

**The Faculty of Mathematics and Information Science, Warsaw University of
Technology, Undergraduate Program (B.Sc) in Computer Science
(valid from 2010-10-01)**

Semester 1

No	Course	ECTS	Lc	E	L	P	Exam
1.	Calculus 1	6	2	2	0	0	
2.	Linear Algebra with Geometry	5	2	2	0	0	E
3.	Introduction to Modern Mathematics	5	2	2	0	0	E
4.	Programming 1 (fundamentals, C)	5	2	2	1	0	E
5.	UNIX Fundamentals	2	0	0	2	0	
6.	Physics 1	4	2	1	1	0	
7.	Electronic Principles	3	1	1	0	0	
8.	Physical Education and Sports	0	0	2	0	0	
Total:		30					3
Hours - total:				27			
Hours - (without Sports, HES, Languages):				25			

Semester 2

No	Course	ECTS	Lc	E	L	P	Exam
	Calculus 2	6	2				E
1.				2	0	0	
2.	Discrete Mathematics 1	5	2	2	0	0	
3.	Programming 2 (object oriented, C++)	5	2	0	2	0	
4.	Physics 2	4	2	1	0	0	E
5.	Introduction to Digital Systems	4	2	1	1	0	
6.	Techniques of Auto-presentation	2	0	2	0	0	
7.	Language	4	0	4	0	0	
8.	Physical Education and Sports	0	0	2	0	0	
Total:		30					2
Hours - total:				27			
Hours - (without Sports, HES, Languages):				19			

Semester 3

No	Course	ECTS	Lc	E	L	P	Exam
1.	Discrete Mathematics 2	5	2	1	0	0	E
2.	Differential Equations	5	2	2	0	0	E
3.	Algorithms & Data Structures	6	2	2	2	0	E
4.	Programming 3 (advanced, Java)	5	2	0	2	0	
5.	Internet Programming	3	1	0	2	0	
6.	Humanities - Communication	2	0	2	0	0	
7.	Language	4	0	4	0	0	
8.	Physical Education and Sports	0	0	2	0	0	
Total:		30					3
Hours - total:				28			
Hours - (without Sports, HES, Languages):				20			

Semester 4

No	Course	ECTS	Lc	E	L	P	Exam
1.	Probability	4	2	2	0	0	E
2.	Numerical Methods	4	2	1	0	1	E
3.	Mathematical Foundation of Engineering	4	2	2	0	0	
4.	Programming 4 (in graphical environment)	4	2	0	2	0	
5.	Operating Systems	3	2	0	1	0	
6.	Data Transmission	3	2	0	1	0	
7.	Data Bases	4	1	0	2	0	
8.	Language	4	0	4	0	0	
9.	Physical Education and Sports	0	0	2	0	0	
Total:		30					2
Hours - total:				31			
Hours - (without Sports, HES, Languages):				25			

Semester 5

No	Course	ECTS	Lc	E	L	P	Exam
	Electives x 3	12		9			E
1.	Automata Theory and Languages	5	2	2	0	0	E
2.	Computer Statistics	4	2	0	2	0	E
3.	Software Engineering 1	4	2	1	0	0	
4.	Computer Networks	3	2	0	1	0	
5.	Language	2	0	2	0	0	
6.	Physical Education and Sports	0	0	2	0	0	
Total:		30					3
Hours - total:				27			
Hours - (without Sports, HES, Languages):				23			

Semester 6

No	Course	ECTS	Lc	E	L	P	Exam
	Electives x 2	8		6			E
1.	Computer Graphics	4	2	0	2	0	E
2.	Artificial Intelligence Fundamentals	4	2	0	0	1	
3.	Software engineering 2	4	0	0	3	0	
4.	UNIX Programming	4	1	0	2	0	
5.	Project (individual)	4	0	0	0	3	
6.	Social and Professional Aspects in Computer Science	2	0	2	0	0	
7.	Physical Education and Sports	0	0	2	0	0	
Total:		30					2
Hours - total:				26			
Hours - (without Sports, HES, Languages):				22			

Semester 7

No	Course	ECTS	Lc	E	L	P	Exam
	Elective	4		3			
1.	Diploma Seminar	3	0	2	0	0	
2.	Project (group)	4	1	0	0	1	
3.	Algorithms and Computability	7	2	1	1	0	
4.	Bachelor Thesis Preparation	12	0	0	0	0	
Total:		30					0
Hours - total:				11			

Additionally, there are 180 hours in sem. 7 for Bachelor Thesis preparation
Student Internship (after sem 4 or sem. 6) - 4 ECTS *not within the ECTS limits*

Electives - Winter Semester (5)

No	Course	ECTS	Lc	E	L	P	Exam
1.	Parallel and Distributed Programming	4	2	1	0	0	E
2.	.NET Programming	4	2	0	2	0	
3.	Introduction to TCP/IP networks	4	2	0	2	0	
4.	Assemblers	4	2	0	1	0	
5.	Stochastic simulation	4	2	1	1	0	E

Electives - Summer Semester (6)

No	Course	ECTS	Lc	E	L	P	Exam
1.	Symbolic and Numeric Calculations	4	0	0	2	0	
2.	Oracle Database Administration	4	2	0	2	0	E
3.	Computer Forensics	4	2	0	1	0	
4.	Graphic Processors in Computational Applications	4	1	0	0	2	
5.	Network Operating Systems	4	1	0	2	0	

Electives - Winter Semester (7)

No	Course	ECTS	Lc	E	L	P	Exam
1.	Data Mining	4	2	0	1	0	
2.	Advanced Artificial Intelligence	4	2	0	0	1	
3.	Distributed Operating Systems	4	2	0	1	0	
All electives from sem.5							