



MODULE DESCRIPTION

Module code	
Module name	Sieci multimedialne
Module name in English	Multimedia Networks
Valid from academic year	2012/2013

MODULE PLACEMENT IN THE SYLLABUS

Subject	Computer Science
Level of education	1st degree <i>(1st degree / 2nd degree)</i>
Studies profile	General <i>(general / practical)</i>
Form and method of conducting classes	Full-time <i>(full-time / part-time)</i>
Specialisation	Computer Graphics
Unit conducting the module	The Department of Computer Graphics
Module co-ordinator	Robert Tomaszewski, PhD, Eng.
Approved by:	

MODULE OVERVIEW

Type of subject/group of subjects	Major <i>(basic / major / specialist subject / conjoint / other HES)</i>
Module status	Non-compulsory <i>(compulsory / non-compulsory)</i>
Language of conducting classes	Polish
Module placement in the syllabus - semester	7th semester
Subject realisation in the academic year	Winter semester <i>(winter / summer)</i>
Initial requirements	Algorithms and Data Structures, Programming in the C Language 2, and Computer Networks <i>(module codes / module names)</i>
Examination	No <i>(yes / no)</i>
Number of ECTS credit points	7

Method of conducting classes	Lecture	Classes	Laboratory	Project	Other
Per semester	30		15	30	

TEACHING RESULTS AND THE METHODS OF ASSESSING TEACHING RESULTS



Projekt współfinansowany ze środków Unii Europejskiej w ramach Europejskiego Funduszu Społecznego

Module target	The aim of the module is to learn the principles of graphical and sound data compression as well as to create programs which realise streaming (drawing particular attention to modern standards of publishing multimedia contents in the Internet).
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Effect symbol	Teaching results	Teaching methods (l/c/lp/other)	Reference to subject effects	Reference to effects of a field of study
W_01	Knowledge of basic principles of sending and presenting multimedia contents (image, sound, and video contents) in computer networks (taking the Internet into particular consideration).	l	K_W10 K_W18	T1A_W04 T1A_W05 T1A_W07
W_02	Information on the principles of graphical and sound data compression.	l	K_W07 K_W18	T1A_W03 T1A_W04 T1A_W05 T1A_W07
U_01	The ability of creating programs which realise streaming (including the ones applying modern standards).	l	K_U01	T1A_U01 T1A_U07
U_02	Practical knowledge as regards the implementation of graphics and sound compression/decompression.	l	K_U01	T1A_U01 T1A_U07
K_01	Teamwork.	p	K_U02 K_U03 K_K03	T1A_U02 T1A_U03 T1A_K03 T1A_K04

Teaching contents:

Teaching contents as regards lectures

Lecture number	Teaching contents	Reference to teaching results for a module
1-2	The functioning of datagram connection-based protocols in the Internet, point-to-point and broadcast streaming.	W_01
3-4	The principles of operation of HTTP as well as encryption standards of MIME.	W_01
5-7	Streaming media: Real-Time Streaming Protocol and Real-Time Transport Protocol.	W_01
8-12	The algorithms of compressing images and sound: sample data formats (JPEG and mp3); the fundamentals of MPEG standard.	W_02
13-15	Modern multimedia data presentation methods in the Internet based on the Synchronised Multimedia Integration Language (SMIL, a standard recommended by W3C to describe multimedia presentations with the use of XML).	W_01

Teaching contents as regards laboratory classes

Laboratory class number	Teaching contents	Reference to teaching results for a module
1-2	Creating a simple customer code and a server sending graphical or sound data.	U_01
3-4	The implementation of the selected fragments of algorithms for graphics/sound compression/decompression.	U_02
5	The fundamentals of streaming – the implementation of the selected	U_01



	functions concerning Real-Time Streaming Protocol.	
6-7	Creating documents with a language for presenting multimedia data in the Internet based on the standard of Synchronised Multimedia Integration Language (SMIL).	U_01

The characteristics of a project assignment

Work in teams of 2 or 3. The project consists in creating an application for audio/video material sharing for applying the learnt protocols/technologies.

The methods of assessing teaching results

Effect symbol	Methods of assessing teaching results <i>(assessment method, including skills – reference to a particular project, laboratory assignments, etc.)</i>
W_01	A test
W_02	A test
U_01	A test
U_02	A test
K_01	The evaluation of a project assignment

STUDENT'S INPUT

ECTS credit points		
	Type of student's activity	Student's workload
1	Participation in lectures	30
2	Participation in classes	
3	Participation in laboratories	15
4	Participation in tutorials (2-3 times per semester)	2
5	Participation in project classes	30
6	Project tutorials	10
7	Participation in an examination	
8		
9	Number of hours requiring a lecturer's assistance	87 <i>(sum)</i>
10	Number of ECTS credit points which are allocated for assisted work <i>(1 ECTS credit point=25-30 hours)</i>	3
11	Unassisted study of lecture subjects	15
12	Unassisted preparation for classes	
13	Unassisted preparation for tests	30
14	Unassisted preparation for laboratories	20
15	Preparing reports	
16	Preparing for a final laboratory test	5
17	Preparing a project or documentation	40
18	Preparing for an examination	
19	Preparing questionnaires	
20	Number of hours of a student's unassisted work	110 <i>(sum)</i>



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21	Number of ECTS credit points which a student receives for unassisted work <i>(1 ECTS credit point=25-30 hours)</i>	4
22	Total number of hours of a student's work	197
23	ECTS credit points per module <i>1 ECTS credit point=25-30 hours</i>	7
24	Work input connected with practical classes <i>Total number of hours connected with practical classes</i>	85
25	Number of ECTS credit points which a student receives for practical classes <i>(1 ECTS credit point=25-30 hours)</i>	3