

Code	TITLE	ECTS	exam type	Semester	hour/semester				Instructor-in-charge	Prerequisite
					lecture	practice	seminar	laboratory		
	total credit (6 semester)	180								
	total credit - 1. semester	31		1						
	total credit - 2. semester	30		2						
	total credit - 3. semester	33		3						
	total credit - 4. semester	31		4						
	total credit - 5. semester	28		5						
	total credit - 6. semester	27		6						
Obligatory courses										
PTIB0301	Elementary Linear Algebra	5	Oral	1	26	26			Dr. Simon Ilona	
PTIB1201	Elementary Programming	5	Mark	1		52			Dr. Kégl Tímea	
PTIB4401	Pre-Calculus	3	Mark	1	13	26			Dr. Király Balázs	
GINFVA0201	Mathematical logic	3	Mark	1		26			Dr. Eisner Tímea	
PTIB1601	Programming I.	6	Mark	1		52			Dr. Mogyorósi Gábor	
ONINF2-2001	Relational Databases	5	Oral	1	26	26			Dr. Horváth Zoltán	
PTIA1901	Computer Architectures	2	Oral	1	26				Dr. Almási Gábor	
PTIB4501	Learning Methodology	2	Mark	1		13			Jenák Ildikó	
PTIB1301	Methodology of Programming I.	6	Mark	2	26	26			Dr. Kégl Tímea	Programming I.
ONINF1-0601	Algorithms, data structures	5	Oral	2	26	26			Dr. Almási Gábor	
PTIB0101	Discrete Mathematics I.	6	Oral	2	26	26			Dr. Tóth László	
PTIB4601	Basic IT Skills	2	Mark	2		26			Rébay Viktor	
PTIA0201	Calculus I.	5	Oral	2	26	26			Dr. Pap Margit	
ONINF3-0202	Programming II.	6	Mark	2		52			Dr. Mogyorósi Gábor	Programming I.
PTIB0102	Discrete mathematics II.	4	Oral	3	26	26			Dr. Tóth László	
PTIA0202	Calculus II.	5	Oral	3	26	26			Dr. Pap Margit	Calculus I.
PTIA0801	Basics of Computer Science	5	Mark	3	26	26			Dr. Jenei Sándor	
ONINF1-1001	Computer Networks	5	Oral	3	52				Dr. Mechler Mátyás Illés	
PTIA0501	Probability and Statistics	3	Oral	3	26	13			Dr. Hetesi Zsolt	
PTIB2401	Operation of IT Systems	3	Mark	4		26			Rébay Viktor	
PTIC4301	Introduction to Artificial Intelligence	3	Oral	4	26				Dr. Szabó Sándor	
PTIB0901	Numerical methods I.	4	Mark	4	26	26			Dr. Király Balázs	
ONINF1-0901	Operating Systems	5	Oral	4	26	26			Dr. Almási Gábor	
PTIA0902	Numerical methods II.	2	Mark	5		26			Dr. Király Balázs	Numerical methods I.
PTIB0601	Operations Research	3	Mark	5		39			Dr. Király Balázs	
PTIB1501	System engineering	4	Oral	5	26	26			Dr. Zentai Norbert	
PTIA4201	Thesis consultation I.	10	Mark	5					Dr. Pap Margit	
GINFA38	IT Security	3	Oral	6	26				Dr. Zentai Norbert	
PTIC4001	Control technology	4	Oral	6	13	26			Dr. Zentai Norbert	
PTIA4202	Thesis consultation II.	10	Mark	6					Dr. Pap Margit	
Internship (length of 8 weeks)		0		1 - 6						
Software developer IT specialist specialization										
Obligatory courses										
PTIC1302	Backend Technologies	5	Mark	3	26	26			Dr. Mogyorósi Gábor	Methodology of Programming I.

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PTIB1-1501	Web Programming I	6	Mark	3	26	26			Kiss-Vincze Tamás	
PTIA1-1801	Frontend frameworks	3	Mark	4		26			Dr. Horváth Zoltán	
PTIE1-1601	State-of-the-art Database Systems	4	Mark	4		26			Dr. Horváth Zoltán	
PTIA1-1701	Software Development Technologies	5	Mark	4	13	39			Kiss-Vincze Tamás	Programming I.
Facultative courses (see below)										
	Facultative courses	4		4						
	Facultative courses	3		5						
	Facultative courses	6		6						
Elective courses (10 credits to be completed)										
	Elective courses	6		5						
	Elective courses	4		6						
Geoinformatics specialization										
Obligatory courses										
OTNFOL-2501	Introduction to Geography	4	Oral	3	13	26			Dr. Nagyváradi László	
AFOLNS1-0101	Analog Cartography	3	Mark	4		26			Dr. Nagyváradi László	
AFOLNA1002	Introduction to GIS II.	4	Mark	4		39			Dr. Kovács István Péter	
AFOLNS1-0301	Digital Cartography	3	Mark	4		26			Dr. Gyenizse Péter	
AFOLNS1-0401	GIS Software I.	4	Mark	4		26			Dr. Kiss Kinga	
AFOLNS1-0201	Data Acquisition Methods	4	Mark	5		26			Dr. Kiss Kinga	
AFOLNS-0101	Introduction to ArcGIS	4	Mark	5		39			Dr. Pirkhoffer Ervin	
MNGEO82	Web GIS	6	Mark	5		39			Dr. Farkas Gábor	
AFOLNS1-0402	GIS Software II.	4	Mark	6		26			Dr. Halmai Ákos	
Elective courses (10 credits to be completed)										
	Elective courses	4		3						
	Elective courses	6		6						
Artificial intelligence specialization										
Obligatory courses										
TTINFVA9101	Introduction to Artifical Intelligence Research	4	Mark	3	13	26			Dr. Hetesi Zsolt	
TTINFVB8701	Chat GPT	4	Mark	4	13	26			Karsa Róbert	
PTIA1-KV2201	Advanced Python programming	3	Mark	4		26			Dr. Kégl Tímea	Elementary Programming
MATNAKV11	Mathematical Foundations of Artificial Intelligence sem.	3	Mark	4		26			Karsa Róbert	
PTIA1-KV2601	Data Analysis	6	Mark	5	26	26			Dr. Feleki Zsolt	Elementary Programming Relational Databases
PTIB1-KV1901	Deep Learning	5	Mark	5	13	26			Karsa Róbert	
TTINFVA8601	Natural Language Processing (Machine Learning III)	4	Mark	5	13	26			Karsa Róbert	
Facultative courses (see below)										
	Facultative courses	7		6						
Elective courses (10 credits to be completed)										
	Elective courses	4		3						
	Elective courses	3		4						
	Elective courses	3		6						
Facultative courses										

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PTIA1-KV2801	AI in Training Analysis and Planning	3	Oral	autumn	26	0			Dr. Horváth Zoltán	
PTIA4101	Analysis 1.	5	Oral	autumn	39	26			Dr. Pap Margit	
PTIA1-KV0601	Analysis 3.	4	Oral	autumn	26	26			Dr. Pap Margit	Calculus II. or Analysis II.
PTIA1-KV0603	Analysis 5.	3	Oral	autumn	13	26			Dr. Eisner Timea	Calculus II. or Analysis IV.
PTIA1-KV1401	Biorobotics	4	Oral	autumn	26	13			Dr. Zentai Norbert	
AFIZNKV0801	CAD I	2	Mark	autumn		26			Dr. Polónyi Gyula	
PTIA1701	Compilers and assemblers	2	Mark	autumn		26			Dr. Gimesi László	
PTIB1101	Formal languages and automata	5	Mark	autumn	26	26			Dr. Jenei Sándor	
PTIA1-KVA1501	IT Life (Openminds)	4	Mark	autumn		39			Dr. Lendvai Tamás	
TTINFV71	Basics of desktop publishing	3	Mark	autumn		39			Rébay Viktor	
AFIZNKV1102	LabView II	3	Mark	autumn		26			Dr. Márton Zsuzsa	
AFIZNKV1002	MATLAB II.	2	Mark	autumn		26			Dr. Mechler Mátyás Illés	
AFIZNKV2101	Microcontroller programming	4	Mark	autumn				52	Dr. Almási Gábor	
ONINF1-0801	Mobile technology	6	Mark	autumn		52			Dr. Zentai Norbert	
PTIB2301	Distributed systems, parallel programming	3	Mark	autumn		39			Dr. Zentai Norbert	
PTIA1-KV1701	IT solution of business processes with enterprise resource planning systems	3	Mark	autumn		26			Dr. Lendvai Tamás	
AFIZNKV0701	Visualization techniques	3	Mark	autumn		26			Dr. Almási Gábor	
PTIA4102	Analysis II.	5	Oral	spring	39	26			Dr. Pap Margit	Calculus I. or Analysis I.
PTIA1-KV0602	Analysis IV.	5	Oral	spring	26	13			Dr. Pap Margit	Calculus II. or Analysis III.
PTIA1-KV2401	Basics of Android	4	Mark	spring		39			Dr. Horváth Zoltán	
TTOTNINFV2301	Introduction into Maxima	2	Mark	spring		26			Dr. Mechler Mátyás Illés	
PTIB1-0101	Basics of C#	3	Mark	spring		26			Dr. Mogyorósi Gábor	Methodology of Programming I.
AFIZNKV0802	CAD II	2	Mark	spring		26			Dr. Polónyi Gyula	
PTIA1-KV2701	Data Science	6	Mark	spring	26	26			Dr. Feleki Zsolt	
AFIZNKV4001	Introduction to LaTeX typesetting	3	Mark	spring		26			Dr. Mechler Mátyás Illés	
PTIA1-KV2001	Chapters of Linear Algebra	5	Oral	spring	26	13			Dr. Simon Ilona	Elementary Linear Algebra
PTIA1-KV1601	Coding theory	5	Mark	spring	26	13			Dr. Jenei Sándor	Elementary Linear Algebra
PTIA1-KV0901	Complex functions	4	Oral	spring	26	26			Dr. Pap Margit	Calculus II. or Analysis V.
AFIZNKV1101	LabView basics	3	Mark	spring		26			Dr. Márton Zsuzsa	
AFIZNKV1001	MATLAB I.	3	Mark	spring		39			Dr. Mechler Mátyás Illés	
TTINFVA29	Neural networks	3	Mark	spring		26			Dr. Gimesi László	
PTIA1-KV2301	Programming languages	4	Oral	spring	26				Dr. Almási Gábor	
GINFF4201	Expert Systems	3	Oral	spring	13	13			Dr. Lendvai Tamás	
GINFF4202	Expert Systems II.	3	Oral	spring	13	13			Dr. Lendvai Tamás	
PTIC1801	Professional communication	3	Mark	spring		26			Dr. Zentai Norbert	
PTIA1-KV2101	Computer graphics	2	Mark	spring		26			Dr. Gimesi László	
PTIA1-KV0501	Computer game development	2	Mark	spring		26			Kiss-Vincze Tamás	
TTINFV8101	Vaadin backend-frontend framework	4	Mark	spring		39			Dr. Horváth Zoltán	Methodology of Programming I.
GINFV25	Web programming II.	5	Mark	spring	26	26			Kiss-Vincze Tamás	Web programming I.