.0							
Learning activity and number of study hours	Learning activity	Participation in didaction classes included in sturble		Participation in consultation hours		Self-study		SUM
	Number of study hours	30		2.0		18.0		50
Subject objectives	The purpose of the course is to familiarize students with the methods of computer animation.							

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IKG, W44] knows and understands, to an advanced extent, architecture, design profession and extent architecture, design profession and explaints are all extent and extended in the principles of human-computer interaction, the operation and evaluation criteria of data more profession and evaluation criteria of a simple device, facility, system or refined of study, using sutable methods, techniques, tools and materials, following earliering and extended and criteria and control, and the professional engineering environment. King U07] can apply methods of professional engineering environment King U07] can apply methods or professional engineering environment. Subject contents It. Rules of redit for a course, bibliography 2. Animation history, traditional containment full animation, day animation, rubber loss, toloscoping 3. Stop eniodicip pappot similarition, calved animation, day animation other techniques 8. Characteria animation, facility animation other techniques 8. Characteria animation, facility animation, or calved animation, day animation of the criteria extension of motion phases anticipation, main movement of animation, calved animation, day animation of the criteria extension of motion phases animation of the criteria environment of the criteria extension of motion phases animation of the criteria environment of the criteria extension of motion phases animation of the criteria environment of the criteria extension of motion phases animation of the criteria extension of the criteria extension	Learning outcomes	Course outcome	Subject outcome	Method of verification				
Rica U03 can design, according to required specifications, and make earny out a process, specific to the field of study, using suitable methods, etchniques, tools and materials, following engineering standards and more specific to the field of study, using suitable methods, etchniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering environment [KIK U07] can apply methods of process and function support, specific to the field of study and experience gained in the professional engineering environment 1. Rules of credit for a course, bibliography 2. Animation history, traditional cel animation: full animation, rubber hose, notoscoping 3. Stop motion: pupper animation, cutout animation, clay animation, model animation 4. Computer 2D animation techniques 5. Character animation factor environment of the receivage animation of the rechniques 8. Character animation, factor animation countries of the provided animation of the rechniques 8. Character animation, factor animation with key frames key frames and tweened frames 12. Read motion and simulated motion 13. Principles of the computer 3D animation and tweened frames 12. Read motion and simulated motion 13. Principles of animation: anticipation, overshoot, follow through slow in and slow out 14. Principles of animation: squash and steets, overshoot and moving hold. 16. Computer animation tools 17. Computer special effects used in a film Practucal exercise No requirements (recommended classes in Computer Graphics) Assessment methods and criteria Subject passing criteria Passing threshold Percentage of the final grade Midderm colloquium 53.0% 50.0% Recommended reading Basic literature 1. J. D. Foley, A. van Dam, S. K. Feiner, J. F. Hughes: Computer Graphics, Pri		understands, to an advanced extent, architecture, design principles and methods of hardware and software support for local and distributed information systems, including computing systems, databases, computer networks and information applications, as well as the principles of human-computer interaction, the operation and evaluation criteria of data processing, storage and transfer methods, including computational algorithms, artificial intelligence and data mining as well as standards and methods of IT systems administration, monitoring of processes and robustness to undesirable	understands the principles of					
Subject contents Training to the field of study prepare computer animation Subject contents Subject contents Subject contents 1. Rules of credit for a course, bibliography 2. Animation history, traditional cel animation: full animation, nubber hose, rotoscoping 3. Stop motion: puppet animation subtrainton skeletal animation of. Computer 3D animation techniques 5. Computer 3D animation skeletal animation of. Computer 3D animation pre-vertex animation (morph target animation). 7. Computer 3D animation there 1D. Frame frequency, undesirable effects in animation stagecoach-wheel effect 11. Animation with key frames, key frames and tweened frames 12. Real motion and simulated motion 13. Principles of animation: anticipation, overshoot, follow through, slow in and slow out 14. Principles of animation: squash and stretch, overdraw, arch moving, moving hold 15. Parameterization of motion phases: anticipation, main, overshoot and moving hold. 16. Computer animation tools 17. Computer special effects used in a film Prerequisites and co-requisites Assessment methods and criteria Subject passing criteria Passing threshold Percentage of the final grade Midterm colloquium 53.0% 50.0% 50.0%		required specifications, and make a simple device, facility, system or carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering	,	use methods and tools [SU1] Assessment of task				
limited animation, rubber hose, rotoscoping 3. Stop motion: puppet animation, cutout animation, clay animation anded animation 4. Computer 2D animation techniques 5. Computer 3D animation skeletal animation 6. Computer 3D animation pre-vertex animation (morph target animation) 7. Computer 3D animation of the techniques 8. Character animation, facial animation with key frames, key frames and tweened frames 12. Real motion and simulated motion 13. Principles of animation: anticipation, overshoot, follow through, slow in and slow out 14. Principles of animation: squash and stretch, overdraw, arch moving, moving hold 15. Parameterization of motion phases: anticipation, main, overshoot and moving hold. 16. Computer animation tools 17. Computer special effects used in a film Prerequisites Assessment methods and criteria Subject passing criteria		process and function support,	l	use methods and tools [SU1] Assessment of task				
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Humans Move in an Unstructured World. Wiley Publ. 2006. 2. J. E. Pratt, G. A. Pratt: Exploiting Natural Dynamics in the Control of a 3D Bipedal Walking Simulation, Proceedings of International Conference on Climbing and Walking Robots CLAWAR 1999. 3. M. da Silva, Y. Abe, J. Popović: Interactive Simulation of Stylized Human Locomotion, SIGGRAPH 2008. 4. M. da Silva, Y. Abe, J. Popović: Simulation of Human Motion Data using Short-Horizon Model-Predictive Control, EUROGRAPHICS 2008.	Recommended reading	Graphics: Principles and Practice, Second Edition. Addison-Wesley, Reading 1990. 2. M. Giambruno: 3D Graphics & Animation, Second Edition. New Riders, Indianapolis 2002. 3. R. Parent: Computer Animation, Algorithms and Techniques (Second Edition). Morgan						
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Adresy na platformie eNauczanie:		eResources addresses Adresy na platformie eNauczanie:						
Example issues/ example questions/ tasks being completed Basic animation of a humanoid character, animation of scenes using key poses and key frames	example questions/	Basic animation of a humanoid character, animation of scenes using key poses and key frames						
Work placement Not applicable	Work placement	Not applicable						

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