Study plan - Approved

Academic year: **2019/2020**
Study programme: **ADUIm - Data Science and Artificial Intelligence - (Joint degree study, master II. deg., full time form)**
Study field: **22. - Mathematics**
Guarantee : **Prof. RNDr. Tomáš Madaras, PhD., from: 2019-09-01 - subprogramme matematika**
Study field: **18. - Computer Science**
Guarantee : **Prof. RNDr. Gabriel Semanišin, PhD., from: 2019-09-01 - subprogramme Informatika**

Study section

Compulsory courses

Block - Mathematical models and methods ADUI								Min. 24 Credits
Abbreviation	Name	Current	Credit	Range	End	Year	Sem.	Prerequisites	Teacher
ÚMV/MPA/19	Markov's processes and their applications		6	3L + 2P	PaS	1	W		Hančová, Gajdoš
ÚMV/KOA/10	Combinatorial algorithms		6	3L + 1P	PaS	1	S		Ivančo, Maceková
ÚMV/NPR/19	Stochastic processes		6	3L + 2P	PaS	1	S		Žežula, Hančová
ÚMV/VRS/14	Multidimensional Statistical Methods		4	3P	A	1	S		Klein
ÚMV/SDM/19	Data Management Seminar I		2	2P	A	1	S		Hančová

Block - Computer science models and methods ADUI								Min. 44 Credits
Abbreviation	Name	Current	Credit	Range	End	Year	Sem.	Prerequisites	Teacher
ÚINF/VYZ1/15	Computational complexity		4	2L	S	1	W		Geffert
ÚINF/PDB1/15	Organization and data processing		4	2L + 1P	S	1	W		Török, Gurský
ÚINF/PDSI1/15	Pro-seminar to diploma thesis in informatics		2	2P	A	1	W		Šnajder
ÚINF/STU1/16	Machine learning		5	2L + 2P	PaS	1	S		Antoni, Andrejková
ÚINF/PDS1/18	Parallel and distributed systems		5	2L + 1P	PaS	1	S		Jirásek
ÚINF/SDI1a/15	Seminar to diploma theses in informatics		2	2P	A	1	S	ÚINF/PDSI1/15	Jirásek, Krídlo
ÚINF/NEU1/15	Neural networks		5	2L + 1P	PaS	2	W		Antoni, Andrejková
ÚINF/KKV1/15	Classical and quantum computations		6	3L + 1P	S	2	W		Semanišin, Bednárová
ÚINF/APA1/15	Approximation algorithms		5	2L + 1P	S	2	W		Semanišin, Krídlo
ÚINF/SDI1b/15	Seminar to diploma theses in informatics		2	2P	A	2	W	ÚINF/SDI1a/15	Jirásek, Krídlo
ÚINF/SDM/19	Data Management Seminar II		2	2P	A	2	W		Semanišin, Szabari
ÚINF/SDI1c/15	Seminar to diploma theses in informatics		2	2P	A	2	S	ÚINF/SDI1b/15	Jirásek, Krídlo

Compulsory elective courses   Min. 22 Credits

Block - Mathematics								Min. 14 Credits
Abbreviation	Name	Current	Credit	Range	End	Year	Sem.	Prerequisites	Teacher
ÚMV/ATG/13	Applied graph theory		5	2L + 1P	S	1	W		Madaras
ÚMV/LTM/10	Logic and set theory		6	3L + 2P	PaS	1	W	ÚMV/MANb/19 or ÚMV/FRPb/19	Ivančo, Šupina
ÚMV/TSS/10	Control theory		6	3L + 1P	PaS	1	W		Cechlárová
ÚMV/THR/10	Game theory	!	6	3L + 1P	PaS	1	W		Cechlárová
ÚMV/VSM/10	Computational statistics and simulation methods		5	2L + 2P	PaS	2	W		Žežula, Klein

Block - Computer science methods ADUI								Min. 8 Credits
Abbreviation	Name	Current	Credit	Range	End	Year	Sem.	Prerequisites	Teacher
ÚINF/KMU1/15	Coding and multimedial data transition		4	2L + 1P	PaS	1	W		Jirásek
ÚINF/PSDU/16	Case studies in data mining		4	2L + 2P	H	1	W		Török, Šebej, Bruoth
ÚINF/ZNA1/15	Foundations of knowledge systems		4	2L + 1P	S	1	S		Krajči, Krídlo
ÚINF/ADA/19	Applications of data analysis		5	2L + 2P	PaS	1	S		Gallay, Kopčo
ÚINF/BPD1/15	Security of computer systems and data		5	2L + 2P	PaS	2	W		Jirásek, Krivoš-Belluš
ÚINF/VKN/15	Computational and cognitive neuroscience		5	2L + 2P	S	2	W		Kopčo

Elective courses

Block - Výber									
Abbreviation	Name	Current	Credit	Range	End	Year	Sem.	Prerequisites	Teacher
ÚINF/SVK1/15	Student scientific conference		4		H		S		
ÚMV/SVK/10	Students scientific conference		4		H		S		
ÚINF/AOS1/15	Administration of OS		2	2P	H	1, 2	W		Sokol, Bajtoš
ÚMV/TMT/10	Matroid theory		5	3L	S	1, 2	W		Horňák
ÚMV/THO/10	Queueing theory		6	4L	S	1, 2	W		Horňák
ÚMV/TIN/10	Information theory	!	4	2L	S	1, 2	W		Horňák
ÚINF/MPJ1/15	Modern programming languages		4	1L + 2P	S	1, 2	S		Török
ÚINF/MWT1/19	Moderné webové technológie		5	2L + 2P	PaS	1	S		Gurský
ÚINF/SGV1/16	Seminar on computer graphics and vision		3	2P	H	1	S		Krivoš-Belluš, Jirásek

Certified study programmes	
Abbreviation	Name
IB1	Ethics in Biomedical Sciences For Medical Practice
IB10	Medzinárodný certifikát ECo-C
IB11	Medzinárodný certifikát ECDL
IB12a	Use, Administration, and Development in the SAP System – Administrator
IB12c	Use, Administration, and Development in the SAP System – Consultant
IB12p	Use, Administration, and Development in the SAP System – Programmer
IB12u	Use, Administration, and Development in the SAP System – User
IB13	Psychological, social, and cultural aspects of health
IB2	Essentials of Law – Aspects of Private Law
IB3	Essentials of Law – Aspects of Public Law
IB4	Project Management
IB5	Closed-end Economy
IB6	Conflict and Crisis Situations Resolving in Educational Practice
IB9	Medzinárodný certifikát TOEFL
ITpP	IT pre prax

State exams

Compulsory courses

Block - State exam									Min. 24 Credits
Abbreviation	Name	Current	Credit	Range	End	Year	Sem.	Prerequisites	Teacher
ÚINF/DPO/15	Diploma Thesis and its Defence		20		OB				
ÚINF/IMUI/19	Information management and artificial intelligence methods		4		SS			ÚINF/ZNA1/15 and ÚINF/NEU1/15 and ÚINF/STU1/16 and ÚMV/VSM/10 and ÚMV/NPR/19	

Compulsory elective courses

Such a symbol can occur after the teaching range:

d - Days in a semester

h - Hours in a week

s - Hours in a semester

t - Weeks in a semester

When none of these symbols are given, expected range of teaching is "hours in a week"

Other signs can occur next to the courses of the study programmes

! - course will not be implemented in the given academic year

+ - course will not be implemented, perhaps the next academic year

- - course is implemented for the last time

* - course has more prerequisites

Explanatory notes:

Range: L - Lecture, P - Practice

Semester: W - Winter, S - Summer

End: S - Examination, H - Evaluation, Z - Credit Exam, A - Passing, PaS - Continuous assessment with examination, P - Continuous assessment / Practice