



MODULE DESCRIPTION

Module code	ID1SIII4
Module name	Systemy inteligentne 2
Module name in English	Intelligent Systems 2
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	
Unit conducting the module	The Department of Electronics and Intelligent Systems
Module co-ordinator	Prof. Marian Gorzałczany, PhD hab., Eng.
Approved by:	

MODULE OVERVIEW

Type of subject/group of subjects	Major <i>(basic / major / specialist subject / conjoint / other HES)</i>
Module status	Compulsory <i>(compulsory / non-compulsory)</i>
Language of conducting classes	Polish
Module placement in the syllabus - semester	5th semester
Subject realisation in the academic year	Winter semester <i>(winter / summer)</i>
Initial requirements	Intelligent Systems 1 <i>(module codes / module names)</i>
Examination	No <i>(yes / no)</i>
Number of ECTS credit points	3

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



TEACHING RESULTS AND THE METHODS OF ASSESSING TEACHING RESULTS

Module target	The aim of the module is to acquaint students with the ability of designing certain classes of intelligent systems (including decision support systems) using the Integrated Artificial Intelligence Package Sphinx 4.0, developed by Aitech (modules Neuronix 4.0, Detreex 4.0, and Pc-shell 4.1) as well as a student's own software prepared in the Department of Electronics and Intelligent Systems.
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Effect symbol	Teaching results	Teaching methods (l/c/l/p/other)	Reference to subject effects	Reference to effects of a field of study
W_01	A student has practical knowledge as regards the principle of operation and teaching technique concerning neural multi-layer perceptron-type networks	p	K_W07 K_W13	T1A_W03 T1A_W04
W_02	A student has practical knowledge of association memories built on the basis of Hopfield neural networks.	p	K_W07 K_W13	T1A_W03 T1A_W04
W_03	A student has practical knowledge of induction methods concerning decision trees.	p	K_W07 K_W13	T1A_W03 T1A_W04
U_01	A student is able to design (using the Sphinx 4.0 package) a neural decision support system on the basis of data describing a decision process.	p	K_U07 K_U09 K_U10	T1A_U07 T1A_U08 T1A_U09
U_02	A student is able to conduct (using the Sphinx 4.0 package) the process of „discovering” knowledge in data by applying the decision tree technique.	p	K_U07 K_U09 K_U10	T1A_U07 T1A_U08 T1A_U09

Teaching contents:

Teaching contents as regards project classes

Project class number	Teaching contents	Reference to teaching results for a module
1	Introductory classes (discussing project assignments, the principles concerning obtaining a credit, division into teams, etc.).	
2	The project of a neural classifier for linearly separable data.	W_01, U_01
3	The project of a neural classifier for linearly inseparable data.	W_01, U_01
4	The project of a neural classifier concerning the issue of image recognition.	W_01, U_01
5	The project concerning “discovering” knowledge with data sets using decision trees.	W_03, U_02
6	The project of association memory using the Hopfield neural network.	W_02
7	The project concerning programming fundamentals in the Prolog language.	W_01
8	A reserve date, i.e. an additional date for obtaining a credit for tests and completing project assignment, previously not submitted (e.g. due to an excused absence as regards project classes).	

The methods of assessing teaching results

Effect symbol	Methods of assessing teaching results (assessment method, including skills – reference to a particular project, laboratory assignments, etc.)
W_01	An entry test
W_02	An entry test



W_03	An entry test
U_01	A report on the completed project
U_02	A report on the completed project

STUDENT'S INPUT

ECTS credit points		
	Type of student's activity	Student's workload
1	Participation in lectures	
2	Participation in classes	
3	Participation in laboratories	
4	Participation in tutorials (2-3 times per semester)	8
5	Participation in project classes	30
6	Project tutorials	
7	Participation in an examination	
8		
9	Number of hours requiring a lecturer's assistance	38 <i>(sum)</i>
10	Number of ECTS credit points which are allocated for assisted work <i>(1 ECTS credit point=25-30 hours)</i>	1.52
11	Unassisted study of lecture subjects	
12	Unassisted preparation for classes	
13	Unassisted preparation for tests	13
14	Unassisted preparation for laboratories	
15	Preparing reports	12
16	Preparing for a final laboratory test	
17	Preparing a project or documentation	12
18	Preparing for an examination	
19	Preparing questionnaires	
20	Number of hours of a student's unassisted work	37 <i>(sum)</i>
21	Number of ECTS credit points which a student receives for unassisted work <i>(1 ECTS credit point=25-30 hours)</i>	1.48
22	Total number of hours of a student's work	75
23	ECTS credit points per module <i>1 ECTS credit point=25-30 hours</i>	3
24	Work input connected with practical classes <i>Total number of hours connected with practical classes</i>	75
25	Number of ECTS credit points which a student receives for practical classes <i>(1 ECTS credit point=25-30 hours)</i>	3