University of Gdańsk

Subject card

Subject name and code	Multimedia, PG_00178745						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Master's 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	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Business Informatics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		mgr inż. Dawid Jereczek				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	45.0	0.0	0.0	0.0	60
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	60		4.0		61.0	125
Subject objectives	The aim of the course is to provide students with theoretical knowledge and practical skills in multimedia technologies. Students will learn the basic concepts related to multimedia, types of media (text, image, sound, video), and their applications in various fields of computer science. They will become familiar with popular multimedia file formats, compression techniques, as well as tools and software used for creating and editing multimedia content. The course also covers the fundamentals of computer graphics (raster, vector, and 3D), sound and video processing, and the integration of different media forms. Additionally, the course addresses the applications of multimedia in marketing, social media, and various business contexts, including communication, management, and training.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[IiEMU2_U12] The student can adapt, design, create, and operate IT systems that support business entities.	The student is able to select and apply appropriate multimedia tools and technologies for creating and editing content that supports organizational activities, can integrate various forms of media (text, image, sound, video) to effectively communicate information, is capable of designing and implementing multimedia solutions that enhance marketing, internal, and external communication within organizations, and can apply multimedia in training processes and knowledge management activities.	[SU4] test/exam - oral or written [SU5] implementation of a problem task [SU6] demonstration of practical skills
[IiEMU2_W02] The student comprehends advanced theoretical and practical concepts in econometrics, informatics, or statistics, which are essential for a deeper understanding of economic and social phenomena.	The student knows the basic concepts and technologies related to multimedia and their applications in computer science and business, understands the structure and properties of various multimedia file formats and compression techniques, is familiar with and understands tools and methods for creating and editing multimedia content, and possesses knowledge of the use of multimedia in marketing communication, social media, as well as in management and training processes.	[SW4] test/exam - oral or written [SW5] implementation of a problem task

Subject contents

Fundamentals of Multimedia: Introduction to the concept of multimedia, types of media (text, image, sound, video), and their applications in various areas of computer science. Multimedia File Formats: Overview of popular file formats (e.g., JPEG, MP3, MP4) and their compression, including a discussion of the advantages and limitations of each format. Multimedia Tools and Software: Practical introduction to tools for creating and editing multimedia content. Computer Graphics: Basics of raster and vector graphics, 3D modeling, and image and animation processing. Sound in Multimedia: Fundamentals of acoustics, techniques for recording and editing sound, and the integration of audio with other multimedia elements. Video in Multimedia: Techniques for video recording, editing, and processing, including the creation of special effects and animations. Multimedia in Marketing: Use of multimedia materials in advertising campaigns, social media, and brand building. Applications of Multimedia in Business: Case studies on the use of multimedia in various aspects of company operations, such as management, training, and internal and external communication.

Prerequisites and co-requisites

The student should have basic knowledge of multimedia technologies (image, sound, and video), and be familiar with popular graphic and multimedia tools.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
own work during classes	51.0%	50.0%
test	51.0%	50.0%

Recommended reading

Basic literature	1. Domanski M. (2010), Obraz cyfrowy, WKiŁ, Warszawa 2. Russ J. (2007), The Image Processing Handbook, CRC Press 3. Chapman N., Chapman J. (2009), Digital Multimedia, Wiley
Supplementary literature	Watkinson J. (2004), The MPEG Handbook, Focal Press
eResources addresses	

Example issues/ example questions/ tasks being completed

Work placement

Not applicable