

**Faculty of Mathematics and Information Sciences, Warsaw University of Technology**  
**Graduate Program (M.Sc) in Computer Science 2006/2007**

**Semester 1**

No	Course	Responsible / Lecturer	ECTS	Lc	E	L	P	Exam
<b>Obligatory</b>								
1.	Calculus - Advances	prof. nzw. dr hab. T Rzeżuchowski	5	2	2	0	0	E
2.	Nonlinear Systems and Graphic Applications	prof. dr hab. S. Janeczko	3	2	0	1	0	
3.	Advanced Algorithms	prof. dr hab. Z. Lonc	4	2	0	0	1	
4.	Data Compression	dr hab. I. Herburt	3	2	0	1	0	
5.	Programming Project	dr W. Homenda	5	0	0	0	3	
6.	Institutions of Democracy	dr I. Jackiewicz	2	0	2	0	0	
Total:			<b>22</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>1</b>

**Artificial Intelligence**

1.	Knowledge Representation and Reasoning	dr A. Radzikowska	5	2	0	2	0	E
2.	Programming in Logic & Symbolic Programming	dr F. Okulicka-Dłużewska	3	1	0	2	0	
Total:			<b>8</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>

**Computing in Science and Engineering**

1.	Advanced Numerical Methods	dr K. Twardowska	4	2	0	0	1	
2.	Approximation and Interpolation	prof. dr hab. S. Janeczko	4	2	1	0	0	E
Total:			<b>8</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>

**Computing in Business and Economy**

1.	Data Management and Analysis with the SAS System	dr W. Matysiak	5	2	0	2	0	E
2.	Intelligent Data Analysis	dr P. Grzegorzewski	3	2	0	1	0	
Total:			<b>8</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1</b>

**Semester 2**

No	Course	Responsible / Lecturer	ECTS	Lc	E	L	P	Exam
<b>Obligatory</b>								
1.	Algorithms & Computability	dr W. Homenda	5	2	0	1	0	E
2.	High Performance Computing 1	dr F. Okulicka-Dłużewska	5	2	0	2	0	
3.	Institutions of the European Union	dr I. Jackiewicz	2	0	2	0	0	
Total:			<b>12</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>

**Artificial Intelligence**

1.	Neural Networks	prof. dr hab. B. Macukow, prof. nzw. dr hab. J. Mańdziuk	5	2	0	2	0	E
2.	Image and Speech Recognition	dr W. Kasprzak	5	2	1	1	0	
Total:			<b>10</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>

**Computing in Science and Engineering**

1.	Math. Modeling in Physics & Techn.	prof. nzw. dr hab. T Rzeżuchowski	5	2	1	0	1	E
Total:			<b>5</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>

**Computing in Business and Economy**

1.	Techniques of Survey Sampling	prof. dr hab. J. Wesołowski	6	2	1	0	1	E
2.	Mathematics of Financial Derivatives	prof. nzw. dr hab. M. Rutkowski	4	2	1	0	1	
Total:			<b>10</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>

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**Electives semester 2**

No	Course	Responsible / Lecturer	ECTS	Lc	E	L	P	Exam
1.	Differential Equations	prof. nzw. dr hab. A. Fryszkowski	5	2	1	1	0	(E)
2.	Partial Differential Equations	prof. nzw. dr hab. A. Fryszkowski	5	2	1	0	1	(E)
3.	Mathematical Programming	dr Ewa Pawelec	5	2	1	0	1	(E)
4.	Genetic and Evolutionary Programming	dr U. Rutkowska	4	2	0	0	1	(E)
5.	Molecular Computation Systems	dr inż.. Piotr Wąsiewicz	4	2	0	0	1	(E)
6.	Agent-based Computing	dr M. Paprzycki	4	2	0	0	1	(E)
Total:			<b>27</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>0</b>

**Semester 3**

No	Course	Responsible / Lecturer	ECTS	Lc	E	L	P	Exam
<b>Obligatory</b>								
1.	Distributed Operating Systems	dr T. Kruk	4	2	0	1	0	
2.	Elements of Modern Physics	prof. dr hab. L. Adamowicz (IF)	4	2	1	0	0	
3.	Humanities Seminar	prof. dr hab. S. Janeczko	2	0	2	0	0	
4.	Diploma Seminar	prof. dr hab. B. Macukow	2	0	2	0	0	
Total:			<b>12</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>0</b>	

**Artificial Intelligence**

1.	Software Testing	dr L. Stapp	4	1	1	1	0	E
Total:			<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>

**Computing in Science and Engineering**

1.	High Performance Computing 2	dr F. Okulicka	5	2	0	0	2	
2.	Method of Finite Element	dr A. Grabarski, dr F. Okulicka	4	2	0	0	1	E
Total:			<b>9</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>

**Computing in Business and Economy**

1.	Risk Theory and Insurance App.	prof. dr hab. W. Niemirow	5	2	1	0	1	E
Total:			<b>5</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>

**Electives semester 3**

No	Course	Responsible / Lecturer	ECTS	Lc	E	L	P	Exam
1.	Image Reconstruction Algorithms	dr hab. Z. Pasternak-Winiarski	5	2	0	0	2	(E)
2.	Computer Graphics 3D	dr J. Porter-Sobieraj	5	2	0	2	0	(E)
3.	Advanced Simulation Methods in Engineering	prof. Jacek Rokicki	5	2	0	1	1	(E)
4.	Oracle Database Programming	mgr R. Maczewski	4	2	0	0	2	
5.	Component Programming with J2EE	dr M. Grzenda	4	1	0	2	0	E
6.	Numerical Computing Seminar	tbd	4	0	1	0	1	
Total:			<b>27</b>	<b>9</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>0</b>

**Semester 4**

No	Course	Responsible / Lecturer	ECTS	Lc	E	L	P	Exam
<b>Obligatory</b>								
1.	Diploma Seminar		4	0	2	0	0	
2.	MSc Thesis		26	0	0	0	0	
Total:			<b>30</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	

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**Electives - Engineering Course Subjects**

**Electives Winter Semester**

<b>No</b>	<b>Course</b>	<b>Responsible / Lecturer</b>	<b>ECTS</b>	<b>Lc</b>	<b>E</b>	<b>L</b>	<b>P</b>	<b>Exam</b>
1.	Mathematical Linguistic	dr L. Stapp, dr W. Homenda	5	2	1	1	0	E
2.	PDP	dr L. Stapp	4	2	1	0	0	E
3.	Computer Statistics	dr P. Grzegorzewski	4	2	0	2	0	E
4.	Advanced Windows Programming	mgr K. Mossakowski	4	2	0	2	0	
5.	Data Mining	dr K. Bryś	3	2	0	1	0	E
6.	Advanced Artificial Intelligence	dr J. Arabas	3	2	0	0	1	
7.	Data Security	mgr M. Skórzewska-Amberg	3	2	0	0	0	
8.	Computer Networks	mgr J. Sobczyk	3	2	0	1	0	
<b>Total:</b>			<b>29</b>	<b>16</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>4</b>

**Electives Summer Semester**

<b>No</b>	<b>Course</b>	<b>Responsible / Lecturer</b>	<b>ECTS</b>	<b>Lc</b>	<b>E</b>	<b>L</b>	<b>P</b>	<b>Exam</b>
1.	Algebra for Computer Science	prof. dr hab. A. Romanowska	4	2	1	0	0	E
2.	Elements of Sampling Theory	prof. nzw. dr hab. P. Szablowski	4	2	1	0	0	E
3.	Oracle Database Administration	mgr R. Mączewski	4	2	0	0	2	
4.	Introduction to TCP/IP networks	mgr M. Kozłowski	3	1	0	2	0	
5.	UNIX Programming & Administration	dr M. Grzenda	3	1	0	1	0	E
6.	Network Operating Systems	dr J. Oleniacz	3	1	0	3	0	
7.	Data Transmission	mgr M. Pilarski	3	2	0	1	0	
<b>Total:</b>			<b>24</b>	<b>11</b>	<b>2</b>	<b>7</b>	<b>2</b>	<b>3</b>