Course descriptions

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COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-245/17	3D Technologies, Robotics and Artificial Intelligence

Educational activities:
Type of activities: course
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Michal Malý, PhD., Mgr. Ján Žižka, PhD., Mgr. Tomáš Kovačovský

Last change: 06.10.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-540/00	Advanced Programming Techniques

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 123

A	B	C	D	E	FX
60,16	9,76	8,13	7,32	10,57	4,07

Lecturers: doc. RNDr. Ľubomír Salanci, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI+KAI/1-AIN-210/15	Algorithms and Data Structures

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 3.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-170/13 - Programming (2)

Antirequisites: FMFI.KZVI/1-AIN-210/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1004

A	B	C	D	E	FX
14,64	7,77	13,35	14,44	29,28	20,52

Lecturers: RNDr. Andrej Blaho, PhD., Ing. Ján Komara, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-210/00	Algorithms and Data Structures

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 3.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-170/13 - Programming (2)

Course requirements:

Learning outcomes:

Class syllabus:
Introduction to problems. Matematical foundations: symbolism, combinatorial identities. Sorting analysis: heapsort, quicksort; linear time sorting. Data structures: basic, hash tables, bináry searching trees, red-black and balanced trees. Design and analysis technics: dynamic programming , greedy algorithms.

Recommended literature:
Aho, Hopcroft, Ullman: The design and analysis of computer algorithms. Addison Wesley, 1974
N.Wirth: Algoritmy a štruktúry údajov, Alfa 1987.
Cormen, Leiserson, Rivest: Introduction to Algorithms, MIT Press, 1990

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 808

A	B	C	D	E	FX
12,5	6,31	11,88	14,36	32,18	22,77

Lecturers: RNDr. Andrej Blaho, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-551/00	Algorithms for AI Robotics

Educational activities:
Type of activities: lecture / laboratory practicals
Number of hours:
per week: 2 / 1 **per level/semester:** 28 / 14
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Perception and senzor systems, Software robotic architectures, Representation and inference in space, Navigation and localisation, probabilistic approaches, Simulation robotic systems, Robotics and artificial life (applications of evolutionary algorithms and neural networks for robotics), Applications

Recommended literature:
Dudek, Jenkin: Computational Principles of Mobile Robotics, Cambridge Univ. Press, 2000
Murphy: Introduction to AI Robotics, MIT Press, 2000
Nolfi, Floreano: Evolutionary Robotics, MIT Press, 2000
Kortenkamp, Bonasso, Murphy, Artificial Intelligence and Mobile Robots, MIT Press, 1998
Nehmzow, Mobile Robotics: A Practical Introduction, Springer, 2000
Bruce, Green, Georgeson: Visual Perception, 4th ed, Psychology Press, 2003.
Kalaš, Tridsať rokov svetovej robotiky, Vydavatelstvo STU, 2006

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 117

A	B	C	D	E	FX
10,26	11,11	30,77	24,79	16,24	6,84

Lecturers: Mgr. Pavel Petrovič, PhD.

Last change: 24.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAI/1-AIN-950/09	**Course title:** Applied Informatics
Number of credits: 0	
Educational level: I.	
State exam syllabus:	
Last change: 22.06.2017	
Approved by: doc. RNDr. Damas Gruska, PhD.	

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAI/1-AIN-955/15	**Course title:** Applied Informatics
Number of credits: 4	
Educational level: I.	
State exam syllabus:	
Last change: 22.09.2017	
Approved by: doc. RNDr. Damas Gruska, PhD.	

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-426/11	Applied Robotics Seminar

Educational activities:
Type of activities: course
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:
During semester: participate at seminars and/or events
Grading: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
The student will gain experiences with theoretical and practical aspects of robotic contests, he or she will learn about algorithms, programming and building robots and methods for robot performance evaluation. This knowledge will be tested on particular situations.

Class syllabus:
- applications of mobile robotics
- history of mobile robotics
- sensors and actuators
- navigation, simulation, and learning
- analysis of robot behavior
- building and programming a real model
- robotic contests – FLL
- robotic contests – rozličné kategórie RoboCup
- robotic contests – Istrobot, Robot Challenge
- robotic contests – RoboTour, Eurobot, Sailing Robots Championship

Recommended literature:
Ulrich Nehmzow: Mobile Robotics: A Practical Introduction.
Emília Kratochvílová (2010) Pedagogika voľného času, TYPI UNIVERSITAS TRNAVIENSIS.
Petrovic P., Balogh R., Pekarova J. (2009) Roboticke vzdelavacie iniciativy, Informatika v skole a v praxi, Ruzomberok: Pedagogicka fakulta Katolickej univerzity, 2008. ISBN 978-80-8084-362-5. p. 239-248

Languages necessary to complete the course:
Slovak or English

Notes:

This course can be taken in either of the two semesters, but counts only one time. We welcome students of all study years from the whole university.

Past grade distribution
Total number of evaluated students: 170

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: Mgr. Pavel Petrovič, PhD.

Last change: 24.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-426/11	Applied Robotics Seminar

Educational activities:
Type of activities: course
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:
During semester: participate at seminars and/or events
Grading: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
The student will gain experiences with theoretical and practical aspects of robotic contests, he or she will learn about algorithms, programming and building robots and methods for robot performance evaluation. This knowledge will be tested on particular situations.

Class syllabus:
- applications of mobile robotics
- history of mobile robotics
- sensors and actuators
- navigation, simulation, and learning
- analysis of robot behavior
- building and programming a real model
- robotic contests – FLL
- robotic contests – rozličné kategórie RoboCup
- robotic contests – Istrobot, Robot Challenge
- robotic contests – RoboTour, Eurobot, Sailing Robots Championship

Recommended literature:
Ulrich Nehmzow: Mobile Robotics: A Practical Introduction.
Emília Kratochvílová (2010) Pedagogika voľného času, TYPI UNIVERSITAS TRNAVIENSIS.
Petrovic P., Balogh R., Pekarova J. (2009) Roboticke vzdelavacie iniciativy, Informatika v skole a v praxi, Ruzomberok: Pedagogicka fakulta Katolickej univerzity, 2008. ISBN 978-80-8084-362-5. p. 239-248

Languages necessary to complete the course:
Slovak or English

Notes:

This course can be taken in either of the two semesters, but counts only one time. We welcome students of all study years from the whole university.

Past grade distribution
Total number of evaluated students: 170

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: Mgr. Pavel Petrovič, PhD.

Last change: 24.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-911/11	BSc Project

Educational activities:
Type of activities:
Number of hours:
per week: **per level/semester:**
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 629

A	B	C	D	E	FX
62,48	15,42	9,7	5,88	3,97	2,54

Lecturers:

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-920/00	BSc Seminar

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:
During semester: priebežné referáty
Final grade depends on presentation of the final thesis results
Evaluation scale: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Students will get acquainted with research work and with writing scientific publications. They will discuss about project approach to problem solving, and they will be introduced to the basics of acquiring and presenting research results.

Class syllabus:
- student in cooperation with the advisor of bachelor thesis and with the teacher of the seminar formulates goals and stages of his or her work,
- principles of research and scientific work, evaluation and presentation,
- principles of producing scientific publications,
- regular presentation of interim results of the bachelor thesis in a seminar study group

Recommended literature:
depending on the topic of the bachelor thesis, and recommendation of the thesis advisor
information sources on the Internet

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 690

A	B	C	D	E	FX
63,33	15,94	9,57	2,9	3,19	5,07

Lecturers: Mgr. Pavel Petrovič, PhD., RNDr. Andrej Blaho, PhD., RNDr. Zuzana Černeková, PhD., doc. RNDr. Milan Ftáčnik, CSc.

Last change: 24.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAI/1-AIN-990/00	**Course title:** BSc Thesis Defense
Number of credits: 0	
Educational level: I.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by: doc. RNDr. Damas Gruska, PhD.	

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAI/1-AIN-991/15	**Course title:** BSc Thesis Defense
Number of credits: 8	
Educational level: I.	
State exam syllabus:	
Last change: 22.09.2017	
Approved by: doc. RNDr. Damas Gruska, PhD.	

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-407/15	Brain and Mind

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 70

A	B	C	D	E	FX
58,57	28,57	11,43	1,43	0,0	0,0

Lecturers: doc. PhDr. Ján Rybár, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJFB/1-AIN-515/00	Calculations in Science and Technology

Educational activities:
Type of activities: course
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 35/65

Learning outcomes:

Class syllabus:
Statistical uncertainties and distributions, Solutions for sets of linear equations, Numerical differentiation and integration, Linear and nonlinear regression, Nonlinear equations, Ordinary differential equations, Monte-Carlo methods, Fast Fourrier Transformation

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 510

A	B	C	D	E	FX
12,94	5,49	12,35	20,98	45,29	2,94

Lecturers: doc. Mgr. Stanislav Antalic, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-408/15	Cognitive Laboratory

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1., 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 10

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. PhDr. Ján Rybár, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-260/00	Computer Networks

Educational activities:
Type of activities: lecture
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 4.

Educational level: I.

Prerequisites: FMFI.KI/1-INF-166/11 - Programming (2) in Java or FMFI.KAI/1-AIN-170/13 - Programming (2)

Course requirements:

Learning outcomes:

Class syllabus:
The lectures are devoted to telecommunication networks and services, and to their development. Special attention is paid to integrating trends in data communication, to principles of swiching and communication protocols; to network architectures and to general aspects of peripheral devices. Other topics of the lectures are: data transfers, problems of synchronization, standards and recommendations and finally, performane analysis. The lectures cover practical topics, such as characterisation of various types of cables, network components and techniques of network interconnection.

Recommended literature:
Fred Halsall: Introduction to data communications and computer networks.
Jean Walrand: Communication Networks.
Uyless D. Black: Emerging Communication Technologies
F. Kállay, P. Peniak: Počítačové siete a ich aplikácie

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1033

A	B	C	D	E	FX
18,49	15,0	15,39	23,14	22,46	5,52

Lecturers: RNDr. Andrej Bebják, RNDr. Jaroslav Janáček, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-283/15	Computer Networks (1)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 1 **per level/semester:** 28 / 14
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 2.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KI/1-INF-260/00

Course requirements:
Exercises, tests, written and oral final exam
Scale of assessment (preliminary/final): 40/60

Learning outcomes:
Students will be familiar with basic terminology of computer networks and principles of their operation. They will have practical experience with usage and configuration of technologies commonly used on local networks and on the internet.

Class syllabus:
Basic network terminology, layer models, OSI, TCP/IP
Physical layer - cables, wireless transmission
Data link layer - Ethernet, WiFi, PPP, Bluetooth.
Network layer – IP, routing, ICMP, ARP.
Transport layer – UDP, TCP, NAT.
Application layer – DNS, DHCP, Web, Mail, FTP, ...
IPv6
Security – firewall, VPN, SSL/TLS, security at the application layer (Web, Mail).

Recommended literature:
Computer Networks / Andrew S. Tanenbaum, David J. Wetherall. Boston : Pearson education, 2011
Computer Networks / Andrew S. Tanenbaum. Upper Saddle River : Prentice-Hall, 2003
Data and computer communications / William Stallings. Upper Saddle River : Prentice-Hall, 2004

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution Total number of evaluated students: 1273					
A	B	C	D	E	FX
16,5	14,85	17,52	23,8	21,84	5,5
Lecturers: RNDr. Jaroslav Janáček, PhD.					
Last change: 08.02.2018					
Approved by: doc. RNDr. Damas Gruska, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KI/2-INF-183/15	**Course title:** Computer Networks (2)
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** 2 / 1 **per level/semester:** 28 / 14 **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 5.	
Educational level: I., II.	
Prerequisites:	
Recommended prerequisites: 1-INF-283	
Course requirements: assignments, written tests, written and oral final exam Scale of assessment (preliminary/final): 40/60	
Learning outcomes: Students will be familiar with principles and practical application of advanced technologies in computer networks and data communication.	
Class syllabus: 802.1q, STP, DOCSIS , ATM, IP routing protocols (BGP, OSPF, RIP, ...), advanced topics in TCP (syn-cookies, ECN, ...), advanced topics in WiFi, tunneling. Theoretical principles of data transmission, maximal bandwidth, CRC, ..., modulation techniques, data transmission - UART, USRT, synchronization Long-distance lines and multiplexing - optical networks - FDMA/TDMA/CDMA, synchronous optical networks (SDH, SONET).	
Recommended literature: Computer Networks / Andrew S. Tanenbaum, David J. Wetherall. Boston : Pearson education, 2011 Computer Networks / Andrew S. Tanenbaum. Upper Saddle River : Prentice-Hall, 2003 Data and computer communications / William Stallings. Upper Saddle River : Prentice-Hall, 2004	
Languages necessary to complete the course: Slovak, English	
Notes:	

Past grade distribution Total number of evaluated students: 41					
A	B	C	D	E	FX
26,83	46,34	17,07	4,88	4,88	0,0
Lecturers: RNDr. Jaroslav Janáček, PhD.					
Last change: 10.05.2016					
Approved by: doc. RNDr. Damas Gruska, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KEF/1-AIN-140/16	Computer Principles - Hardware

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 1.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KEF/1-AIN-140/15

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 235

A	B	C	D	E	FX
27,66	25,53	15,32	9,36	10,21	11,91

Lecturers: RNDr. Ján Greguš, PhD., doc. RNDr. František Kundracik, CSc.

Last change:

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KEF/1-AIN-140/00	Computer Principles - Hardware

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Principles of DDL, DTL a TTL circuits. Combinational and sequential schemes, their optimalization and practical applications (RS- and D- type flip-flops, counter and shift register). Multiplexer and demultiplexer, paralel-serial code converter, RS232 interface, statical RAM memory, delta modulation and simple digital sound recording.

Recommended literature:
faculty guidance documents

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1090

A	B	C	D	E	FX
92,66	4,86	0,64	1,56	0,28	0,0

Lecturers: RNDr. Ján Greguš, PhD., doc. RNDr. Ľudovít Fischer, CSc.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-180/15	Computer Principles - Operating Systems

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 1 **per level/semester:** 28 / 14
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 3.

Educational level: I.

Prerequisites: (FMFI.KAI/1-AIN-170/13 - Programming (2) or FMFI.KI/1-INF-127/15 - Programming (1) in C/C++) and (FMFI.KEF/1-AIN-140/16 - Computer Principles - Hardware or FMFI.KI/1-INF-130/00 - Computer Architecture) and (FMFI.KZVI/1-AIN-186/16 - Computer Principles - System Programming or FMFI.KI/1-INF-526/15 - System Programming)

Antirequisites: FMFI.KZVI/1-AIN-180/00 and FMFI.KI/1-INF-171/15

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 991

A	B	C	D	E	FX
4,04	8,88	18,67	29,06	34,21	5,15

Lecturers: RNDr. Peter Tomcsányi, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-180/00	Computer Principles - Operating Systems

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The model of multilevel machine. Machine language - an example based on Intel Pentium and assembly procedures and functions in Delphi. Operating systems - history, structure, basic concepts. Process management, memory management, management of i/o devices, file management. The tasks of each part, related theoretical problems and their practical solutions.

Recommended literature:
Tanenbaum A. S.: Structured Computer Organization, Third Edition, Prentice-Hall International, ISBN 0-13-852872-1
Tanenbaum, A. S.: Operating systems, Design and Implementation, Prentice-Hall 1987, ISBN 0-13-637406-9
Notes in electronic form made by RNDr. Vanda Hambálková http://www.dcs.fmph.uniba.sk/~hambalko/
Brandejs, M.: Mikroprocesory INTEL Pentium a spol., Grada, 1994, ISBN 80-7169-041-4

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 899

A	B	C	D	E	FX
3,89	9,01	18,24	28,7	35,04	5,12

Lecturers: RNDr. Peter Tomcsányi, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-186/16	Computer Principles - System Programming

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 3 **per level/semester:** 28 / 42
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 2.

Educational level: I.

Prerequisites: (FMFI.KEF/1-AIN-140/16 - Computer Principles - Hardware or FMFI.KI/1-INF-130/00 - Computer Architecture) and (FMFI.KAI/1-AIN-130/16 - Programming (1) or FMFI.KI/1-INF-127/15 - Programming (1) in C/C++)

Antirequisites: FMFI.KZVI/1-AIN-186/15

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 125

A	B	C	D	E	FX
6,4	9,6	16,8	24,8	31,2	11,2

Lecturers: RNDr. Peter Tomcsányi, PhD., Mgr. Pavel Petrovič, PhD., RNDr. Andrej Blaho, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-611/00	Creative Writing

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Principles of creative writing
Techniques of writing
Writing Research Papers
Journalistic genres
Specifics of internet writing
Art of editing
Creativity, originality and rules

Recommended literature:
Lester, James D., Lester, James D. Jr., Principles of Writing Research Papers, Penguin Academics, 2003
Dočekalová, Markéta, Creative writing for all (in czech), Grada Publishing, 2006
Seley, Hans, Secrets fo science (in czech), Orbis Praha, 1964
King, Stephen, About writing, Memoirs about writing (in czech), BETA- Dobrovský, Praha, 2002
Bradbury, Ray, ZEN and Art of Writing, Essays about creativity (in czech), PRAGMA, Praha, 1998

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 111

A	B	C	D	E	FX
93,69	1,8	0,9	0,0	0,0	3,6

Lecturers: Ing. František Gyarfaš, CSc.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-521/00	Database Systems Implementation

Educational activities:
Type of activities: lecture / laboratory practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
DBMS Oracle Architecture, Oracle SQL, Data types, basic data objects, introduction to PL/SQL, Database tables, Indexes, Optimization - tools for performance tuning, Import, export and data loading and overview of other topics.

Recommended literature:
Connoly, T.M. and Begg, C.E.: Database Systems: A Practical Approach to Design, Implementation and Management. Pearson Education, 2005 (4th edition).
Casteel, J.: Oracle 10g: SQL, Course Technology, 2006

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 291

A	B	C	D	E	FX
9,28	11,34	18,56	30,58	25,77	4,47

Lecturers: Mgr. Pavel Petrovič, PhD.

Last change: 24.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-221/15	Databases (1)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 226

A	B	C	D	E	FX
6,19	7,08	10,62	25,22	30,53	20,35

Lecturers: Ing. Alexander Šimko, PhD.

Last change: 06.10.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-222/15	Databases (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 4.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-221/15 - Databases (1)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 119

A	B	C	D	E	FX
7,56	6,72	7,56	17,65	39,5	21,01

Lecturers: Ing. Alexander Šimko, PhD.

Last change: 06.10.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI+KAI/1-AIN-305/15	Deductive Databases

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites: FMFI.KAGDM+KAI/1-AIN-412/15 - Mathematics (4) - Logic for Computer Science and FMFI.KAI/1-AIN-222/15 - Databases (2)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 13

A	B	C	D	E	FX
30,77	46,15	23,08	0,0	0,0	0,0

Lecturers: RNDr. Martin Homola, PhD., Ing. Alexander Šimko, PhD., RNDr. Jozef Šiška, PhD., Mgr. Ján Kľuka, PhD.

Last change: 06.10.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-131/10	Development of Information Systems

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KI/1-INF-516/10

Course requirements:
Evaluation during semester - tests
Exam, Project
Evaluation based on total points earned: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 50/50

Learning outcomes:
Students will learn about the stages in the software design process, models of development including agile, fundamentals of clean code, read and write basic UML diagrams, use design patterns, understand and get practice in using revision control systems for source code repositories , and try a full process of software design on a realistic project from specification till deployment to use in a combined development model.

Class syllabus:
- Stages in development of information system
- Tranditional development models
- Agile methods of IS development
- Specification of requirements of IS
- UML
- Design of IS
- Design patterns
- Integration of applications
- Source code repositories
- Clean code
- Soft skills

Recommended literature:
Design patterns : Elements of reusable object-oriented software / Erich Gamma ... [et al.].
Boston : Addison-Wesley, 1995

Architektúra softvérových systémov : Architektúra internetových systémov a architektúra orientovaná na služby / Ľubor Šešera, Peter Grec, Pavol Návrat. Bratislava : Slovenská technická univerzita, 2011
Aplikačné architektúry softvérových systémov / Ľubor Šešera. Bratislava : Slovenská technická univerzita, 2012
Čistý kód / Robert C. Martin ; překlad Jiří Berka. Brno : Computer Press, 2009
Software engineering : Modern approaches / Eric J. Braude, Michael E. Bernstein. Hoboken : Wiley, 2011
Sun Certified Enterprise Architect for Java EE study guide / Mark Cade, Humphrey Sheil. Upper Saddle River : Prentice Hall, 2010

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 599

A	B	C	D	E	FX
20,03	35,89	25,88	12,52	4,17	1,5

Lecturers: Mgr. Pavel Petrovič, PhD., doc. PhDr. Ján Šefránek, CSc.

Last change: 03.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-120/00	Discrete Mathematics (1)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 50/50

Learning outcomes:

Class syllabus:

Recommended literature:
Grimaldi, R. P.: Discrete and Combinatorial Mathematics, Pearson Addison-Wesley, 2004 (5th edition).
Knor, M.: Kombinatorika a teória grafov I, MFF UK, Bratislava 2000.
Matoušek, J., Nešetřil, J.: Kapitoly z diskrétnej matematiky, Nakl. Karolinum, Praha 2009 (4. vydanie).
Znám, Š.: Teória čísel, Alfa, Bratislava 1986 (2. vydanie).

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1116

A	B	C	D	E	FX
7,62	10,04	21,06	26,7	17,29	17,29

Lecturers: Ing. Ján Komara, PhD., doc. RNDr. Tatiana Jajcayová, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-160/00	Discrete Mathematics (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 2.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-120/00 - Discrete Mathematics (1)

Course requirements:

Learning outcomes:

Class syllabus:
- Combinatorics: permutations, variations, combinations.
- Pigeonhole principle.
- Principle of inclusion and exclusion.
- Elementary probability and statistics.
- Recurrence.
- Graphs.
- Basic graph algorithms.

Recommended literature:
Graham, Knuth, Patashnik: Concrete Mathematics. A Foundation for Computer Science
Cormen, Leiserson, Rivest: Introduction to Algorithms
Preparata, Yeh: Úvod do teórie diskrétnych matematických štruktúr
Olejár D., Škoviera M: Diskrétna matematika I, Bratislava UK, 1990.
Kolář J., Štepánková O., Chytil M.: Logika, algebry a grafy, SNTL-Alfa, Praha 1989
J.Matoušek, J.Nešetřil: Kapitoly z diskrétnej matematiky, Matfyzpress 1996, Praha (2.vydanie)
Š. Znám: Kombinatorika a teória grafov, MFF UK (skriptá)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 927

A	B	C	D	E	FX
5,29	7,44	18,77	29,02	25,89	13,59

Lecturers: Ing. Ján Komara, PhD., doc. RNDr. Tatiana Jajcayová, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-105/15	Efficient Algorithms and Complexity

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites: FMFI.KZVI+KAI/1-AIN-210/15 - Algorithms and Data Structures or FMFI.KI/1-INF-220/00 - Algorithms and Data Structures

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 46

A	B	C	D	E	FX
4,35	13,04	19,57	17,39	34,78	10,87

Lecturers: Mgr. Vladimír Boža, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-311/15	Embedded Linux

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 16

A	B	C	D	E	FX
43,75	50,0	6,25	0,0	0,0	0,0

Lecturers: RNDr. Jozef Šiška, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-233/13	English Conversation Course (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3., 5.

Educational level: I., II.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 100/0

Learning outcomes:

Class syllabus:
The content of the course is general English.
The language level is B2/C1 (Upper-Intermediate/Lower Advanced).

Recommended literature:
Selection of materials from Inside Out Upper-Intermediate, Cutting Edge Upper-Intermediate, New English File Upper-Intermediate, British and American newspapers and journals
Recordings: authentic and semi-authentic (source: BBC, CNN, coursebook recordings)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 135

A	B	C	D	E	FX
58,52	18,52	9,63	2,22	1,48	9,63

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-234/13	English Conversation Course (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4., 6.

Educational level: I., II.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 100/0

Learning outcomes:

Class syllabus:
The course is a follow-up to the Conversation Course in English (1). The content of the course is general English.
The language level is B2/C1 (Upper-Intermediate/Lower Advanced).

Recommended literature:
Selection of materials from Inside Out Upper-Intermediate, Cutting Edge Upper-Intermediate, New English File Upper-Intermediate, British and American newspapers and journals
Recordings: authentic and semi-authentic (source: BBC, CNN, coursebook recordings)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 62

A	B	C	D	E	FX
67,74	19,35	4,84	0,0	0,0	8,06

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-131/00	English Language (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
On entering the first semester, students´ knowledge of English is tested and they are divided into groups according to the results of the placement test. In the groups of pre-intermediate and intermediate students, fundamentals of technical English are taught. Advanced students take classes of technical English for their field of study: English for mathematics, for physics, for computer science, English for management and economic and financial mathemathics.

Recommended literature:
Zemanová, A.: Anglický jazyk pre študentov FMFI UK. Kurz pre mierne pokročilých. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-2829-6
Erdélyi L., Gombárik P.: Anglický jazyk pre študentov FMFI UK. Aplikovaná matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3216-3
Gombárik P.: Anglický jazyk pre študentov FMFI UK. Matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3207-1
Klátiková E.: Anglický jazyk pre študentov FMFI UK. Informatika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3196-8
Alena Zemanová: Anglický jazyk pre študentov FMFI UK. Fyzika. Univerzita Komenského v Bratislave, Bratislava 2014, 92 strán, ISBN: 978-80-223-3477-8.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 4568

A	B	C	D	E	FX
30,12	23,82	18,83	13,05	8,08	6,11

Lecturers: PhDr. Elena Klátiková, PhDr. Alena Zemanová, Mgr. Ing. Jana Kočvarová, Ing. Eva Vartíková, Mgr. Alexandra Maďarová, Mgr. Renáta Čárska, Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015
Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-132/00	English Language (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
This is a continuation of the course English (1) designed for pre-intermediate students. Fundamental vocabulary is presented through selected topics in mathematics, physics and informatics. The lessons also contain revision of elementary grammar. Generally, it is a necessary preliminary to advanced programs.

Recommended literature:
Zemanová, A.: Anglický jazyk pre študentov FMFI UK. Kurz pre mierne pokročilých. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-2829-6

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1350

A	B	C	D	E	FX
18,74	21,19	25,93	17,11	11,26	5,78

Lecturers: PhDr. Elena Klátiková, PhDr. Alena Zemanová, Mgr. Ing. Jana Kočvarová, Ing. Eva Vartíková, Mgr. Alexandra Maďarová, Mgr. Renáta Čárska, Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-231/00	English Language (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject continues the program of English (2). Students take classes of special English for their field of study: English for mathematics, English for physics, English for computer science, English for management and economic and financial mathemathics.
The subject requires advanced knowledge of general English.

Recommended literature:
Erdélyi L., Gombárik P.: Anglický jazyk pre študentov FMFI UK. Aplikovaná matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3216-3
Gombárik P.: Anglický jazyk pre študentov FMFI UK. Matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3207-1
Klátiková E.: Anglický jazyk pre študentov FMFI UK. Informatika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3196-8
Alena Zemanová: Anglický jazyk pre študentov FMFI UK. Fyzika. Univerzita Komenského v Bratislave, Bratislava 2014, 92 strán, ISBN: 978-80-223-3477-8.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1134

A	B	C	D	E	FX
16,67	19,4	22,75	17,55	18,52	5,11

Lecturers: PhDr. Elena Klátiková, PhDr. Alena Zemanová, Mgr. Ing. Jana Kočvarová, Ing. Eva Vartíková, Mgr. Alexandra Maďarová, Mgr. Renáta Čárska, Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-232/10	English Language (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Students take classes of special English for their field of study: English for mathematics, English for physics, English for computer science, English for management and economic and financial mathemathics.

Recommended literature:
Erdélyi L., Gombárik P.: Anglický jazyk pre študentov FMFI UK. Aplikovaná matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3216-3
Gombárik P.: Anglický jazyk pre študentov FMFI UK. Matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3207-1
Klátiková E.: Anglický jazyk pre študentov FMFI UK. Informatika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3196-8
Alena Zemanová: Anglický jazyk pre študentov FMFI UK. Fyzika. Univerzita Komenského v Bratislave, Bratislava 2014, 92 strán, ISBN: 978-80-223-3477-8.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2248

A	B	C	D	E	FX
28,43	28,51	20,95	10,9	5,83	5,38

Lecturers: Mgr. Ing. Jana Kočvarová, Mgr. Alexandra Maďarová, Ing. Eva Vartíková, PhDr. Alena Zemanová, PhDr. Elena Klátiková, Mgr. Renáta Čárska, Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-670/00	Expert Systems

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 284

A	B	C	D	E	FX
20,07	13,03	36,27	14,79	11,97	3,87

Lecturers: doc. RNDr. Dušan Guller, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/2-AIN-133/15	Extreme Programming

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 6.

Educational level: I., II.

Prerequisites:

Recommended prerequisites:
1-AIN-171 Programmiong (3)

Antirequisites: FMFI.KAI/1-AIN-680/00

Course requirements:
Continuous assessment: work in exercises, ongoing transmission and delivery of assigned tasks
Test: test at the computer, an interview, project development
Approximate evaluation scale: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 50/50

Learning outcomes:
After completing the course, students will be able to use the methods and techniques Agile Extreme Programming methodology. It will be the pair programming, different techniques of use and test, test driven programming, refactoring, techniques of working with legacy code. They will be able to organize work on a collective project by project management methodology in the form of extreme programming.

Class syllabus:
A brief history of software engineering life cycle of software systems, the traditional methodology and agile methodologies, the main pillars of extreme programming, pair programming, test of controlled programming, typology of different kinds of tests and their use, refactoring and its methodology and techniques, working with legacy code, four variables project management, strategy solutions - planning, development, design, testing, design and creation of custom group project.

Recommended literature:
Čistý kód / Robert C. Martin ; překlad Jiří Berka. Brno : Computer Press, 2009
Refactoring : Improving the design of existing code / Martin Fowler. Boston : Addison-Wesley, 1999
Agilní programování : Metodiky efektivního vývoje softwaru / Václav Kadlec. Brno : Computer Press, 2004
electronic documents

Languages necessary to complete the course:
slovak, english

Notes:

Past grade distribution
Total number of evaluated students: 74

A	B	C	D	E	FX
68,92	12,16	10,81	2,7	2,7	2,7

Lecturers: Ing. František Gyarfaš, CSc.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-215/14	Formal Languages and Automata (1)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 3 / 2 **per level/semester:** 42 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:
homework, test, written and oral final exam
Scale of assessment (preliminary/final): 30/70

Learning outcomes:
Students will be familiar with basic models of automata and grammars, and they will be ale to compare their computational power. They will understand algorithmic problem (un)decidability and a formal definition of computational complexity of a problem.

Class syllabus:
Chomsky hierarchy of formal grammars. Finite state automata and pushdown automata. Basic properties of regular and context-free languages, regular expressions. Turing machines. Undecidable problems. Introduction to computational complexity theory.

Recommended literature:
The Mathematical theory of context free languages / Seymour Ginsburg. New York : McGraw Hill, 1966
Formálne jazyky a automaty / John E. Hopcroft, Jeffrey D. Ullmanm ; preložili Branislav Rovan, Peter Mikulecký. Bratislava : Alfa, 1978
Introduction to Automata Theory, Languages, and Computation / John E. Hopcroft, Rajeev Motwani, Jeffrey D. Ullman. Boston : Pearson/Addison-Wesley, 2007

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 442

A	B	C	D	E	FX
22,17	5,2	3,39	21,04	34,62	13,57

Lecturers: prof. RNDr. Branislav Rovan, PhD., RNDr. Peter Kostolányi, PhD., Mgr. Šimon Sádovský

Last change: 08.02.2018
Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-141/00	French Language (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
French language is taught at two levels: beginner and intermediate. Students opt for one of them depending on whether they wish to obtain the fundamentals of the language or wish to maintain and/or improve previous knowledge of French.

Recommended literature:
Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 374

A	B	C	D	E	FX
39,84	22,19	21,66	10,16	2,14	4,01

Lecturers: Mgr. Pavel Vilášek, Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-142/00	French Language (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject continues the program of French language (1) and provides courses of essential and intermediate French language.

Recommended literature:
Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2
Blažena Srncová: Učebnica francúzštiny pre študentov Matematicko-fyzikálnej fakulty , UK 1983
Kolektív Lingea, s.r.o.: Slovensko-francúzsky hovorník, Bratislava 2008

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 237

A	B	C	D	E	FX
34,18	27,85	21,52	11,39	2,53	2,53

Lecturers: Mgr. Pavel Vilášek, Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-241/00	French Language (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject provides a course of intermediate French language, covering not only general, but also technical language.

Recommended literature:
Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2
Blažena Srncová: Učebnica francúzštiny pre študentov Matematicko-fyzikálnej fakulty , UK 1983
Kolektív Lingea, s.r.o.: Slovensko-francúzsky hovorník, Bratislava 2008

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 93

A	B	C	D	E	FX
33,33	30,11	23,66	7,53	1,08	4,3

Lecturers: Mgr. Pavel Vilášek, Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-242/00	French Language (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject provides a course of intermediate French covering not only general, but also technical French language.

Recommended literature:
Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2
Blažena Srncová: Učebnica francúzštiny pre študentov Matematicko-fyzikálnej fakulty , UK 1983
Kolektív Lingea, s.r.o.: Slovensko-francúzsky hovorník, Bratislava 2008
Zarha Lahmidi: Sciences-techniques.com, ISBN 209-0331186-0, CLE international, 2005

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 63

A	B	C	D	E	FX
31,75	38,1	20,63	3,17	1,59	4,76

Lecturers: Mgr. Pavel Vilášek, Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-512/12	Functional Programming

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 52

A	B	C	D	E	FX
78,85	3,85	13,46	0,0	3,85	0,0

Lecturers: RNDr. Peter Borovanský, PhD.

Last change:

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-301/15	Fundamentals of Computer Graphics and Image Processing

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAI+KAGDM/1-AIN-240/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1117

A	B	C	D	E	FX
23,37	26,59	22,11	12,0	8,06	7,88

Lecturers: doc. RNDr. Milan Ftáčnik, CSc.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-251/11	Fundamentals of Enterprise and Management

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4., 6.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-131/10 - Development of Information Systems

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 883

A	B	C	D	E	FX
26,05	25,37	22,2	13,36	9,85	3,17

Lecturers: Mgr. Marian Holienka, PhD., Ing. Peter Filo, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-303/15	Game Engines

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 90

A	B	C	D	E	FX
20,0	20,0	12,22	7,78	2,22	37,78

Lecturers: RNDr. Andrej Lúčny, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAGDM/1-AIN-545/00	Geometric Objects Representation

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:
Preliminary assessment: tests, projects
Final assessment: Exam in written and oral form
Final assessment examination 70% (A 90%; B 80%; C 70%; D 60%; E 50%)

Learning outcomes:
The graduate gains basic knowledge of the cubic curve segments, spline curves, patches and spline surfaces. Spline curves and surfaces are studied with parametric or geometric continuities, the shape parameters are applied for modeling. The computational algorithms of the curve segments are presented.

Class syllabus:
1. Representation of cubic segments in Hermite and Bernstein basis, computational algorithms.
2. Geometric and parametric continuities for curve segments and creating:
a) interpolating splines (Hermite spline, cardinal spline, Catmull-Rom spline)
b) approximating splines (Bézier spline, Beta spline, B-spline).
Rational curves (Bézier, NURBS) and the weights as shape parameters.
3. Representation of surfaces defined by
a) geometric transformation (surfaces of revolution)
b) boundary curves (ruled surfaces, Coons surfaces)
c) control nets (tensor-product surfaces, Bézier, B-spline, NURBS).

Recommended literature:
Geometric Modeling with Splines / R. F. Riesenfeld, E. Cohen, G. Elber: A K Peters/CRC Press; 1 ed. 2001
Fundamentals of CAGD / J. Hoschek, D. Lasser: A K Peters/CRC Press; 1 ed., 1996
Geometric Concepts for Geometric Design / W. Boehm, H. Prautzsch. Publ. by A K PETERS, 1993
Bézier and B-Spline Techniques / H. Prautzsch, W. Boehm, M. Paluszny. Springer-Verlag Berlin Heidelberg, 2002
Curves and Surfaces for CAGD, Fifth Edition: A Practical Guide / Gerald Farin. Morgan-Kaufmann, 2002

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 133

A	B	C	D	E	FX
13,53	16,54	19,55	27,82	16,54	6,02

Lecturers: RNDr. Soňa Kudličková, CSc., RNDr. Martina Bátorová, PhD.

Last change: 25.01.2018

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAGDM/1-MAT-551/10	Geometry for Graphics (1)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 5.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 680

A	B	C	D	E	FX
18,97	15,15	17,06	20,44	18,82	9,56

Lecturers: Mgr. Ľudovít Balko, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAGDM/1-MAT-552/10	**Course title:** Geometry for Graphics (2)
Educational activities: **Type of activities:** course **Number of hours:** **per week:** 2 **per level/semester:** 28 **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 6.	
Educational level: I.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	

Past grade distribution
Total number of evaluated students: 428

A	B	C	D	E	FX
21,73	11,45	16,59	18,69	27,8	3,74

Lecturers: Mgr. Ľudovít Balko, PhD.	
Last change: 02.06.2015	
Approved by: doc. RNDr. Damas Gruska, PhD.	

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-151/00	German Language (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
German language is taught at three levels: beginner, intermediate and advanced. Students opt for one of them depending on whether they need to learn the fundamentals or maintain and/or improve their previous knowledge.

Recommended literature:
Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 648

A	B	C	D	E	FX
31,94	29,17	21,3	10,03	2,93	4,63

Lecturers: Mgr. Pavel Vilášek, Mgr. Alexandra Maďarová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-152/00	German Language (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The course continues the program of German language (1). German language is taught at three levels: beginner, intermediate, advanced.

Recommended literature:
Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 408

A	B	C	D	E	FX
29,17	22,06	23,77	14,95	3,68	6,37

Lecturers: Mgr. Pavel Vilášek, Mgr. Alexandra Maďarová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-251/00	German Language (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject continues the program of German language (2). It provides a course of intermediate and advanced German language.

Recommended literature:
Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.
Aus moderner Technik und Naturwissenschaft, 1999, Max Hueber Verlag, D-85737, ISBN 3-19-001629-1

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 148

A	B	C	D	E	FX
38,51	27,03	22,3	6,76	2,7	2,7

Lecturers: Mgr. Pavel Vilášek, Mgr. Alexandra Maďarová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-252/00	German Language (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject continues the program of German language (3). It provides a course of intermediate and advanced German language.

Recommended literature:
Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.
Vilma Václavíková: Nemčina pre študentov MFF UK, Vysokoškolský učebný text pre potrebu študentov KJP, č. 9793/1982 C VIII/2, 1983

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 78

A	B	C	D	E	FX
35,9	28,21	14,1	12,82	3,85	5,13

Lecturers: Mgr. Pavel Vilášek, Mgr. Alexandra Maďarová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-430/00	Graph Theory

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 3 / 1 **per level/semester:** 42 / 14
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites: FMFI.KI/1-INF-160/00 - Introduction to Combinatorics and Graph Theory

Course requirements:

Learning outcomes:

Class syllabus:
Basic notions: trees, bipartite graphs. Searching graphs and labyrinths, Eulerean graphs, Konig theorem, Hall theorem and its consequences, the measurment of the power of graph connectivity, Menger theorem, planar graphs, Euler theorem. Kuratovski theorem. The colouring of graphs, some NP complete problems, greedy algorithm, Brooks theorem, Vizing theorem, the colourinmg of planar graphs. Flows: Ford-Fulkerson's algorithm and its appl;ications, integer and group flows, the relation betwenn flows and colouring. Hamiltonian graphs, Chvatal theorem, Random graphs, probability models, properties of random graphs.

Recommended literature:
Plesník J.: Grafové algoritmy. Veda
Diestel R.: Graph theory, Springer Verlag
Nesetřil J.: Teorie grafů, SNTL

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 104

A	B	C	D	E	FX
55,77	10,58	14,42	14,42	3,85	0,96

Lecturers: doc. RNDr. Edita Mačajová, PhD., prof. RNDr. Martin Škoviera, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/2-INF-174/15	Graph Theory

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 3 / 1 **per level/semester:** 42 / 14
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I., II.

Prerequisites:

Recommended prerequisites:
1-INF-160

Course requirements:
Exam
Scale of assessment (preliminary/final): 0/100

Learning outcomes:
The course will provide students with solid foundations of graph theory by proving key classical theorems and explaining the most important graph algorithms. Emphasis is also placed on motivation from other scientific disciplines and technology and possible applications of the covered topics.

Class syllabus:
Basic terminology: trees, bipartite graphs, graph and labyrinth search. Eulerian graphs. matchings in graphs, König's theorem, Hall theorem and its corollaries. measuring of graph connectivity. Menger's theorem, Planar graphs, Euler's theorem. Kuratowski's theorem. Graph coloring: some NP-hard problems, greedy algorithm. Brooks' theorem. Vizing's theorem. Coloring of planar graphs. Flows, Ford–Fulkerson algorithm and its applications. Integer and group flows, relationship to coloring. Hamiltonian graphs. Chvátal's theorem. Random graphs, probabilistic models, properties of random graphs.

Recommended literature:

Languages necessary to complete the course:
Slovak, English.

Notes:

Past grade distribution
Total number of evaluated students: 29

A	B	C	D	E	FX
37,93	10,34	20,69	20,69	10,34	0,0

Lecturers: doc. RNDr. Edita Mačajová, PhD., prof. RNDr. Martin Škoviera, PhD.

Last change: 10.05.2016
Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAI+KAGDM/1-AIN-240/00	**Course title:** Graphical Systems, Visualization, Multimedia
Educational activities: **Type of activities:** course **Number of hours:** **per week:** 3 **per level/semester:** 42 **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 4.	
Educational level: I.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus: - Multimedia system architecture, methodology of mathematical modeling and visualization, applications of computer graphics, visualization and multimedia. - International standardization (ISO, Web Consortium, EU norms). Visual computing, history, social applications, copyrights law and authorship. - Graphics communication. Geometric modeling. Introduction to rendering. OpenGL. Human computer interaction. Design of simple graphics user interface. - Physical and logical input devices. GUI programming. Interaction with multimedia and communication systems. Graphics and multimedia formats. Data compression algorithm. Graphics and Image processing norms. Web consortium. Definition of functionality of graphical systems and GUI. Coordinate systems. Affine transformations. Simple graphics pipeline. Clipping. Segment rasterization (DDA, Bresenham algorithms). - 2D graphics elements: polyline, filling, text. Image hierarchy and 2D computer animation. Color models (RGB, CMYK). Web design and publishing. Text in images. Human perception. History of visualization. Visualization pipelines. Interactive multimedia titles. Introduction to 3D graphics. Visibility problem and z-buffer algorithm. Light sources. Camera parameters. Scene graphs. VRML norm. Local illumination model (constant, Gouraud, Phong). Texture. Photorealistic rendering. - 3D modeling. Parametric and implicit representation. SG and B-rep. Procedural modeling (fractals and particle systems). - Computer animation. Computer games and virtual reality. Medical data scanning, modeling and visualization.	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	

Past grade distribution Total number of evaluated students: 1078					
A	B	C	D	E	FX
23,93	26,99	22,17	11,32	7,7	7,88
Lecturers: doc. RNDr. Andrej Ferko, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Damas Gruska, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-413/15	Graphs, Graphic Algorithms and Optimization

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 6.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-160/15 - Mathematics (3) - Discrete Mathematics and FMFI.KAGDM/1-AIN-152/15 - Linear Algebra

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 352

A	B	C	D	E	FX
6,53	10,51	20,45	26,7	25,85	9,94

Lecturers: doc. RNDr. Tatiana Jajcayová, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-655/00	Heuristic Methods

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 498

A	B	C	D	E	FX
34,14	35,34	17,07	5,02	2,61	5,82

Lecturers: doc. RNDr. Milan Ftáčnik, CSc.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-550/00	Image Processing Fundamentals

Educational activities:
Type of activities: course
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 406

A	B	C	D	E	FX
10,59	18,47	27,83	22,41	16,01	4,68

Lecturers: doc. RNDr. Milan Ftáčnik, CSc.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-491/15	Integrated Education of People with Disabilities

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 24

A	B	C	D	E	FX
95,83	4,17	0,0	0,0	0,0	0,0

Lecturers: PaedDr. Elena Mendelová, CSc.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-304/15	Introduction to Artificial Intelligence

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I., II.

Prerequisites:

Course requirements:
Doing small exercises, the project and the final exam.
Scale of assessment (preliminary/final): Small exercises during the semester (30%)Projects (20%)Final written-oral exam (50%)

Learning outcomes:
The student gets the basic insight into artificial intelligence, that can further be extended in master programme. The course covers the basics of symbolic and subsymbolic artificial intelligence. The theory is combined with practical exercises.

Class syllabus:
UI definition, description of simple rational agents. Logical agents, uninformed and informed search for solution space, the basics of game theory and crawling with the opponent, problems with restrictive conditions, optimization. Learning from examples: supervised learning, classification and regression, model selection, generalization, regularization. Nonparametric models, nearest neighbor models, finding nearest neighbors with k-d tress, regression. Probabilistic computation: Basic concepts and methods. Reinforcement learning: basic concepts, learning methods, Fuzzy systems: fuzzy logic, formalism inspired by natural language. Robotics: Basic concepts and tasks.

Recommended literature:
Stuart Russell and Peter Norvig, Artificial Intelligence: A Modern Approach (3rd edition), Prentice Hall, USA, 2010.

Languages necessary to complete the course:
English, Slovak

Notes:

Past grade distribution
Total number of evaluated students: 65

A	B	C	D	E	FX
10,77	15,38	15,38	20,0	16,92	21,54

Lecturers: doc. RNDr. Mária Markošová, PhD., prof. Ing. Igor Farkaš, Dr.

Last change: 07.12.2017
Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-132/12	Introduction to BSc Project

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 5.

Educational level: I.

Prerequisites: (FMFI.KAI/1-AIN-232/17 - Project (1) or FMFI.KAI/1-AIN-231/11 - Project (1)) and (FMFI.KAI/1-AIN-262/17 - Project (2) or FMFI.KAI/1-AIN-261/11 - Project (2))

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 407

A	B	C	D	E	FX
72,48	18,43	5,65	0,49	0,49	2,46

Lecturers: Mgr. Pavel Petrovič, PhD., RNDr. Andrej Blaho, PhD.

Last change: 24.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-411/00	Introduction to Computer Logic

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
- Propositional logic
- First-order logic
- Model-theoretic semantics and introduction to the classical model theory
- Automated Reasoning, inference problems in logic and their algorithmization
- Survey on applications of logic and inference in databases, knowledge representation, and artificial intelligence

Recommended literature:
Klasická matematická logika, Sochor, A., Karolinum, Prague 2001
Inteligencia ako výpočet, Šefránek, J., Iris, Bratislava, 2000

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 243

A	B	C	D	E	FX
10,7	7,41	13,99	34,98	24,69	8,23

Lecturers: doc. PhDr. Ján Šefránek, CSc., RNDr. Jozef Šiška, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-230/00	Introduction to Database Systems

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 3.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAI/1-AIN-221/15 and FMFI.KAI/1-AIN-222/15

Course requirements:
homeworks, final exam
Scale of assessment (preliminary/final): 50/50

Learning outcomes:
Students will be familiar with problems of database system use and implementation and techniques of solving these problems. The course will introduce the theory and practice of relational model and transaction systems. Students will be able to use the SQL relational language, Datalog and principles of relational database design.

Class syllabus:
Data models, the architecture of DBMS and modelling of reality; relational model; relational query languages, SQL, the theory of relational databases design (functional dependences, keys and normal forms), logical and deductive databases, datalog, negation in databases, transactions and the processing of transactions, data structures for two-level memory, physical algebra.

Recommended literature:
Foundations of databases / Serge Abiteboul, Richard Hull, Victor Vianu. Reading : Addison-Wesley, 1995
Database systems : The complete book / Hector Garcia-Molina, Jeffrey D. Ullman, Jennifer Widom. Upper Saddle River : Prentice-Hall, 2002

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 659

A	B	C	D	E	FX
16,39	9,41	15,17	13,66	19,42	25,95

Lecturers: doc. Mgr. Tomáš Plachetka, Dr., RNDr. Michal Rjaško, PhD., RNDr. Ján Mazák, PhD.

Last change: 09.02.2018
Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-506/11	Introduction to Declarative Programming

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 499

A	B	C	D	E	FX
13,63	10,42	11,42	20,24	27,25	17,03

Lecturers: Ing. Ján Komara, PhD., Mgr. Ján Kľuka, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-520/00	Introduction to Information Security

Educational activities:
Type of activities: lecture
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The role of information security. The major security attributes of information (confidentiality, availability, authenticity, integrity, privacy, etc.) Basic notions of information security (system, asset, threat, vulnerability, risk). Building a new or securing an existing IT system. Security projects (description of the system and of its environment, identification of relevant threats, qualitative risk analysis, contrameasures). Risk management (incident handling, disaster recovery, business continuity planning). Management of information security. Evaluation and certification of IT system/product. Introduction to cryptology and PKI.

Recommended literature:
An Introduction to Computer Security. The NIST Handbook., volume 800-12 of NIST Special Publication. NIST, 1996.
Swanson M. Guide for Developing Security Plans for Information Technology Systems, volume 800-18 of NIST Special Publication. NIST, 1998.
Swanson M. and Guttman B. Generally Accepted Principles and Practices for Securing Information Technology Systems, volume 800-14 of NIST Special Publication. NIST, 1996.
International Standard ISO/IEC 17799, Information technology - Code of practice for information security management,. ISO/IEC, 2000.
BS 7799 Information Security management - Part 2: Specification for information security management systems, Version 4.4 Draft for public comment, Bsi, 2002
Common Methodology for Information Technology Security Evaluation, Introduction and General Model, volume 1 of CEM 97/017. ISO/IEC, 1997.
International Standard ISO/IEC 15408 Common Criteria for Information Technology Security Evaluation. Annexes, volume 2a. ISO/IEC, 1998.
International Standard ISO/IEC 15408 Common Criteria for Information Technology Security Evaluation. Introduction and General Model, volume 1. ISO/IEC, 1998.
International Standard ISO/IEC 15408 Common Criteria for Information Technology Security Evaluation, Security Assurance Requirements, volume 3. ISO/IEC, 1998.

International Standard ISO/IEC 15408 Common Criteria for Information Technology Security Evaluation. Security Functional Requirements, volume 2. ISO/IEC, 1998.
Common Methodology for Information Technology Security Evaluation, Evaluation Methodology, volume 2 of CEM 99/045. ISO/IEC, 1999.
Stoneburner G., Goguen A., and Feringa A. Risk Management Guide for Information Technology Systems. Recommendations of the National Institute of Standards and Technology, volume 800-30 of NIST Special Publication. NIST, 2001.

Languages necessary to complete the course:

Notes:

Past grade distribution

Total number of evaluated students: 782

A	B	C	D	E	FX
11,13	12,02	24,04	30,56	21,61	0,64

Lecturers: doc. RNDr. Daniel Olejár, PhD., RNDr. Michal Rjaško, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-210/00	Introduction to Mathematical Logic

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Language, semantics and syntax of propositional calculus. Compactness theorems. Axioms and deductive rules. Basic theorems of propositional calculus. Post theorems. Consistency and completness of propositional calculus. Language, axioms and deductive rules of predicate calculus. Deduction theorem. Basic theorems of predicate calculus. Compactness and consistency of predicate calculus.
Axioms of equality and theories with equality. Expressing mathematical statments by formulas of predicate calculus.

Recommended literature:
Mendelson E. Introduction to Mathematical Logic. Chapman & Hall, London, 4th edition, 1997.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 687

A	B	C	D	E	FX
16,01	10,48	11,79	11,94	37,12	12,66

Lecturers: doc. RNDr. Eduard Toman, CSc., Mgr. Anna Kompišová

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-625/00	Introduction to Mathematical Logic for Programmers

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 40/60

Learning outcomes:

Class syllabus:
Primitive Recursive Functions. Basic functions and operations (composition of functions and primitive recursion). Explicit definitions. Bounded minimalization. Pairing function and arithmetization. Course of values recursion. Backward recursion. Recursion with substitution in parameters. Nested simple recursion. Recursion with measure. Regular recursive definitions. Clausal language.
General Recursive Functions. Beyond primitive recursion: Ackermann-Péter function, universal function for primitive recursive functions. Primitive recursive indices. Transfinite recursion. General recursive functions. Regular minimalization. μ-Recursive functions.
Partial Recursive Functions. First recursion theorem (fixed point theorem). Computation model. Equivalence of the operational and denotational semantics. Partial recursive functions. Unbounded minimalization. Arithmetization of computation. Kleene normal-form theorem. Universal function. Recursive indices. Enumeration theorem. Partial μ-recursive functions.

Recommended literature:
J. Komara. Recursive Functions. Downloadable lecture notes available through the web page of the course.
J. Komara and P. J. Voda. Lecture Notes in Theory of Computability. 2001.
J. Komara and P. J. Voda. Metamathematics of Computer Programming. 2001.
I. Korec. Úvod do teórie algoritmov. Skriptá MFF UK, 1981.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 21

A	B	C	D	E	FX
0,0	0,0	14,29	14,29	33,33	38,1

Lecturers: Ing. Ján Komara, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-427/00	Introduction to Philosophy of Language

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Frege's "semantic triangle"; Russell's theory of descriptions; relation between language and "world" (Wittgenstein's "Tractatus logico-philosophicus"); critics of traditional philosophy and its "pseudo-problems"; natural (ordinary) language and artificial languages; two approaches to ordinary language; Quine's critics of dogmas of empiricism; expression meaning as an object (entity) and expression meaning as its use; language games (Wittgenstein's "Philosophical Investigations"), rules and rule following; undestanding - role of community and role of form of life; Oxonian schol of linguistic analysis (P. F. Strawson, J. L. Austin, H. P. Grice)

Recommended literature:
Frege, G.: "O zmysle a denotáte.", In: Filozofia, roč. 47, 1992, č. 6.
Russell, B.: "Opisy.", In: Organon F, 1995, č. 2
Peregrin, J.: Kapitoly z analytické filosofie, Filosofia, Praha 2005.
Filozofia prirodzeného jazyka, Archa, Bratislava 1992

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 19

A	B	C	D	E	FX
84,21	10,53	5,26	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-403/00	Introduction to Psychology of Jean Piaget (1)

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Piaget's theory of cognitive development
- the sensorimotor stage
- the preoperational stage
- the concrete operational stage
- the formal operational stage

Recommended literature:
J. Piaget, B. Inhelderová: Psychológia dieťaťa. Bratislava: Sofa 1997.
H. E. Gruber, J. J. Voneche, Eds.: Essential Piaget. London: 1995.
CD ROM Piaget, Piaget's videos (Geneva University)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. PhDr. Ján Rybár, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-404/00	Introduction to Psychology of Jean Piaget (2)

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
1. Constructivist models (Piaget).
2. Associationist models (Behaviorism).
3. Sociocognitive models (Vygotsky).
4. Nativist models (Chomsky and Fodor).

Recommended literature:
K. Richardson: Models of Cognitive Development. London: Psychology Press 2003.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. PhDr. Ján Rybár, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-211/10	Introduction to Theoretical Informatics

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 4.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-160/15 - Mathematics (3) - Discrete Mathematics and FMFI.KZVI+KAI/1-AIN-210/15 - Algorithms and Data Structures

Antirequisites: FMFI.KI/1-INF-215/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 666

A	B	C	D	E	FX
5,11	10,81	12,76	20,42	32,88	18,02

Lecturers: RNDr. Michal Winczer, PhD., doc. Mgr. Tomáš Vinař, PhD., RNDr. Andrej Blaho, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-415/00	Introduction to Theory of Programming

Educational activities:
Type of activities: course
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Program schemes
- basic notions - standard scheme, interpretation, Herbrand interpretations, properties of program schemes
- decidability of basic properties - basic undecidability results, subclasses of schemes with decidable properties (free and Yanov schemes)
- comparative schematology - relations between classes of standard, structured and recursive schemes, partially interpreted schemes

Program correctness
- partial and total correctness - invariants, inductive formulas, weakest precondition, strongest postcondition
- proof methods - Floyd method, Hoare-like proof systems, used induction principles, proving properties of recursive programs
- systematic development of correct programs

Semantics of programs and languages
- program meaning - principles of operational, denotational and axiomatic semantics
- semantic domains - algebraic structure, construction of domains
- formal semantics - operational and denotational semantics of imperative and recursive programs, types and semantics
- comparison of operational and denotational semantics - imperative programs, recursive programs (correctness of computational rules, criteria of correctness)

Recommended literature:
Prívara, I.: Introduction to Theory of Programming, textbook (and transparencies) - in Slovak

Languages necessary to complete the course:

Notes:

Past grade distribution Total number of evaluated students: 92					
A	B	C	D	E	FX
20,65	21,74	23,91	17,39	10,87	5,43
Lecturers: RNDr. Igor Prívara, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Damas Gruska, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-112/15	Introduction to Web Technologies

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 1.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KZVI/1-AIN-610/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1798

A	B	C	D	E	FX
44,61	15,02	14,29	10,9	7,45	7,73

Lecturers: PaedDr. Roman Hrušecký, PhD., RNDr. Marek Nagy, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-312/15	Language Pragmatics (1)

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-313/15	Language Pragmatics (2)

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 6.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-312/15 - Language Pragmatics (1)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-406/15	Language and Cognition

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2., 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 30

A	B	C	D	E	FX
30,0	46,67	20,0	3,33	0,0	0,0

Lecturers: doc. PhDr. Ján Rybár, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAGDM/1-AIN-152/15	Linear Algebra

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites: FMFI.KMANM/1-AIN-188/17 - Mathematics (2) - Mathematical Analysis and FMFI.KAI/1-AIN-160/15 - Mathematics (3) - Discrete Mathematics

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 4

A	B	C	D	E	FX
75,0	0,0	25,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Tatiana Jajcayová, PhD., doc. RNDr. Róbert Jajcay, DrSc.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-510/15	Linux - Principles and Means

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAI/1-AIN-510/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 871

A	B	C	D	E	FX
50,17	16,99	12,63	8,04	7,35	4,82

Lecturers: RNDr. Marek Nagy, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-500/00	Linux for Users

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:
The aim of the course is to acquire skills to work on the command line of Linux operating system. The course is designed not only for beginners.

Class syllabus:
Text console
Directories and files
Users, groups, redirection and searching
Atributes of files and directories
Text editor vim
Sorting and selecting
Finding
Processes
sed - stream editor
awk
bash scripts

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1334

A	B	C	D	E	FX
40,33	17,02	14,47	11,17	12,82	4,2

Lecturers: RNDr. Marek Nagy, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTFDF/1-AIN-110/00	Mathematics (1)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Elementary functions
Limits of functions and sequences
Continuity of functions
Function derivative and basic rules
Applications (investigation of function behaviour)
Basic rules of integration
Sequences and series

Recommended literature:
Graham, Knuth, Patashnik: Concrete Mathematics. A Foundation for Computer Science
Cormen, Leiserson, Rivest: Introduction to Algorithms
Neubrunnn T., Vencko J.: Matematická analýza 1, skriptum UK, Bratislava 1989
Calculus I

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1102

A	B	C	D	E	FX
13,34	8,26	10,98	16,06	37,66	13,7

Lecturers: prof. RNDr. Peter Prešnajder, DrSc.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-121/15	Mathematics (1) - Introduction to Mathematical Reasoning

Educational activities:
Type of activities: course
Number of hours:
per week: 6 **per level/semester:** 84
Form of the course: on-site learning

Number of credits: 8

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1364

A	B	C	D	E	FX
7,33	9,38	21,33	26,98	16,2	18,77

Lecturers: doc. RNDr. Tatiana Jajcayová, PhD., Ing. Ján Komara, PhD., Mgr. Peter Náther, PhD., PaedDr. Daniela Bezáková, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTFDF/1-AIN-150/00	Mathematics (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 2.

Educational level: I.

Prerequisites: FMFI.KTFDF/1-AIN-110/00 - Mathematics (1)

Course requirements:

Learning outcomes:

Class syllabus:
The notions of group and field
Matrices, operations with matrices, determinants
Systems of linear equations
Space of solutions, vector spaces
Scalar and vector products
Linear affine spaces
Linear transformations and the change of basis
Eigenvectors and eigenvalues

Recommended literature:
Graham, Knuth, Patashnik: Concrete Mathematics. A Foundation for Computer Science
Cormen, Leiserson, Rivest: Introduction to Algorithms
Zlatoš: Lineárna algebra a geometria
Katriňák a kol.: Algebra a teoretická aritmetika I
G. Birkhoff, S. Mac Lane, Prehľad modernej algebry, Alfa, 1979

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 908

A	B	C	D	E	FX
7,71	7,93	12,67	21,59	42,95	7,16

Lecturers: prof. RNDr. Peter Prešnajder, DrSc.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/1-AIN-188/17	Mathematics (2) - Mathematical Analysis

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 3 **per level/semester:** 28 / 42
Form of the course: on-site learning

Number of credits: 7

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 120

A	B	C	D	E	FX
11,67	9,17	20,83	24,17	23,33	10,83

Lecturers: doc. RNDr. Zbyněk Kubáček, CSc., PaedDr. Peter Vankúš, PhD., RNDr. František Jaroš, PhD., Ing. Ján Komara, PhD.

Last change:

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-410/00	Mathematics (3)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 3.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-120/00 - Discrete Mathematics (1) and FMFI.KAI/1-AIN-160/00 - Discrete Mathematics (2) and FMFI.KTFDF/1-AIN-110/00 - Mathematics (1) and FMFI.KTFDF/1-AIN-150/00 - Mathematics (2)

Course requirements:

Learning outcomes:

Class syllabus:
- Elementary group theory.
- Cyclic groups.
- Permutation groups.
- Semigroups and monoids.
- Basic field theory.

Recommended literature:
Graham, Knuth, Patashnik: Concrete Mathematics. A Foundation for Computer Science
Cormen, Leiserson, Rivest: Introduction to Algorithms
Katriňák a kol.: Algebra a teoretická aritmetika I
G. Birkhoff, S. Mac Lane, Prehľad modernej algebry, Alfa, 1979

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 350

A	B	C	D	E	FX
6,29	10,29	20,57	26,86	26,0	10,0

Lecturers: doc. RNDr. Tatiana Jajcayová, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-160/15	Mathematics (3) - Discrete Mathematics

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 3.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-121/15 - Mathematics (1) - Introduction to Mathematical Reasoning

Antirequisites: FMFI.KAI/1-AIN-160/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1040

A	B	C	D	E	FX
5,29	7,5	18,46	28,85	25,29	14,62

Lecturers: doc. RNDr. Tatiana Jajcayová, PhD., Ing. Ján Komara, PhD., Mgr. Peter Náther, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAGDM+KAI/1-AIN-412/15	Mathematics (4) - Logic for Computer Science

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 4 **per level/semester:** 28 / 56
Form of the course: on-site learning

Number of credits: 7

Recommended semester: 4.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-160/15 - Mathematics (3) - Discrete Mathematics

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1078

A	B	C	D	E	FX
13,45	8,91	12,62	18,27	31,54	15,21

Lecturers: Mgr. Ján Kľuka, PhD., RNDr. Jozef Šiška, PhD., RNDr. Martin Homola, PhD., Mgr. Júlia Pukancová

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI+KAI/1-AIN-472/15	Mobile Application Developement

Educational activities:
Type of activities: lecture / independent work
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 5.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAI/1-AIN-472/12

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 247

A	B	C	D	E	FX
30,36	8,5	15,79	17,81	21,05	6,48

Lecturers: RNDr. Peter Borovanský, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MAT-570/15	Modelling and Rendering Techniques

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAI/1-MAT-570/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 17

A	B	C	D	E	FX
29,41	23,53	23,53	0,0	17,65	5,88

Lecturers: prof. RNDr. Roman Ďurikovič, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MAT-570/00	Modelling and Rendering Techniques

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 30/70

Learning outcomes:

Class syllabus:
The notion of geometric, quantitative and organisation model. Hierarchy in geometric models. Tools for object definition, modification, and storage. Primitive objects and their most frequent characteristics. Local operationa and global operations with objects. CSG representation and object construction. Boundary representation (B-rep). Euler-Poincare formula and its meaning. Platonic solids. Boolean operators with B-rep. Faceted, edge-oriented and vertex-oriented representations of non-manifolds. Solid modeling with polygonal meshes. Extruded solids. Rendering of shaded and color images. F-rep (implicit functional representation). Volume graphics and image-based rendering fundamentals. Rendering of polygonal meshes. Subdivision techniques.

Recommended literature:
1. Watt A.: 3D Computer Graphics, Pearson Education Limited 2000
2. Mortenson M., E.: Geometric Modeling, New York: John Wiley, 1985
3. Hoffmann CH., M.: Geometric & Solid Modeling: A Introduction, Morgan Kaufman Publishers, Inc. San Mateo, California 1989

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 189

A	B	C	D	E	FX
10,58	10,05	18,52	21,69	25,4	13,76

Lecturers: prof. RNDr. Roman Ďurikovič, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-636/00	Modern Approach to Web Design

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 3.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAI/1-INF-506/10

Course requirements:

Learning outcomes:

Class syllabus:
Students are expected to be already familiar with HTML/XHTML and basic CSS. We start with basic building blocks on top of which Web is built: DNS, URIs, HTTP. We only briefly review HTML/XHTML and concentrate on XML, XPath, XSLT, and advanced features of CSS in depth. We also introduce XML Schema, and SVG briefly and provide a short review of most popular server-side and client-side extensions. Apart from technology, the course is largely concerned with issues of quality (accessibility and usability standards, typographic issues, writing style imposed and required by Web, browser incompatibility issues), current graphic design trends, current Web publication genres and themes (such as community portals, wikis and blogs), and production issues (dealing with large projects, site maintenance, security of web applications, SEO).
This is NOT a beginners' course. Pre-requirements: HTML (advanced), CSS (basic), server-side Web programming (basic). This is not a graphic design course. This is neither php, asp.net, javascript, ajax, nor flash course -- we only mention these technologies marginally.

Recommended literature:
W3C's specifications: XML, XHTML, CSS, WCAG.
Tutorials and references at http://www.zvon.org/ (DTD, XSLT, XPath).
Web style guide 2nd ed.: http://www.webstyleguide.com/.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 395

A	B	C	D	E	FX
9,11	8,35	8,1	12,91	26,84	34,68

Lecturers: Mgr. Ján Kľuka, PhD., RNDr. Martin Homola, PhD.

Last change: 02.06.2015
Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-530/00	Multimedia

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Multimedia, basic terms, examples, multimedia production, computer graphics - basic terms, multimedia formats, software for image manipulation, animation - introduction, animation formats, software for animation production, audio - basic terms, audio formats, audio editing software, digital video - basic terms, DV formats, DV production software, authoring software.

Recommended literature:
Holsinger, E.: Jak pracují multimedia, Brno, UNIS 1995
Kireš, M., Šnajder, Ľ., Kalakay, R.: Multimédiá pre učiteľa, Bratislava, ÚIPŠ 2002
Ružický, E.: Úvod do počítačovej grafiky, Bratislava, UK 1991
Salanci, Ľ.: Práca s grafikou. Bratislava, SPN 2000
www.w3schools.com/media
www.scantips.com

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 809

A	B	C	D	E	FX
61,56	28,8	6,92	0,62	0,0	2,1

Lecturers: Ľubomír Lúčan, CSc.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-480/00	Neural Networks

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Introduction to artificial neural networks (connectionism), brief history, characteristic features.
Learning in neural networks, learning algorithms, generalization to new data.
Pattern recognition and classification usind feedforward models.
Linear models, autoassociative memory, memory capacity.
Self-organized learning (unsupervised), feature extraction.
Topographic mapping, visualization of high-dimensional data.
Hybrid models (supervised and unspervised learning).
Recurrent models: learning temporal structure in data.
Hopfield model: memorized patterns as attractors in state space.
Connectionizm in cognitive science.

Recommended literature:
Kvasnička V., Beňušková Ľ., Pospíchal J., Farkaš I., Tiňo P. a Kráľ A. kol.: Introduction into theory of neural networks (in Slovak). IRIS Bratislava, 1997.
Haykin S.: Neural networks. MacMillan Press, 2000 (2nd edition).

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 196

A	B	C	D	E	FX
19,39	8,16	15,31	23,47	22,45	11,22

Lecturers: prof. Ing. Igor Farkaš, Dr.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-INF-695/13	OpenGL

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 21

A	B	C	D	E	FX
4,76	38,1	19,05	19,05	19,05	0,0

Lecturers: Mgr. Martin Samuelčík, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-675/00	Philophy of Internet

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Brief history of information
Internet and physical space, virtualization
Internet and authors
Small worlds and internet
Power of searching machines
Wikinomics and Wisdom of Crowd
Internet and social networks

Recommended literature:
David A. Vise, Mark Malseed, The Google Story, Pragma, 2007
Pavol Rankov, Information society - perspectives, problems, paradoxes (in Slovak), LCA Publishers Group, Levice, 2007
Radana Divínová, Cybersex - Form of Internet Communication (in Czech), TRITON, Praha, 2005
Barabási, Albert-László, Linked, Paseka, Praha, 2005
Sherry Turkle, Life on the Screen, Identity in the Age of the Internet, Simon & Schuster, New York, 1995
Hubert L. Dreyfus, On the Internet, Thinking in Action, Routledge, Taylor & Francis Group, London and New York, 2001
David Weinberger, Small Pieces Loosely Joined {a unified theory of a web}, Perseus Publishing, 2002
John Battelle, The Search, Portfolio, Penguin Books, New York, 2006
Don Tapscott, Anthony D. Williams, WIKINOMICS, How Mass Collaboration Changed Everything, Portfolio, Penguin Books, New York, 2006
James Surowiecki, The Wisdom of Crowds, Abacus, Londom 2004

Languages necessary to complete the course:

Notes:

Past grade distribution Total number of evaluated students: 483					
A	B	C	D	E	FX
66,46	14,7	9,94	3,93	0,62	4,35
Lecturers: Ing. František Gyarfaš, CSc.					
Last change: 22.09.2017					
Approved by: doc. RNDr. Damas Gruska, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-425/00	Philosophical Conceptions of Meaning (1)

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
G. Frege on sense reference (denotation) of language expressions;
Russell's theory of descriptions; solving of problems - identity sentences, existential sentences and semantic function of expression without reference;
critics of theory of descriptions - P. F. Strawson and K. Donnellan.
semantics of Tractatus logico-philosophicus - names and objects, sentences as pictures of facts;
Alfred Tarski - semantic conception and definition of truth;
R. Carnap - method of extension and intension, internal and external questions

Recommended literature:
Frege, G.: "O zmysle a denotáte.", In: Filozofia, roč. 47, 1992, č. 6.
Russell, B.: "Opisy.", In: Organon F, 1995, č. 2.
Carnap, R.: Meaning and Necessity, Chicago, IL: University of Chicago Press, 1947.
Peregrin, J.: Význam a struktura. Oikúmené, Praha 1999.
Organon F: preklady článkov Russella, Tarskeho, Donnellana a i.
Denotácia, referencia a význam. Organon F, Príloha, Bratislava 2000.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-426/00	Philosophical Conceptions of Meaning (2)

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
names as rigid designators in "possible worlds"; causal-historical theory of reference; semantic reductionism versus semantic holism; W. v. O. Quine - indeterminateness of translation; inscrutability of reference and ontological relativity; Quine's pragmatism; D. Davidson - radical interpretation and principle of charity; H. Putnam - meaning of "meaning", internal and external realism.

Recommended literature:
Kripke, Saul A.: Pomenovanie a nevyhnutnosť. Kalligram, Bratislava 2002
Davidson, D.: Čin, myseľ, jazyk. Archa, Bratislava 1997.
Quine, W. V. O.: Od stimulu k vědě, Academia, Filosofia, Praha 2002
Quine, W. v. O.: Hledání pravdy. Herrmann a synové, Praha 1994.
Peregrin, J. (edit): Obrat k jazyku: Druhé kolo. Filosofia, Praha 1998.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-241/15	Philosophical Semantics I.

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 9

A	B	C	D	E	FX
44,44	33,33	22,22	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-242/15	Philosophical Semantics II.

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-241/15 - Philosophical Semantics I.

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	100,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-423/00	Philosophy of L. Wittgenstein (1)

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
analysis selected sections of Wittgenstein's main writings; influence of Frege's and of Russell's works; interpretation of Wittgenstein's Tractatus; "picture theory" of meaning - fact and Picture of fact; name and meaning of name; sencente and sentence meaning; criterium of sentence meaningfulness - tautology and contradiction, empirical sentences; boundaries of language from the standpoint of theory of meaning; "what we cannot speak about"

Recommended literature:
Wittgenstein, L.: Tractatus logico - philosophicus, Kalligram, Bratislava 2003.
Wittgenstein, L.: Modrá a Hnedá kniha, Kalligram, Bratislava 2002.
Wittgenstein, L.: Filosofická zkoumání, Filosofia, Praha 1998.
Malcolm, N.: Ludwig Wittgenstein v spomienkach. Archa, Bratislava 1993.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 36

A	B	C	D	E	FX
88,89	2,78	5,56	0,0	2,78	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-424/00	Philosophy of L. Wittgenstein (2)

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
philosophical problem solving by arranging what we have always known (by looking into the workings of our language) - its possibility
meanings of "meaning" in ordinary language; expression meaning as its use (usage, way of use); reading and interpretation of The Blue and Brown Books and of Philosophical Investigations

Recommended literature:
Wittgenstein, L.: Tractatus logico - philosophicus, Praha 1993.
Wittgenstein, L.: Modrá a Hnedá kniha, Kalligram, Bratislava 2002.
Wittgenstein, L.: Filosofická zkoumání, Filosofia, Praha 1998.
Malcolm, N.: Ludwig Wittgenstein v spomienkach. Archa, Bratislava 1993.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 25

A	B	C	D	E	FX
96,0	4,0	0,0	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-110/00	Physical Education and Sport (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 0

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
According to the particular sport: practicing of individual game skills in sports like basketball, volleyball, soccer, floorball. Training in the individual sports like swimming, trampoline jumping, rowing and canoeing, aerobic, bodybuiding, command of fundamental technique of sports discipline. To arrange development of coordination abilities, articular mobility and cardiovascular system.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 4433

A	B	C	D	E	FX
97,23	1,78	0,05	0,0	0,02	0,92

Lecturers: Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, PaedDr. Dana Mašlejová, doc. PhDr. Vojtech Potočný, CSc., Mgr. Jana Leginusová, Mgr. Tomáš Kuchár, PhD., PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek

Last change: 25.05.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-120/00	Physical Education and Sport (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 0

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Practising offensive and defensive combinations and game at modified rules in collective games such as basketball, volleyball, soccer, floorball. Command of elements of higher difficulty in terms of the level of the activity abilities (crawl stroke, breast stroke, butterfly stroke, trampoline jump, aerobic compositions with steps, fitball, elastic gums, paddling on the running water.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 3794

A	B	C	D	E	FX
97,65	1,95	0,03	0,0	0,0	0,37

Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Ondrej Podkonický, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Jana Leginusová, doc. PhDr. Vojtech Potočný, CSc., PaedDr. Mikuláš Ortutay, Mgr. Viktor Sládok, Mgr. Martin Dovičák, Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-210/00	Physical Education and Sport (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
To practise game combinations, tactical - mechanical elements in basketball, volleyball, soccer, floorball, ice hockey, badminton, competition rules in the sports specialization.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2338

A	B	C	D	E	FX
99,19	0,43	0,0	0,0	0,0	0,38

Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, PaedDr. Mikuláš Ortutay, Mgr. Ondrej Podkonický, doc. PhDr. Vojtech Potočný, CSc., Mgr. Martin Dovičák, Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-220/00	Physical Education and Sport (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Preparation for sport championships of the Faculty in the chosen sport at modified rules. The selection of talented students into the teams of the University and Faculty leagues and other faculty sport events.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2080

A	B	C	D	E	FX
99,66	0,19	0,0	0,0	0,0	0,14

Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Ladislav Mókus, Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ondrej Podkonický, doc. PhDr. Vojtech Potočný, CSc., PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-310/00	Physical Education and Sport (5)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Preparation and participation of individuals and teams in the system of university sport competitions and sport events.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1535

A	B	C	D	E	FX
99,35	0,39	0,0	0,0	0,0	0,26

Lecturers: Mgr. Tomáš Kuchár, PhD., doc. PhDr. Vojtech Potočný, CSc., Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-320/00	Physical Education and Sport (6)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Using the communication in the physical education and sport and organizing the sport championships to achieve expressive motion of the sport and health in a valuable orientation the students.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1335

A	B	C	D	E	FX
99,55	0,22	0,07	0,0	0,0	0,15

Lecturers: PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, doc. PhDr. Vojtech Potočný, CSc., Mgr. Jana Leginusová, Mgr. Tomáš Kuchár, PhD., PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-167/15	Practical Classes in Robotics

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 25

A	B	C	D	E	FX
48,0	16,0	24,0	4,0	4,0	4,0

Lecturers: Mgr. Pavel Petrovič, PhD.

Last change: 24.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/1-INF-435/13	Probability and Statistics

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 124

A	B	C	D	E	FX
43,55	12,9	16,13	17,74	8,87	0,81

Lecturers: Mgr. Lenka Filová, PhD.

Last change:

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-INF-175/15	Probability and Statistics

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 3 / 1 **per level/semester:** 42 / 14
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 5.

Educational level: I., II.

Prerequisites:

Antirequisites: FMFI.KAMŠ/1-INF-435/13

Course requirements:
written tests, final exam
Scale of assessment (preliminary/final): 30/70

Learning outcomes:
Students will be familiar with mathematical foundations of probability and statistics. They will be able to solve common types of problems involving probability and conduct simple statistical analyses.

Class syllabus:
Definition of probabilistic model and basic properties of probabality, conditional probability, Bayes theorems, random variables, random vectors and their characteristics, limit theorems, introduction to Markov chain theory, probabilistic theory of information, regression model with normally distributed errors, introduction to theory of parameter estimation and statistical hypothesis testing

Recommended literature:
Pravdepodobnosť a matematická štatistika : Štatistické analýzy / František Lamoš, Rastislav Potocký. Bratislava : Univerzita Komenského, 1998
Zbierka úloh zo základov teórie pravdepodobnosti / Radoslav Harman, Erika Hönschová, Ján Somorčík. Bratislava : PACI, 2009
Electronic course notes published on the course web site

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 87

A	B	C	D	E	FX
35,63	12,64	20,69	11,49	17,24	2,3

Lecturers: Mgr. Lenka Filová, PhD., Mgr. Lívia Leššová

Last change: 22.08.2015
Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-421/00	Problems of Analytical Philosophy (1)

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
beginnings - G. Frege, B. Russell and G. E. Moore; goals and methods of the philosophical analysis; relation between language and "world" (Tractatus logico-philosophicus); search for criteria of meaningfulness of sentences; critics of traditional philosophy and of its "pseudoproblems"; Vienna circle - the principle of verifiability and its variants; logical positivism and its limits

Recommended literature:
Frege, G.: "O zmysle a denotáte.", In: Filozofia, roč. 47, 1992, č. 6.
Russell, B.: "Opisy.", In: Organon F, 1995, č. 2
Kamhal, D.(ed.): Z analytickej filozofie I., UK Bratislava 1993, textbook
Peregrin, J.: Kapitoly z analytické filosofie, Filosofia, Praha 2005.
Valenta, L.: Problémy analytické filozofie. Nakladatelství Olomouc 2003.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 35

A	B	C	D	E	FX
91,43	5,71	2,86	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-422/00	Problems of Analytical Philosophy (2)

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Natural (ordinary) language and artificial language; two approaches to the analysis of ordinary language; late Wittgenstein - meaning of expression and use of expression, language games; Oxonian "linguistic philosophy" (P. F. Strawson, J. L. Austin, H. P. Grice); J. Searle and elaboration of theory of speech acts; Quine's pragmatism and his critics of dogmas of empiricism; inscrutability of reference and ontological relativity; D. Davidson and his pragmatism

Recommended literature:
Filozofia prirodzeného jazyka, (ed. M. Oravcová) Bratislava, Archa 1992.
Strawson, P. F.: Analýza a metafyzika. Kalligram, Bratislava 2001.
Quine, W. V. O.: Od stimulu k vědě, Academia, Filosofia, Praha 2002
Davidson, D.: Subjektivita, intersubjektivita, objektivita, Praha 2004

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 9

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-130/13	Programming (1)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 4 / 2 **per level/semester:** 56 / 28
Form of the course: on-site learning

Number of credits: 8

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1306

A	B	C	D	E	FX
21,75	9,04	12,25	13,02	14,93	29,02

Lecturers: RNDr. Andrej Blaho, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-130/16	Programming (1)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 4 / 4 **per level/semester:** 56 / 56
Form of the course: on-site learning

Number of credits: 9

Recommended semester: 1.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAI/1-AIN-130/13

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 515

A	B	C	D	E	FX
20,58	9,13	7,96	9,13	18,45	34,76

Lecturers: RNDr. Andrej Blaho, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-170/13	Programming (2)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 2.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-130/13 - Programming (1) or FMFI.KAI/1-AIN-130/16 - Programming (1)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1067

A	B	C	D	E	FX
25,4	8,53	11,25	13,4	24,18	17,24

Lecturers: RNDr. Andrej Blaho, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-171/10	Programming (3)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
- Data structures, Functions, Global and Local Variables
- Structures, Classes, Types
- Objects, Polymorphism, Object Oriented Design
- Methods, Virtual Methods and Classes, Arguments
- Constructors, Destructors
- Operators and Overloading
- Class Hierarchies, Abstract Classes, Inheritance
- Pointers and Pointer Arithmetic
- Streams
- Templates and STL
- Exceptions
- Parallelism

Recommended literature:
Gottschling, Peter, Discovering Modern C++, The C++ In-Depth Series, Addison-Wesley, 2016
2. Meyers, Scott, Effective Modern C++, 42 Specific Ways to Improve Your Use of C++11 and C++14, O'Reily, 2015
3. Stroustrup, Bjarne, A Tour of C++, The C++ In-Depth Series, Addison-Wesley, 2014
4. Meyers, Scott, Effective C++, 50 Specific Ways to Improve Your Programs and Design, Addison-Wesley, 2002
5. Eckel, Bruce, Thinking in C++, 2nd ed., Prentice Hall, 2000 (existuje online verzia - http://www.datastore.cz/bruceeckel/)
6. Meyers, Scott, More Effective C++: 35 New Ways to Improve Your Programs and Designs, Addison-Wesley, 1995
7. Martin, Robert C., Clean Code: A Handbook of Agile Software Craftsmanship, Robert C. Martin Series, Prentice Hall, 2009

8. Holub, Allen I., Enough Rope to Shoot Yourself in the Foot, Rules fro C and C++ Programming, McGraw-Hill, 1995
9. Holub, Allen I., The C Companion, Prentice-Hall, Inc., New Jersey, 1987

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1024

A	B	C	D	E	FX
27,44	16,7	9,47	11,52	21,48	13,38

Lecturers: Ing. František Gyarfaš, CSc.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-172/00	Programming (4)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
- basic programming constructs of the language, comparison with C++
- basic data types and language components
- fundamental JAVA libraries
- object-orient programming in JAVA
- data structures and algoritms
- threads and concurrent programs
- design of applets and applications with user's interface

Recommended literature:
Eckel,B.: Thinking in Java, Prentice Hall, 1997,
Goodrich,M.T, Tamassia,R.: Data Structures and Algorithms in Java, 3rd Ed., John Wiley & Sons, 2004,www.datastructures.net,
Herout,P.: Učebnice jazyka Java, Kopp,2003,
Weiss M.A.: Data Structures & Problem Solving Using Java, Addison Wesley, 1998.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 392

A	B	C	D	E	FX
29,34	12,76	21,94	15,82	15,82	4,34

Lecturers: RNDr. Peter Borovanský, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-302/17	Programming (5)

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 108

A	B	C	D	E	FX
57,41	6,48	9,26	7,41	12,96	6,48

Lecturers: doc. RNDr. Ľubomír Salanci, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI+KAI/1-AIN-430/15	Programming Paradigms

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAI/1-AIN-430/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 315

A	B	C	D	E	FX
22,86	7,62	12,38	19,05	37,78	0,32

Lecturers: RNDr. Peter Borovanský, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-231/11	Project (1)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 833

A	B	C	D	E	FX
41,78	15,01	13,21	7,92	8,4	13,69

Lecturers: Ľubomír Lúčan, CSc.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-232/17	Project (1)

Educational activities:
Type of activities: independent work
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 179

A	B	C	D	E	FX
54,75	13,97	11,73	2,23	8,38	8,94

Lecturers: Ľubomír Lúčan, CSc., doc. RNDr. Damas Gruska, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-261/11	Project (2)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 4.

Educational level: I.

Prerequisites: FMFI.KAI/1-AIN-231/11 - Project (1)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 775

A	B	C	D	E	FX
34,06	18,45	12,13	6,19	11,35	17,81

Lecturers: Ľubomír Lúčan, CSc., Mgr. Peter Náther, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-262/17	Project (2)

Educational activities:
Type of activities: independent work
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 129

A	B	C	D	E	FX
65,12	15,5	8,53	3,88	1,55	5,43

Lecturers: Ľubomír Lúčan, CSc., doc. RNDr. Damas Gruska, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-UXX-340/00	Recreation Sports in Dialy Routine of Pupils and Students

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
To optimize the daily working programme of the students, the programmes of the sport recreational activities and time-off the students. The sport and health in a value orientation of the students. Using developed elemens in an education physical activity and sport preparation.
The programmes of the sport recreational activities as a basic precondition of health strengthening, acquirement of physical capability, fitness, regaining of working energy and readiness of body to confront stress situations and dangerous factors as a basic precondition of health strengthening, acquirement of physical capability, fitness, regaining of working energy and readiness of body to confront stress situations and dangerous factors.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 44

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. PhDr. Vojtech Potočný, CSc.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-161/00	Russian Language (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject provides a course in Russian language for beginners.

Recommended literature:
The textbook has not been published. It is at students' disposal in an electronic format.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 642

A	B	C	D	E	FX
60,9	16,2	9,66	4,83	1,71	6,7

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-162/00	Russian Language (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject continues the program of Russian language (1) and provides a course of Russian for beginners.

Recommended literature:
The textbook has not been published. It is at students' disposal in an electronic format.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 389

A	B	C	D	E	FX
65,81	16,2	9,0	3,34	1,03	4,63

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-261/00	Russian Language (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The course "Russian for Intermediate Students" is a follow-up to "Russian for Beginners". The subject of the course is general Russian in the range appropriate to the given level.

Recommended literature:
The textbook has not been published. It is at students' disposal in an electronic format.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 191

A	B	C	D	E	FX
70,68	17,28	8,38	2,62	0,0	1,05

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-262/00	Russian Language (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The course "Russian for Intermediate Students" is a follow-up to "Russian for Beginners". The subject of the course is general Russian in the range appropriate to the given level.

Recommended literature:
The textbook has not been published. It is at students' disposal in an electronic format.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 130

A	B	C	D	E	FX
73,85	13,85	7,69	3,08	0,77	0,77

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-315/15	Semistructured Data (XML, JSON and NoSQL)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Martin Baláž, PhD., Mgr. Ján Kľuka, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-INF-175/00	Social Aspects of Informatics

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KZVI/1-UXX-332/10 and FMFI.KZVI/1-UXX-333/10

Course requirements:
homeworks
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Students will be motivated to thing about the impact of information and communication technologies on our lives. Students will be familiar with historical perspective of this impact.

Class syllabus:
New ICT are developed and improved very rapidly. They are becoming an invisible part of our everyday life. We try to look at changes introduced by ICT, what positive they are introducing and what the risks are too. We try to analyse different areas of society: education system, medical care, arts, business, finance, manufacturing, etc. Especially we deal with Slovak copyright law and computer crime.

Recommended literature:
Abelson,Ledeen, Lewis, BlownTo Bits, Addison Wesley 2008, www.bitsbook.com
Materials shared at the course website

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 1411

A	B	C	D	E	FX
66,69	9,92	4,39	12,47	2,76	3,76

Lecturers: RNDr. Michal Winczer, PhD.

Last change: 08.02.2018

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-470/15	Specification and Verification of Programs

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 6.

Educational level: I., II.

Prerequisites:

Antirequisites: FMFI.KAI/1-AIN-470/00

Course requirements:
Preliminary assessment: two tests 60%.
Final exam: test 40%.
Scale: A 90%, B 80%, C 70%, D 60%, E 50%.
Scale of assessment (preliminary/final): 60/40

Learning outcomes:
The course develops students' ability to demonstrate the correctness of programs, formally specify the required properties and proving them using various methods, particularly structural induction. Graduates gain knowledge of a particular formalization of recursive programs, proving their properties within a single logical theory Peano arithmetic. They also get hands-on experience with the specification and verification of a large number of programs.

Class syllabus:
1. Declarative Programming. Primitive recursion. Recursion with measure. Iterative recursion. Recursion on notation. Pairing function and arithmetization. Structural recursion.
2. Specification-verification System. Peano Arithmetic. Mathematical induction. Extensions of arithmetic. Derived induction principles: complete induction, measure induction, structural induction.
3. Data Structures. Strings. Lists. Basic operations over lists. Sorting of lists. Applications of lists. Binary trees. Basic operations over binary trees. Binary search trees. Applications of trees. Symbolic expressions. Interpreter of programming language. Universal function.

Recommended literature:
[1] Specification and Verification of Programs / Ján Komara. Online.
[2] Introduction to Declarative Programming / Ján Kľuka. In Slovak. Online.

Languages necessary to complete the course:
slovak, english

Notes:

Past grade distribution
Total number of evaluated students: 56

A	B	C	D	E	FX
16,07	1,79	7,14	8,93	33,93	32,14

Lecturers: doc. RNDr. Damas Gruska, PhD., Ing. Ján Komara, PhD., Mgr. Ján Kľuka, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-115/15	Sports in Nature (1)

Educational activities:
Type of activities:
Number of hours:
per week: **per level/semester:**
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 171

A	B	C	D	E	FX
99,42	0,0	0,58	0,0	0,0	0,0

Lecturers: Mgr. Martin Dovičák, Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický

Last change: 25.05.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-115/15	Sports in Nature (1)

Educational activities:
Type of activities:
Number of hours:
per week: **per level/semester:**
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 171

A	B	C	D	E	FX
99,42	0,0	0,58	0,0	0,0	0,0

Lecturers: Mgr. Martin Dovičák, Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický

Last change: 25.05.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-215/15	Sports in Nature (2)

Educational activities:
Type of activities:
Number of hours:
per week: **per level/semester:**
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 94

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: Mgr. Martin Dovičák, Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický

Last change: 25.05.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/1-MXX-215/15	Sports in Nature (2)

Educational activities:
Type of activities:
Number of hours:
per week: **per level/semester:**
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 94

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: Mgr. Martin Dovičák, Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický

Last change: 25.05.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/1-MXX-501/15	Statistics for Non-statisticians

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 6.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KAMŠ/1-MXX-501/14

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 15

A	B	C	D	E	FX
93,33	0,0	0,0	0,0	0,0	6,67

Lecturers: doc. Mgr. Ján Mačutek, PhD.

Last change:

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-616/00	Symbolic Programming and LISP

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
1. Procedure Abstraction
- basic expressions
- compound procedures
- high level procedures
2. Data Abstraction
- basic data types, symbolic data
- structured data
- procedural data
3. Moularity, Objects and Local State
- environment model
- representing local state
- stream as lists with delayed evaluation

Recommended literature:
H. Abelson, G. J. Sussman, J. Sussman: Structure and Interpretation of Computer Programs, MIT Press, 1993
I. Kalaš: Ine programovanie - Stretnutie s jazykom lisp, Alfa, 1990

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 43

A	B	C	D	E	FX
32,56	16,28	13,95	4,65	16,28	16,28

Lecturers: Ing. Ján Komara, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-316/16	Technologies of Digital Fabrication

Educational activities:
Type of activities: course
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 4., 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 29

A	B	C	D	E	FX
89,66	6,9	0,0	0,0	3,45	0,0

Lecturers: Mgr. Pavel Petrovič, PhD., Ing. Jozef Vaško

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-MXX-428/00	Theory of Speach Acts

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
semantics versus pragmatics; logical analysis and the analysis of language practice; speech act as a basic unit of communication; performative and constative utterances, speech acts - taxonomy and criteria; locutionary, illocutionary and perlocutionary aspects of speech acts; meaning of an expression as a way of its use and as its use (convention versus intention); meaning of expression, sentence meaning and utterer's meaning; referring as a speech act; applications of the theory of speech acts; conversational "implicatures" and maxims of conversation (H. P. Grice)

Recommended literature:
Austin, J. L.: How to do things with words, Oxford UP, 1975 (in Slovak Ako niečo robiť slovami, Kalligram, Bratislava 2004 Jak udělat něco slovy)
Grice, H. P.: Studies in the way of words, Harvard UP, 1991
Searle, J. R.: Speech acts, Cambridge University Press, var. editions
Wittgenstein, L.: Filozofické skúmania, Pravda, Bratislava 1979

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 42

A	B	C	D	E	FX
73,81	11,9	2,38	4,76	7,14	0,0

Lecturers: PhDr. Dezider Kamhal, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI+KZVI/1-INF-810/15	Time-Restricted Programming (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KI+KZVI/1-INF-810/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 298

A	B	C	D	E	FX
47,32	9,73	9,73	11,07	21,81	0,34

Lecturers: RNDr. Michal Forišek, PhD., RNDr. Michal Winczer, PhD.

Last change: 04.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI+KZVI/1-INF-815/15	Time-Restricted Programming (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KI+KZVI/1-INF-815/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 251

A	B	C	D	E	FX
45,42	9,96	8,76	7,57	25,9	2,39

Lecturers: RNDr. Michal Forišek, PhD., RNDr. Michal Winczer, PhD.

Last change: 04.10.2016

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/2-INF-176/15	Unix for System Administrators

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 5.

Educational level: I., II.

Prerequisites:

Course requirements:
Practical assignments (both during the semester and on final exam)
Scale of assessment (preliminary/final): 40/60

Learning outcomes:
After completing the course the students will know the principles of UNIX system administration and they will be able to practically carry out the basic duties of a system administrator.

Class syllabus:
users, groups, passwords
access permissions for files and directories
filesystem structure
character and block devices
special filesystem objects (symlink, pipe)
mounting and unmounting of filesystems to the directory hierarchy (mount, umount, /etc/fstab)
creating filesystems
system startup and shutdown - /etc/inittab, runlevels
job scheduling (cron, at, batch)
TCP/IP configuration (ifconfig, route)
network services (/etc/services, /etc/inetd.conf, /etc/protocols, /etc/hosts, ...)
DNS – client (/etc/resolv.conf)
DNS – server
NFS
Assumptions:
good user-level knowledge of UNIX systems, directory hierarchy navigation, creating and editing files (vi, joe), shell programming (sh/bash), commands find, grep, cat, cut, ls, awk.

Recommended literature:
Course notes provided on the course website, freely available electronic materials

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution Total number of evaluated students: 84					
A	B	C	D	E	FX
14,29	30,95	29,76	15,48	9,52	0,0
Lecturers: RNDr. Jaroslav Janáček, PhD., Mgr. Jaroslav Budiš					
Last change: 09.02.2017					
Approved by: doc. RNDr. Damas Gruska, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-189/15	Web Applications (1)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 2.

Educational level: I.

Prerequisites:

Antirequisites: FMFI.KZVI/1-AIN-615/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1456

A	B	C	D	E	FX
35,51	11,13	13,32	12,64	14,01	13,39

Lecturers: PaedDr. Roman Hrušecký, PhD., RNDr. Marek Nagy, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/1-AIN-244/15	Web Applications (2)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 110

A	B	C	D	E	FX
33,64	12,73	14,55	7,27	17,27	14,55

Lecturers: RNDr. Marek Nagy, PhD.

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KZVI/1-AIN-168/15	Web Applications in Praxis

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 5.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 138

A	B	C	D	E	FX
30,43	16,67	22,46	17,39	10,87	2,17

Lecturers: Mgr. Martin Krupa, Mgr. Robert Mráz, Mgr. Ing. Matúš Tuna

Last change: 22.09.2017

Approved by: doc. RNDr. Damas Gruska, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAGDM+KAI/1-MAT-560/00	Web Graphics

Educational activities:
Type of activities: course
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 30/70

Learning outcomes:

Class syllabus:
1. Basic definitions. Historic survey, state-of-the art and the future of WWW. Semantic Web a Digital Libraries. Mobile communication. Security, legal and social aspects. Webby awards.
2. Client-server architecture. Dominant web services and technologies. SGML, HTML, VRML, UML. Java, php, ASP.NET and others. Examples of proper use. MIME formats and RFC standards. WWW Consortium.
3. Text creation, digital typography and DTP. On-line publishing authoring legal aspects.
4. Creation and use of pictorial data for WWW.
5. WWW sound processing and applications.
6. Internet animations and video.
7. WWW virtual interaction. Face demo by Ken Perlin. WWW as a procedural sketch book.
8. Web design styles and rules after A. Glassner.
9. 3D web graphics, VRML a X3D.
10. Virtual galleries, gardens, thematic parks and chat rooms.
11. Social and philosophic aspects of virtual environments. Netiquette. Third wave by A. Toffler. History of virtual reality (Gibson, Krueger, Lanier, CAVE...). Cult movie Matrix and implications of its message.
12. Interakcia, navigácia a kooperácia vo virtuálnych prostrediach. Distribuovaná VR. Hry a simulátory.
13. Spájanie obrazu s textom. Vizuálna kritika web stránok.
14. Virtuálne mestá. Akvizícia, konštrukcia, prezentácia, aplikácie.
15. Groupware. Skupinová komunikácia. Avatari a on-line komunity. MPEG-7 a MPEG-21.

Recommended literature:
CGEMS (web stránka ACM SIGGRAPH, www.siggraph.org),
pg.netgraphics.sk,
TOFFLER, A. Third Wave.

BERNERS-LEE, T. Semantic Web, Scientific American, May 2001.
SIGGRAPH course notes by od A. Glassner and K. Perlin.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 856

A	B	C	D	E	FX
21,26	27,69	24,3	12,73	5,14	8,88

Lecturers: doc. RNDr. Andrej Ferko, PhD.

Last change: 02.06.2015

Approved by: doc. RNDr. Damas Gruska, PhD.