

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ OPSP/14	Course name: ABAP and Object and Dialogue Programming
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 1 Per study period: 42 / 14 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., II., N	
Prerequisites: ÚINF/RASP/14 or ÚINF/RASP/16	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Screen, function codes, local and global classes, inheritance, polymorphism.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 26	
abs	n
61.54	38.46
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ASSP/14	Course name: Administration of the SAP System
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., N	
Prerequisites: ÚINF/ZLSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Fundamentals (System Logon, Configuring SAP Logon), Starting and Stopping (Starting SAP/ Database, Stopping SAP / Database), System configuration (Parameters in SAP, Parameters in Database, Background Tasks(Scheduling Background Jobs, Monitoring of Background Jobs), Database Administration (Extend Tablespace).	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 22	
abs	n
95.45	4.55
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ ASU1/15		Course name: Algorithms and data structures			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites: ÚINF/PAZ1b/15 or ÚINF/ePAZ1b/11 or ÚINF/ePAZ1b/15					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 47					
A	B	C	D	E	FX
12.77	6.38	6.38	12.77	57.45	4.26
Provides: doc. RNDr. Gabriela Andrejková, CSc., prof. RNDr. Viliam Geffert, DrSc., RNDr. Rastislav Krivoš-Belluš, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ ANM/13		Course name: Applications of Numerical Methods			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 3., 5.					
Course level: I.					
Prerequisites: ÚMV/MZIB/10					
Conditions for course completion: Continuous evaluation is based on students' activity in the classroom and work on assignments. Examination					
Learning outcomes: To acquaint students with basic numerical methods of calculus and algebra, which are necessary for the subsequent course of computational physics.					
Brief outline of the course: Computational solutions of physical problems and computational errors. Approximation and interpolation of functions. Fast Fourier transform. Linear systems of equations - direct and iterative methods. Nonlinear systems of equations. Conditions of convergence and assesment of error. Numerical derrivatives and quadrature. Matrix operations, determinants and inverse matrices. Eigenvalues and eigenvectors - partial and complete problem.					
Recommended literature: 1. C. Pozrikidis: Numerical Computation in Science and Engineering, Oxford University Press, 1998. 2. R.W. Hamming: Numerical Methods for Scientists and Engineers, Dover, 1973. 3. A.L. Garcia: Numerical Methods for Physics, Prentice-Hall, 1994.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 17					
A	B	C	D	E	FX
0.0	11.76	0.0	29.41	52.94	5.88
Provides: doc. RNDr. Milan Žukovič, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ AFJ1a/15		Course name: Automata and formal languages			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Oral examination.					
Learning outcomes: To provide theoretical background for studying computer science in general, by giving the necessary knowledge in theory of automata.					
Brief outline of the course: Chomsky hierarchy of grammars and languages. Finite-state transducers and mapping, construction of a reduced automaton. Finite-state acceptors, nondeterministic acceptors, regular expressions. Closure properties of regular languages. Context-free grammars, Chomsky and Greibach normal forms. Pushdown automata, Pumping lemma. Closure properties of context-free languages.					
Recommended literature: J.E. Hopcroft, R.Motwani, J.D. Ullman: Introduction to automata theory, languages, and computation, Addison-Wesley, 2001. J. Shallit: A second course in formal languages and automata theory, Cambridge University press, 2009. M. Sipser: Introduction to the theory of computation, Thomson Course Technology, 2006.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 741					
A	B	C	D	E	FX
22.94	17.95	24.29	19.03	10.53	5.26
Provides: Mgr. Alexander Szabari, PhD., prof. RNDr. Viliam Geffert, DrSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ BPO/14		Course name: Bachelor Thesis and its Defence			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 17					
A	B	C	D	E	FX
58.82	23.53	11.76	5.88	0.0	0.0
Provides:					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ ZTC1/15		Course name: Basic methods in chaos theory			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 6					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: doc. Ing. Štefánia Gallová, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ ZDD1/15		Course name: Basic methods of data minig			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Final project and examination					
Learning outcomes: Understanding of basic concepts from the areas of data mining and machine learning and basic usage of freely available softwares.					
Brief outline of the course: During the course, students become familiar with the following concepts: regression vs. classification; modeling; overfitting vs. underfitting and regularization; CRISP-DM methodology; data pre-processing: sampling, dimensionality reduction, validation of a model; basic data types: relational vs. multi-relational, time-series; different applications and basics of freewares such as for example Weka and RapidMiner.					
Recommended literature: 1. Jiawei Han, Micheline Kamber, Jian Pei. Data Mining: Concepts and Techniques. Morgan Kaufmann, ISBN 978-0123814791, 2011. 2. Pang-Ning Tan, Michael Steinbach, Vipin Kumar. Introduction to Data Mining. Addison-Wesley, ISBN 978-0321321367, 2005. 3. Ethem Alpaydın. Introduction to Machine Learning, The MIT Press, ISBN 978-0-262-01211-9, 2004.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 0					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Csaba Török, CSc., RNDr. Tomáš Horváth, PhD.					
Date of last modification: 03.05.2015					

Approved: doc. RNDr. Gabriel Semanišin, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ ZBSIM/13		Course name: Basics of Molecular Simulation			
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Written test and elaboration of referate. Exam.					
Learning outcomes: Introduction to the principles of computational simulations of biomolecular objects from point of view of komplex IT application in practice.					
Brief outline of the course: Essential structural characteristics of biomolecules. Foldamers - the definition and its importance. Computational predictions of folding as optimization problem. Propagators - algorithms for the time evolution and their use in molecular dynamics. Monte Carlo methods - algorithms and paralelisation. Computational challenges of biomolecular simulations - description of chemical reactions, free energy evaluation, protein folding. Simulations of rare events. Computational complexity, less traditional optimization techniques and heuristics.					
Recommended literature: - Schlick, Tamar. Molecular Modeling and Simulation. 1st ed. Springer, 2002. - Allen, M. P., and D. J. Tildesley. Computer Simulation of Liquids. Oxford University Press, USA, 1989.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 2					
A	B	C	D	E	FX
0.0	100.0	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Jozef Uličný, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ KMU1/15		Course name: Coding and multimedial data transition			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 5.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 7					
A	B	C	D	E	FX
14.29	0.0	28.57	57.14	0.0	0.0
Provides: doc. RNDr. Stanislav Krajčí, PhD., doc. RNDr. Jozef Jirásek, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚFV/POF1a/99		Course name: Computational Physics I					
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present							
Number of credits: 4							
Recommended semester/trimester of the course: 4.							
Course level: I.							
Prerequisites: ÚFV/ANM/13 or ÚFV/NUM/10							
Conditions for course completion: Continuous evaluation is based on students' activity in the classroom and work on assignments. Examination and assignments submitted electronically with the attached computer code.							
Learning outcomes: To teach students to use computer as a tool of modeling of physical reality.							
Brief outline of the course: Introduction to dynamical systems. Numerical solution of ordinary differential equations (ODE) with initial value. Boundary value problems for ODE. Discrete schemes for partial differential equations (PDE). Numerical solution of PDE. Finite difference methods, consistency, convergence, stability. Elliptic and parabolic PDE. Introduction to Monte Carlo (MC) method and applications in statistical physics. MC simulations of lattice spin systems and stochastic processes.							
Recommended literature: 1. C. Pozrikidis: Num. Comp. in Science and Engineering, Oxford Univ. Press, 1998. 2. A.L. Garcia: Numerical Methods for Physics, Prentice-Hall, 1994. 3. D. P. Landau, K. Binder: A Guide to Monte Carlo Simulations in Statistical Physics, Cambridge Univ. Press, 2000. 4. B. A. Berg: Introduction to Markov Chain Monte Carlo Simulations and Their Statistical Analysis, http://www.worldscibooks.com/etextbook/5904/5904_intro.pdf 5. W. Janke: Lectures on Ising model, http://www.physik.uni-leipzig.de/~janke/Ising_Lectures_Lviv.html							
Course language:							
Notes:							
Course assessment Total number of assessed students: 85							
A	B	C	D	E	FX	N	P
38.82	17.65	7.06	15.29	12.94	2.35	0.0	5.88
Provides: doc. RNDr. Milan Žukovič, PhD.							

Date of last modification: 03.05.2015
Approved: doc. RNDr. Gabriel Semanišin, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/POF1b/99		Course name: Computational Physics II			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 5.					
Course level: I., II.					
Prerequisites: ÚFV/POF1a/99					
Conditions for course completion: Continuous evaluation is based on students' activity in the classroom and work on assignments. Examination and assignments submitted electronically with the attached computer code.					
Learning outcomes: To teach students to create simulation projects to help to solve physical problems.					
Brief outline of the course: Advanced methods of Monte Carlo (MC) simulations of lattice spin systems. Local and cluster perturbation algorithms. Errors and histogram analysis of MC data. Reweighting by simple histogram and multihistogram methods. Multicanonical methods. Simulated and parallel tempering. Universality and finite-size scaling. Determination of order of phase transitions and calculation of critical exponents. Basics of quantum MC simulations. MC simulations of stochastic processes. Diffusion equation. Stochastic processes in financial analysis. Basics of molecular dynamics method.					
Recommended literature: 1. D.P. Landau, K. Binder: A Guide to Monte Carlo Simulations in Statistical Physics, Cambridge University Press, 2000. 2. B.A. Berg: Introduction to Markov Chain Monte Carlo Simulations and Their Statistical Analysis, http://www.worldscibooks.com/etextbook/5904/5904_intro.pdf 3. W. Janke: Lectures on Ising model, http://www.physik.uni-leipzig.de/~janke/Ising_Lectures_Lviv.html					
Course language:					
Notes:					
Course assessment Total number of assessed students: 43					
A	B	C	D	E	FX
55.81	18.6	13.95	9.3	2.33	0.0
Provides: doc. RNDr. Milan Žukovič, PhD.					
Date of last modification: 03.05.2015					

Approved: doc. RNDr. Gabriel Semanišin, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/PSIN/15	Course name: Computer network Internet
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 1 Per study period: 42 / 14 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 2.	
Course level: I.	
Prerequisites: ÚINF/PAZ1a/15 or ÚINF/ePAZ1a/11 or ÚINF/ePAZ1a/15	
Conditions for course completion: Activity at excercises, home work, test. verbal exam, final test	
Learning outcomes: To understand ISO OSI reference model for network communication, to analyze communication channels parameters, to understand different access methods, to be familiar with the function of center network devices (hub, switch, router), to understand IP protocol, IP addresses and the transfer of internet packets, to understand reliable data transfer of the TCP protocol, to be able to use Sockets, to know basic application protocols and use them in own applications.	
Brief outline of the course: 1. Introduction to computer networks, internet connection types, delay and loss in packet-switched networks, ISO OSI reference model and TCP/IP protocols family. 2. Application layer: Web and HTTP, protocol FTP ,e-mail and SMTP, POP3, IMAP, 3. Application layer: domain names and DNS, Peer-to-peer applications. Security in computer networks. 4. Transport layer: services, multiplexing and demultiplexing, protocol UDP, reliable data transfer 5. Transport layer: connection oriented transport protocol TCP, flow and congestion control. 6. Network Layer: Internet protocol IPv4, virtual circuit and datagram networks, packet fragmentation, routing table, application protocol DHCP 7. Network Layer: network address translation NAT, ICMP protocol, internet protocol IPv6 8. Network Layer: routing algorithms and protocols, broadcast and multicast routing 9. Link layer: error detection, multiple access methods CSMA/CD and CSMA/CA, Ethernet, frames, protocols ARP and RARP, link layer addressing 10. Link Layer and wireless and mobile networks: hub, switch, virtual LAN, 802.11 Wireless LAN, Bluetooth 802.15, WiMAX 802.16, Mobile IP, mobility in GSM 11. Physical Layer: Communication channels parameters, digital and analog encoding.	
Recommended literature: 1. J. F. Kurose, Keith W. Ross: Computer Networking: A Top-Down Approach, 5. edícia, 2010 2. A. S. Tanenbaum: Computer Networks, Prentice Hall, 2002 3. W. Stallings: Local and Metropolitan Area Networks, Prentice Hall, 2000	

4. E. Comer, R.E. Droms: Computer Networks and Internets, Prentice Hall, 2003					
5. W. R. Stevens: TCP/IP Illustrated, Vol.1: The Protocols, Addison-Wesley, 1994					
Course language:					
Notes:					
Course assessment					
Total number of assessed students: 657					
A	B	C	D	E	FX
9.74	4.57	10.96	15.53	38.05	21.16
Provides: doc. Ing. Štefánia Gallová, CSc., RNDr. Peter Gurský, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ KOPR/15		Course name: Concurrent programming			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 66					
A	B	C	D	E	FX
25.76	19.7	25.76	12.12	6.06	10.61
Provides: RNDr. Róbert Novotný, PhD., RNDr. Peter Gurský, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ RASP/14	Course name: Creation of Reports in ABAP
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., N	
Prerequisites: ÚINF/ABSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Reading database tables, selection screens, events, declarations and branching of programs, working with internal tables, function modules: upload, download and module creation, code structure, forms and includes.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 26	
abs	n
84.62	15.38
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ DBdi/15		Course name: Database and information systems			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 2					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Csaba Török, CSc., Mgr. Maroš Andrejko					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ DBS1b/15		Course name: Database systems			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites: ÚINF/DBS1a/15 or ÚINF/DBdi/15					
Conditions for course completion:					
Learning outcomes: Mastering the basic techniques of effective design, normalization and programmable extension of relational databases.					
Brief outline of the course: Database modelling. Functional dependency and normalization. Recursion and transitive closure. Cursors. Stored procedures. Indices and B-trees. Triggers. Transaction. XML, SDL, XPath, XQuery.					
Recommended literature: - S. Krajčí: Databázové systémy, UPJŠ, 2005 2. J. - Date C.J., Database Design and Relational Theory, O'Reilly, 2012 - Atkinson, P., Vierra, R., BEGINNING MICROSOFT SQL SERVER 2012 PROGRAMMING, John Wiley - Wrox, 2012 - Itzik Ben-Gan, Microsoft SQL Server, 2012 T-SQL Fundamentals, O'Reilly, 2012 - L. Davidson, J.M. Moss, Pro SQL Server 2012 Relational database Design and Implementation, APRESS, 2012					
Course language:					
Notes:					
Course assessment Total number of assessed students: 624					
A	B	C	D	E	FX
10.26	7.69	10.9	22.44	37.02	11.7
Provides: doc. RNDr. Csaba Török, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/DWA1/15		Course name: Developing web applications with JavaScript			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 5.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course: Principles of JavaScript. Architecture of modern web applications, client-server communications with asynchronous IO programming using NodeJS and MongoDB. Securing web applications. Templates for web page generation. Fundamentals of e-commerce web sites (storefront components, site administration, integrations with third-party services)					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 13					
A	B	C	D	E	FX
23.08	15.38	30.77	7.69	23.08	0.0
Provides:					
Date of last modification: 17.09.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ VMA1/15		Course name: Development of mobile applications			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 22					
A	B	C	D	E	FX
31.82	0.0	13.64	9.09	4.55	40.91
Provides: RNDr. Róbert Novotný, PhD.					
Date of last modification: 02.07.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ DSM3a/10		Course name: Discrete mathematics for informaticians			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Based on results of two semestral tests. Based on semestral evaluation and the result of examination (test).					
Learning outcomes: To present the basics of combinatorics and their applications in computer science.					
Brief outline of the course: Mathematical induction and Dirichlet principle. The sum and the product rule. Permutations, k-permutations, combinations. Selections with repetitions. The inclusion/exclusion principle. Recurrent equations. Introduction to graph theory. Trees. Eulerian and Hamiltonian graphs. Planar graphs. Graph colourings.					
Recommended literature: 1. S. Jendroľ, P. Mihók: Diskrétna matematika I., UPJŠ Košice 1992 2. J. Nešetřil, J. Matoušek: Kapitoly z diskrétni matematiky 3. E. R. Scheinerman: Mathematics - a discrete introduction, Brooks/Cole Publ. Comp. Pacific Grove 2000. 4. R.P. Grimaldi: Discrete and Computational Mathematics, Addison-Wesley Publ. Co.-Reading 1994.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 549					
A	B	C	D	E	FX
4.01	2.37	4.01	13.48	52.46	23.68
Provides: doc. RNDr. Tomáš Madaras, PhD., RNDr. Mária Maceková, PhD., Mgr. Juraj Valiska					
Date of last modification: 03.05.2015					

Approved: doc. RNDr. Gabriel Semanišin, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: CJP/ PFAJ4/07	Course name: English Language of Natural Science
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 2., 4.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Active participation in class and completed homework assignments. Students are allowed to miss 2 classes at the most. Continuous assessment: 2 credit tests (presumably in weeks 6 and 13) and academic presentation in English. Test 1 = 40 points, test 2 = 40 points, presentation = 20 points. In order to be admitted to the final exam, a student has to score at least 65 points as a sum of both credit tests and academic presentation. Exam test = 100 points. The exam test results represent 50% of the final grade for the course, continuous assessment results represent the other 50% of the final grade. The final grade for the course will be calculated as follows: A 93-100, B 86-92, C 79-85, D 72-78, E 65-71, FX 64 and less.	
Learning outcomes: Rozvoj jazykových kompetencií študentov príslušného študijného odboru, upevňovanie a rozvíjanie všetkých jazykových zručností (hovorenie, písanie, čítanie, počúvanie) predovšetkým v odbornej/profesnej angličtine, na stredne pokročilej úrovni ovládania jazyka (B2). Dôraz sa kladie na aktívne správne používanie odbornej/profesnej angličtiny.	
Brief outline of the course: ANGLICKÝ JAZYK PRE GEOGRAFOV: Veda a výskum. Odbor geografia. Planéta Zem. Naša slnečná sústava. Litosféra, hydrosféra, atmosféra, biosféra. Zem - dynamická planéta. Tektonické platne. Sopečná činnosť. Zemetrasenia. Svetové oceány. Morské prúdy. Tsunami. Veľký koralový útes. Atmosféra - zloženie atmosféry. Kontinenty. Európa - krajiny, národnosti. ANGLICKÝ JAZYK PRE EKOLÓGOV: Veda a výskum. Odbor ekológia.	

Životné prostredie. Znečistenie a dôsledky.
Sopečná činnosť, zemetrasenia.
Great Pacific Garbage Patch.
Globálne otepľovanie a dôsledky. Ľadovce.
Počasie a klíma. Búrky, hurikány, tsunami.
Život na Zemi. Ohrozené rastlinné a živočíšne druhy.
ANGLICKÝ JAZYK PRE BIOLÓGOV:
veda a výskum, odbor biológia
morfológia rastlín, koreň
stonka, list
rozmnožovanie rastlín, kvet
biológia človeka - telesné sústavy
slovná zásoba z oblasti botanickej a zoologickej nomenklatúry
ANGLICKÝ JAZYK PRE MATEMATIKOV:
Veda a výskum, odbor matematika
čísla a tvary v matematike
Elementárna algebra
Elementárna geometria
Výpočty v matematike
Pytagoras, Pytagorova veta
Grafy a diagramy
Štatistika
ANGLICKÝ JAZYK PRE FYZIKOV
Veda a výskum, odbor fyzika
Atómy a molekuly
Hmota a jej premeny
Elektrina, jej využitie
Zvuka, jeho prenos
Svetlo
Solárny systém
Matematické operácie
ANGLICKÝ JAZYK PRE CHEMIKOV:
Veda a výskum, odbor chémia:
História, alchímia
Nomenklatúra
Laboratórium a jeho vybavenie
Periodická tabuľka
Hmota a jej premeny
Organická chémia
Anorganická chémia
ANGLICKÝ JAZYK PRE INFORMATIKOV:
Veda a výskum, informatika
Život s počítačom
Typický PC
Zdravie a bezpečnosť, ergonómika
Programovanie
Emailovanie
Cybercrime
Trendy budúcnosti

Recommended literature:

študijné materiály dodané vyučujúcim

Velebná, V. English for Chemists.

Redman, S.: English Vocabulary in Use, Pre-intermediate, Intermediate. Cambridge University Press. 2003.

Powel, M.: Dynamic Presentations. CUP, 2010

Armer, T.: Cambridge English for Scientists. CUP, 2011

Wharton J.: Academic Encounters. The Natural World, CUP: 2009.

Murphy, R.: English Grammar in Use. Cambridge University Press. 1994.

Redman, s.: English Vocabulary in Use, Pre-intermediate, Intermediate. Cambridge University Press. 2003.

P. Fitzgerald : English for ICT studies, Garnet Publishing, 2011

Course language:**Notes:****Course assessment**

Total number of assessed students: 2010

A	B	C	D	E	FX
31.44	25.82	18.71	11.59	9.65	2.79

Provides: PaedDr. Gabriela Bednáriková, Mgr. Marianna Škultétyová, Mgr. Zuzana Naďová, PhDr. Helena Petruňová, CSc.

Date of last modification: 01.09.2016

Approved: doc. RNDr. Gabriel Semanišin, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ABSP/14	Course name: Essentials of ABAP
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 3., 5.	
Course level: I., II., N	
Prerequisites: ÚINF/ZTSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Principles of programming in ABAP, declaration of variables, the basic syntax of the language ABAP Open SQL, ABAP Workbench navigation, ABAP editor, arithmetic, logic conditions, string operations, cycles, test programs using a debugger, an overview of the most important commands of ABAP, definition elementary and structured data objects, functional groups and function modules.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 38	
abs	n
94.74	5.26
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ZLSP/14	Course name: Essentials of Linux for the SAP
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 3., 5.	
Course level: I., N	
Prerequisites: ÚINF/ZTSP/14 or ÚINF/ZTSP/16	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Introduction to Linux: commands, permissions & processes, work with the files, advanced Linux: advanced commands; basics of networking & scripting, SAP architecture on OS level.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 26	
abs	n
92.31	7.69
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ZKSP/14	Course name: Essentials of SAP for Consultants
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 3., 5.	
Course level: I., N	
Prerequisites: ÚINF/ZTSP/14 or ÚINF/ZTSP/16	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Organizational structure and processes (integration of SAP modules). Master records and their importance for the process. Customizing and transports, Standard reporting + Queries, Programming tools - migration, connection to external systems, BADIs, business functions, CMOD, SAP OSS, information retrieval.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 177	
abs	n
100.0	0.0
Provides: RNDr. Štefan Pero	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ZSSP/14	Course name: Essentials of the SAP System for Users
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 3., 5.	
Course level: I., N	
Prerequisites: ÚINF/ZTSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Characteristics of modern systems, effective solutions for the management and operation of institutions, fundamental processes in the institution of government, support for the process from the system. SAP user roles and profiles, case studies in terms of deployment of SAP company.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 166	
abs	n
100.0	0.0
Provides: Ing. Katarína Nináčová, Ing. Slávka Šimková, PhD., RNDr. Edita Vojtová	
Date of last modification: 25.09.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ZTSP/14	Course name: Essentials of the SAP Technology
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 3., 5.	
Course level: I., II., N	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Defining mySAP Technology (Products, Innovations provided by SAP), Navigation (Logon, Screen Design, Calling Functions), System Kernel (Client/Server Architecture, Structure of an SAP system, Processing in SAP), Communication and Integration Technologies (Remote Function Calls, Internet Technologies).	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 160	
abs	n
100.0	0.0
Provides: Ing. Katarína Nináčová, RNDr. Štefan Pero, Ing. Slávka Šimková, PhD., RNDr. Edita Vojtová	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ FUN1/15		Course name: Functional programming			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites: ÚINF/PAZ1c/15					
Conditions for course completion:					
Learning outcomes: To learn bases of declarative programming (as complementary method to procedural programming) and basic methods of implementations of functional programming languages.					
Brief outline of the course: Principles of functional programming. Lambda calculus from the functional programming languages point of view. Properties of functional programming languages. Programming language Haskell: the structure of the language and basic computational rule, basic data types, lists, recursion and induction, trees					
Recommended literature: BIRD, R., WADLER, P.: Introduction to Functional Programming. Prentice Hall International, 1988. LIPOVAČA, M.: Learn You Haskell for Great Good!. Free from http://learnyouahaskell.com/					
Course language:					
Notes:					
Course assessment Total number of assessed students: 197					
A	B	C	D	E	FX
17.26	13.2	16.75	14.21	37.56	1.02
Provides: doc. Ing. Štefánia Gallová, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚGE/ GIS/13		Course name: Geographic Information Systems			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course: Introduction to GIS and geoinformation problematic, basics of geoinformatics, principals of vector and raster representation, surfaces – digital terrain models, organisation of work in projects, system implementation, data sources and data input, data structuring, data analysing, digital image processing, process of layout creation, data quality and metadata, standardisation the digital data and legislation, GIS software products (ArcGIS and relevant ESRI products, Geomedia and Intergraph products, MapInfo, Topol), applications in a geography field in Slovakia, development trends in GIS and geoinformation field.					
Recommended literature: Maguire, D. J., Goodchild, M.F. Geographical Information Systems, Longman scientific & technical, USA 1991, Burrough, P. A. and McDonnell, R. A. (1998). Principles of Geographical Information Systems. Oxford: Oxford University Press.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 9					
A	B	C	D	E	FX
55.56	33.33	11.11	0.0	0.0	0.0
Provides: Mgr. Michal Gallay, PhD., prof. Mgr. Jaroslav Hofierka, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ GRP/13		Course name: GRID computing			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: Ing. Jozef Černák, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ ANO/15		Course name: Image analysis			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 5.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 10					
A	B	C	D	E	FX
20.0	0.0	20.0	10.0	50.0	0.0
Provides: doc. Ing. Zoltán Tomori, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ IBdi/15		Course name: Information security principles			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 18					
A	B	C	D	E	FX
22.22	22.22	22.22	5.56	5.56	22.22
Provides: RNDr. JUDr. Pavol Sokol, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ MAIN/15		Course name: Interdisciplinary applications of informatics			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites: (ÚINF/ANO/15 or ÚINF/AFJ1a/15) and (ÚINF/ZDD1/15 or ÚINF/ASU1/15) and (ÚFV/POF1b/99 or ÚFV/UPF1/12) and (ÚINF/UNS1/15 or ÚFV/NOT1b/03)					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1					
A	B	C	D	E	FX
0.0	0.0	100.0	0.0	0.0	0.0
Provides:					
Date of last modification: 15.07.2016					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ UPF1/12		Course name: Introduction to Computational Physics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Elaboration of microreferat on given topics. Exam and discussion of the implementation of the given project.					
Learning outcomes: The aim of the lecture is to provide students with the physical background of the computational processes in conventional computers, as well as to provide less conventional possibilities to implement computational processes using deeper knowledge of physical processes.					
Brief outline of the course: Physical processes utilised in contemporary computers. Computational processes / thermodynamics point of view. Physical limits of current computer technologies (Moore, Amdahl laws . Computer modeling and physical reality. Computational complexity and paralelism. Distributed computing. Alternative methods of computation (analogue , optical processors, DNA computing, quantum computing).					
Recommended literature: Actual literature provided by lecturer.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 21					
A	B	C	D	E	FX
85.71	14.29	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Jozef Uličný, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ UGR1/15		Course name: Introduction to computer graphics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 3., 5.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: To provide the students with knowledge of graphics algorithms and basic principles of computer graphics.					
Brief outline of the course: Graphics hardware, input and output devices. Color models, palettes. Raster graphics algorithms for drawing 2D primitives. Filling and clipping. Curve modeling, interpolations and approximations, spline forms, Bézier curves, B-splines, surfaces. Homogenous coordinates, affine transformations, perspective and parallel projections. Visible-surface determination, illumination and shading. Rendering techniques, photorealism, textures, ray tracing, radiosity. Object representations, computer animation, virtual reality.					
Recommended literature: FOLEY, J. D., van DAM, A., FEINER, S., HUGHES, J.: Computer Graphics: Principles and Practice, Addison-Wesley, 1991 MORTENSON, M.E.: Geometric modeling, 2.ed., Willey, 1997					
Course language:					
Notes:					
Course assessment Total number of assessed students: 238					
A	B	C	D	E	FX
13.03	8.4	13.03	23.95	31.93	9.66
Provides: doc. RNDr. Gabriel Semanišin, PhD., RNDr. Rastislav Krivoš-Belluš, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ UPR1/15		Course name: Introduction to law for informatics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 7.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	100.0	0.0
Provides: RNDr. JUDr. Pavol Sokol, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/UNS1/15		Course name: Introduction to neural networks			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 3., 5.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: To understand and to know applications of basic paradigms of neural networks. To learn working with software for neural network models.					
Brief outline of the course: Basic models of computational units - neurons (linear threshold gates, polynomial threshold gates, perceptrons), their computational capability, algorithms of adaptations. Feed-forward neural networks, back propagation algorithm. Hopfield neural networks. ART neural networks. Using neural networks to solving of problems. Genetic and evolution algorithms.					
Recommended literature: J. Hertz, A.Krogh, R.G. Palmer: Introduction to the theory of neural computation, Addison Wesley, 1991 HASSOUN, M. H.: Fundamentals of artificial neural networks, The MIT Press, 1995					
Course language:					
Notes:					
Course assessment Total number of assessed students: 346					
A	B	C	D	E	FX
8.09	15.9	23.99	21.1	26.3	4.62
Provides: doc. RNDr. Gabriela Andrejková, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ UNV1/15		Course name: Introduction to neurosciences			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Examination					
Learning outcomes: Introduction to anatomy and physiology of human brain, to cognitive processes corresponding to different mental functions, and to computational tools used in neuroscience.					
Brief outline of the course: Description of neural centers of basic cortical functions (visual, auditory, sensory and motor cortex, learning and memory). Basic physiological, psychological, psychophysical and computational methods used in neuroscience with focus on the application of computational tools for electrophysiological brain activity recording and imaging (e.g., magnetic resonance). Computational applications of neuroscience research.					
Recommended literature: 1. Gazzaniga M. (ed.): The New Cognitive Neurosciences. 2nd ed. MIT Press. 1999 2. Dayan P and LF Abbott: Theoretical Neuroscience - Computational and Mathematical Modeling of Neural Systems. MIT Press, 2001 3. Stillings et al.: Cognitive Science: An Introduction, 2nd ed., MIT Press, 1995					
Course language: Slovak or English					
Notes:					
Course assessment Total number of assessed students: 4					
A	B	C	D	E	FX
0.0	25.0	25.0	0.0	50.0	0.0
Provides: doc. Ing. Norbert Kopčo, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ UIN1/15		Course name: Introduction to study of informatics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 124					
A	B	C	D	E	FX
21.77	18.55	25.0	15.32	4.84	14.52
Provides: doc. RNDr. Stanislav Krajčí, PhD., RNDr. Ondrej Kridlo, PhD., Mgr. Alexander Szabari, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ PAI1/13		Course name: Legal aspects of informatics			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 17					
A	B	C	D	E	FX
5.88	17.65	17.65	17.65	17.65	23.53
Provides: RNDr. JUDr. Pavol Sokol, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ FLO/09		Course name: Logic Circuits			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 1 Per study period: 14 / 14 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion: written exam, presence at the laboratory practice					
Learning outcomes: Student will obtain knowledge about principles of functioning, analysis and synthesis of logical electronic circuits, as a basic unit of computing technology. Student will use his theoretical knowledge to design and to construct of electronic circuits and he/she will learn how to interpret measured results.					
Brief outline of the course: 1. Combinatorial logical circuits (definitions, laws of logical algebra, electronic models of operations of Boolean algebra, NAND, digital multiplexor and demultiplexor, detector of errors for BDC code, arithmetic addition of two one bit binary operands). 2. Digital memory circuits (bistable circuit as basic memory unit, synchronous and asynchronous switching circuits). 3. Sequential logical circuits (sequential behavior, structure and stability of sequential logical circuits, basic sequential functions and their realization, arithmetic unit of digital computer)					
Recommended literature: Petrovič P.: Elektronika I – Vybrané obvody číslicovej techniky. Skriptum PF, Edičné stredisko UPJŠ, Košice 2003. 2. vydanie: Vydavateľstvo UPJŠ, Košice, 2006.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 167					
A	B	C	D	E	FX
29.94	32.34	20.96	5.39	1.8	9.58
Provides: Mgr. Vladimír Komanický, PhD.					
Date of last modification: 21.09.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ LOP1/15		Course name: Logic programming			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 4.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: To learn bases of declarative programming (as complementary method to procedural programming) and basic methods of implementations of logic programming languages.					
Brief outline of the course: Facts and rules in Prolog. Unification of terms (Robinson's unification algorithm). Recursion and backtrack in Prolog. Computational step and computational tree. Classification of terms. Lists. Functors and operators in composed terms. Predicates for input and output. Dynamic database. Cycles (repeat-fail, for). Predicates related to backtrack. Cut. Predicates evaluating of arithmetic expressions.					
Recommended literature: Bratko, I.: Prolog – programming for artificial intelligence, third edition. Addison-Wesley, 2001 Nilsson U., Maluszynski J.: Logic, Programming and Prolog, John Wiley & Sons Ltd. 1995 Nienhuys-Cheng Sh.H., Wolf R.: Foundations of Inductive Logic Programming, Springer-Verlag, 1997					
Course language:					
Notes:					
Course assessment Total number of assessed students: 219					
A	B	C	D	E	FX
19.63	11.42	15.07	24.2	27.4	2.28
Provides: doc. RNDr. Stanislav Krajčí, PhD., RNDr. Ondrej Krídlo, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/MIS/15		Course name: Management of information systems			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites: ÚINF/DBS1a/15 or ÚINF/DBdi/15					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 9					
A	B	C	D	E	FX
22.22	66.67	11.11	0.0	0.0	0.0
Provides: doc. RNDr. Gabriel Semanišin, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MZIa/10		Course name: Mathematical foundations of informatics I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Two tests and completion of individual homework. Based on semestral evaluation and examination test.					
Learning outcomes: To obtain basic knowledge in arithmetic, linear algebra, abstract algebra and calculus, to learn proof methods and to use the obtained knowledge in problem solving.					
Brief outline of the course: Integers, divisibility, congruences, congruence classes. Fields and groups. Systems of linear equations, matrices, matrix operations, determinants. Functions and their properties, continuity, limit, derivative. Analysis of functions.					
Recommended literature: Hut'ka, Benko, Ďurikovič: Matematika, Alfa, Bratislava 1991 D. Studenovská, T. Madaras, S. Mockovčiak: Zbierka úloh z matematiky pre nematematické odbory, UPJŠ 2006 D. Studenovská, T. Madaras: Matematika pre nematematické odbory, UPJŠ 2006 J. Ivan: Matematika 1, Alfa, Bratislava 1989 T. Katriňák a kol.: Algebra a teoretická aritmetika, Alfa, Bratislava 1986					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 153					
A	B	C	D	E	FX
0.0	8.5	6.54	11.11	46.41	27.45
Provides: doc. RNDr. Tomáš Madaras, PhD., RNDr. Pavel Molnár					
Date of last modification: 03.05.2015					

Approved: doc. RNDr. Gabriel Semanišin, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/MZIb/10		Course name: Mathematical foundations of informatics II			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 2., 4.					
Course level: I.					
Prerequisites: ÚMV/MZIa/10					
Conditions for course completion: Based on results of two tests and individual homeworks. Based on semestral evaluation and examination test.					
Learning outcomes: To extend the obtained knowledge in mathematics by topics in integral calculus, differential equations and infinite series.					
Brief outline of the course: Indefinite and definite integral and their applications. Differential equations. Series, convergence criteria. Series of functions, Taylor expansion. Periodic functions, trigonometric series, Fourier expansion.					
Recommended literature: Huťka, Benko, Ďurikovič: Matematika, Alfa, Bratislava 1991 D. Studenovská, T. Madaras, S. Mockovčiak: Zbierka úloh z matematiky pre nematematické odbory, UPJŠ 2006 D. Studenovská, T. Madaras: Matematika pre nematematické odbory, UPJŠ 2006 J. Ivan: Matematika 2, Alfa, Bratislava 1989 T. Katriňák a kol.: Algebra a teoretická aritmetika, Alfa, Bratislava 1986					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 58					
A	B	C	D	E	FX
0.0	10.34	12.07	15.52	51.72	10.34
Provides: doc. RNDr. Tomáš Madaras, PhD., RNDr. Pavel Molnár					
Date of last modification: 03.05.2015					

Approved: doc. RNDr. Gabriel Semanišin, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ VKT/13		Course name: Modern information technologies in applications			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 0 / 2 Per study period: 0 / 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: RNDr. Peter Marcinčák					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ MPJ1/15		Course name: Modern programming languages			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 3.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: Mastering the basics of standard and experimental programming models and techniques.					
Brief outline of the course: Object oriented programming, Generic programming – parametric polymorphism. Vector programming – operator overloading, indexer. Event programming (event handling) – delegates. Attribute programming. Parallel and multithread programming – processes, threadpool. Functional and declarative programming – lambda expressions, LINQ. Graphics primitives.					
Recommended literature: 1. Andrew Troelsen, Pro C# 5.0 and the .NET 4.5 Platform, 2012, APRESS 2. Joseph Albahari, Ben Albahari, C# 5.0 in a Nutshell: The Definitive Reference, 2012, O'REILLY 3. Daniel Solis, Illustrated C# 2012, 2012, APRESS					
Course language:					
Notes:					
Course assessment Total number of assessed students: 103					
A	B	C	D	E	FX
15.53	17.48	27.18	23.3	16.5	0.0
Provides: doc. RNDr. Csaba Török, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ DOP1/15		Course name: Multithreaded and distributed programming			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: Mastering the basics of distributed and parallel programming and design of distributed applications communicating via messages.					
Brief outline of the course: Multithreading, synchronization primitives. Basics of parallel programming, PLINQ, Task Parallel Library. Distributed object-oriented programming and its application. Service-oriented architecture, communication via messages. Endpoint: address, interconnections and communication channels, contracts for services, data and messages.					
Recommended literature: - A. S. Tanenbaum, M.V. Steen: Distributed Systems: Principles and Paradigms, Prentice Hall, 2002 - C.Campbell, R.Johnson, A.Miller, Parallel Programming with Microsoft® .NET, Microsoft, 2010 - J.Sharp, Windows Communication Foundation 4 Step by Step, O'Reilly, 2010 - J.Albahari, B.Albahari, C# 5.0 in a Nutshell: The Definitive Reference, O'Reilly, 2011					
Course language:					
Notes:					
Course assessment Total number of assessed students: 13					
A	B	C	D	E	FX
0.0	30.77	53.85	7.69	7.69	0.0
Provides: doc. RNDr. Csaba Török, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ NOT1a/03	Course name: Nontraditional Optimization Techniques I
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 5.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion: Monitoring progress in solving applied projects. examination (50%), quality of the project (50%) examination	
Learning outcomes: To familiarize students with biologically and physically inspired optimization, simulation and prediction techniques. To expand students' creativity and programming skills by applying heuristic techniques in solving applied problems.	
Brief outline of the course: Fundamentals of optimization theory. Basic optimization problems. Basic types of objective functions. Classification of optimization techniques. Gradient-based optimization techniques. Evolutionary algorithms. Genetic algorithms. Genetic algorithms as Markov processes. Statistical Mechanics Approximations of Genetic Algorithms. Monte Carlo simulation and simulated annealing. Swarm optimization. Cellular Automata and their applications in simulations of complex systems. Fractals. Agent-based models. Evolutionary games. Evolution of cooperation. Fundamentals of Neural Networks. Application of singular value decomposition to solve least squares problems.	
Recommended literature: Hartmann, A. K., Rieger, H., Optimization Algorithms in Physics, Wiley, 2002 Reeves, C. R., Rowe, J. E., Genetic Algorithms: Principles and perspectives, Kluwer, 2003 Mitchell, M., Complexity. A Guided Tour, Oxford University Press, 2009 Solé, R. V., Phase Transitions, Princeton University Press, 2011 Ilachinski, A., Cellular Automata. A Discrete universe, World Scientific, 2002 Haykin, S., Neural Networks. A Comprehensive Foundation, Prentice-Hall, 1999	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 56					
A	B	C	D	E	FX
67.86	16.07	7.14	3.57	5.36	0.0
Provides: RNDr. Branislav Brutovský, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ NOT1b/03		Course name: Nontraditional Optimization Techniques II			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 6.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion: Presentation of the project in written form. Oral exam and discussion of the presented project.					
Learning outcomes: By using examples from the biology to learn applications of optimization techniques on study and interpretation of complex systems. Introduction to new paradigms in the area of systems biology.					
Brief outline of the course: Complex systems, emergent behavior. Evolutionary theory and memetics. Application of optimization techniques on complex systems. Application of methods /genetic algorithms, simulated annealing, taboo search/ on selected problems of biomolecular simulations. Molecular dynamics, protein folding. Population dynamics, metabolic networks and complexity in bioinformatics.					
Recommended literature: The actual scientific papers.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 33					
A	B	C	D	E	FX
84.85	6.06	6.06	3.03	0.0	0.0
Provides: doc. RNDr. Jozef Uličný, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ OSY1/15		Course name: Operating systems			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 0 Per study period: 28 / 0 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 138					
A	B	C	D	E	FX
26.09	10.14	18.84	18.12	18.84	7.97
Provides: doc. Ing. Štefánia Gallová, CSc., RNDr. PhDr. Peter Pisarčík					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ORSP/14	Course name: Oracle Database Administration
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., N	
Prerequisites: ÚINF/ASSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Database Overview: database architecture, connecting to the database, using database administration tools, administrating Oracle instances. Space management: administrating “Table Spaces”, Performing reorganization of tables, housekeeping and troubleshooting. Backup, Restore and Recovery.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 22	
abs	n
90.91	9.09
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ZMSP/14	Course name: Outline of Basic Modules From the Viewpoint of Consultant
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., N	
Prerequisites: ÚINF/ZKSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: User training modules: HR (Human Resources), FI (Financial) + CO (Controlling), MM (Material Management).	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 13	
abs	n
100.0	0.0
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ PDS1/15		Course name: Parallel and distributed systems			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: to introduce the fundamentals of parallel and distributed programming					
Brief outline of the course: current parallel and distributed architectures, basic issues in parallel and distributed applications development, data structures and programming methodologies					
Recommended literature: 1. Kenneth A. Berman and Jerome L. Paul: Algorithms: Sequential, Parallel, and Distributed, Thomson, 2005, ISBN 0-534-42057-5 2. Gregory R. Andrews: Foundations of Multithreaded, Parallel, and Distributed Programming, Addison-Wesley, 2000, ISBN 0-201-35752-6 3. Joseph JáJá: An Introduction to Parallel Algorithms, Addison-Wesley, 1992, ISBN 0-201-54856-9 4. Gerard Tel: Introduction to Distributed Algorithms, Cambridge University Press, 1994, ISBN 0-521-47069-2					
Course language:					
Notes:					
Course assessment Total number of assessed students: 108					
A	B	C	D	E	FX
24.07	18.52	17.59	18.52	12.96	8.33
Provides: doc. RNDr. Csaba Török, CSc., doc. RNDr. Jozef Jirásek, PhD., RNDr. František Galčík, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/LEK1/99		Course name: Physical Principles of Medicine Technique			
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 27					
A	B	C	D	E	FX
85.19	11.11	3.7	0.0	0.0	0.0
Provides: doc. RNDr. Karol Flachbart, DrSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚFV/ IFY1b/07	Course name: Physics for Informaticists II
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 3	
Recommended semester/trimester of the course: 3.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Exam interview - 60%, tests - 40%.	
Learning outcomes: Familiarize students with the basics of modern physics to the extent possible to understand the physical nature of the activities selected hardware of modern information systems and outline and understand the current physical view of the world. Through laboratory exercises practically verify and consolidate the knowledge gained in this course for Computer Science I (for external students).	
Brief outline of the course: Anotation of the lectures – Physics for informaticists II: Methods of computational physics – Monte-Carlo simulation of physical processes, applications to nuclear physics and physics of advanced technology, examples of algorithm. Electromagnetism – a basic interaction, Maxwell's equations of electromagnetics field. Relativistic physics of inertial systems – Einstein's postulates. Gravitation – a fundamental force. Basic quantum physics. Classes – thematic tasks have the character of constructive tasks enabling to verify the theory describing properties of a certain electronic circuit analysed in part I. Amplifying and rectifying phenomena on the semiconductors. Analysis of functions and properties of basic analog and digital electronic elements, circuits, and systems for transmission and processing of informations – transistors, operating amplifiers, combinational and sequence logic circuits, analog to digital and digital to analog converters.	
Recommended literature: 1. Garcia N., Damask A., Schwarz S.: Physics for Computer Science Students – with Emphasis on Atomic and Semiconductor Physics. Second Edition. Springer-Verlag, New-York, Berlin, 1998. 2. Gershenfeld N.: The Physics of Information Technology. Cambridge University Press, Cambridge, 2000. 3. Howatson A. M.: Electrical Circuits and Systems. An Introduction for Engineers and Physical Scientists. Oxford University Press, Oxford, 1996. 4. Zbar P.B., Malvino A.P., Miller M.A.: Basic Electronics: a Text-Lab Manual. Macmillan/McGraw – Hill, New York, 1994.	

Course language:					
Notes:					
Course assessment					
Total number of assessed students: 372					
A	B	C	D	E	FX
20.43	33.06	26.08	12.9	1.88	5.65
Provides: doc. RNDr. Ján Füzér, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/IFY/09		Course name: Physics for Informatics			
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Two written tests. Combination of the results of two tests.					
Learning outcomes: Introduction to classical and modern physics.					
Brief outline of the course: The lecture provides an introduction to classical and modern physics, the basics of magnetism and magnetic recording. Popular form explain the theory of relativity, quantum physics and Maxwell's equations.					
Recommended literature: J. B. Seaborn, Understanding the Universe: An Introduction to Physics and Astrophysics, Springer 1997					
Course language:					
Notes:					
Course assessment Total number of assessed students: 116					
A	B	C	D	E	FX
32.76	25.86	26.72	12.93	1.72	0.0
Provides: doc. RNDr. Ján Füzér, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/IFS1a/07		Course name: Physics Practical for Informatics			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites: ÚFV/IFY1b/07					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 20					
A	B	C	D	E	FX
70.0	25.0	5.0	0.0	0.0	0.0
Provides: prof. RNDr. Rastislav Varga, DrSc., RNDr. Erik Čížmár, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ PRP2/15		Course name: Principles of computers			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 74					
A	B	C	D	E	FX
39.19	17.57	14.86	17.57	10.81	0.0
Provides: doc. Ing. Štefánia Gallová, CSc., RNDr. Juraj Šebej					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ PMO1/15		Course name: Proces modelling			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites: ÚINF/SWI1a/15					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 0					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Gabriel Semanišin, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ ePAZ1a/15		Course name: Programming, algorithms, and complexity			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 4 Per study period: 42 / 56 Course method: present					
Number of credits: 8					
Recommended semester/trimester of the course: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature: 1. ECKEL, B.: Thinking in Java, Pearson, 2006, ISBN: 978-01-318-7248-6 2. PECINOVSKÝ, R.: OOP - Naučte se myslet a programovat objektově, Computer Press, a.s., Brno, 2010, ISBN: 978-80-251-2126-9 3. SIERRA, K., BATES, B. Head First Java, O'Reilly Media; 2nd edition, 2005, ISBN: 978-05-960-0920-5					
Course language:					
Notes:					
Course assessment Total number of assessed students: 7					
A	B	C	D	E	FX
14.29	28.57	0.0	42.86	0.0	14.29
Provides: RNDr. Peter Gurský, PhD., RNDr. František Galčík, PhD., RNDr. Zuzana Bednárová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ePAZ1b/15		Course name: Programming, algorithms, and complexity			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 4 Per study period: 28 / 56 Course method: present					
Number of credits: 7					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites: ÚINF/ePAZ1a/11 or ÚINF/ePAZ1a/15					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 7					
A	B	C	D	E	FX
14.29	42.86	14.29	0.0	14.29	14.29
Provides: doc. RNDr. Gabriela Andrejková, CSc., RNDr. Peter Gurský, PhD., RNDr. František Galčík, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PAZ1c/15	Course name: Programming, algorithms, and complexity
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 3.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes: Gain skills to design and implement complex application with three-layer architecture and well-known design patterns.	
Brief outline of the course: <ol style="list-style-type: none"> 1. Food vending machine as an example of small project. Class identification. Use-cases. Method and instance variable identification. Unit testing in JUnit. 2. Designing CRUD application. Quote Database application example. Entity identification and design. Entity identity. Designing interfaces for Data Access Objects and demo implementation. Three-layered architecture. 3. Business logics in classes. Designing a simple layered application. Class relationships with static association. Pros and cons in hardwired associations. 4. Implementing Factory design pattern as an abstraction of hardwired association. Examples and usage of factory. Briefly about MVC design pattern. Models and view in Swing. Model examples: static, dynamic, refreshing model. 5. Interface as a contract between client and class. Contract in code: input and output parameters, exceptions. Preconditions, postconditions, invariants. Favouring interface over implementation. Inheritance vs composition dilemma. Pros and cons of inheritance, choosing a suitable inheritance candidate. Favouring composition over inheritance. 6. Encapsulation: definition and real use. Best practices for enforcing encapsulation. More about pros and cons of inheritance with examples. Liskov Substitution principle. Delegation as a hybrid between inheritance and composition. 7. Associations between classes. Cardinalities: 1:1, 1:M, 1:N. Design and realization in the code. 8. Exceptions: designing exceptions, exceptions classes and best practices. Three types of exception handling. Logging with default tools and with 'slf4j' library. Logging best practices. 9. Service classes: two design approaches. Configuration vs input parameters. 10. Database access with Spring JDBC Template. Mapping objects and relationships. 	
Recommended literature: SIERRA, K., BATES, B.: Head First Java (2nd Edition), 2005 ECKEL, B.: Thinking in Java (4th Edition), 2006	

Course language:					
Notes:					
Course assessment					
Total number of assessed students: 252					
A	B	C	D	E	FX
36.11	20.63	16.27	11.51	10.32	5.16
Provides: RNDr. Róbert Novotný, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/JAC1/15	Course name: Programming language C
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 5.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion: Practices attendance and activity. Home assignment Final project.	
Learning outcomes: Become skilled in language C and get knowledge of the theoretical concepts that are used in the development in low-level software.	
Brief outline of the course: 1. Installing and setting up the development environment. Simple program in C, compiling and running. 2. Loops, conditions. Introduction to arrays. Numeric functions from numeric library. Compiling with `gcc` and setting up the warnings and hints. 3. Functions. Statically allocated arrays. Array gotchas in C. Makefiles for complex projects. 4. Basic I/O functions. Functions with array parameters and specifics. 5. Dynamic memory allocation as a mechanism for dynamic arrays. Strings as a special case of arrays. Strings and file I/O. 6. String manipulation principles and functions from standard library. 7. Working with binary files. 8. Custom data types. Structs. 9. Dynamic data structures. Linked lists. Stacks and operations with these structs. 10. Additional operations with dynamic data structures. Parameter passing with values and name. 11. Useful tricks and hints: passing parameters from operating system, exit codes. Multidimensional arrays. 12. Function pointers. Generic pointers. Unions.	
Recommended literature: 1. A. D. Marshall: Programming in C: UNIX System Calls and Subroutines using C. [online] < http://www.cs.cf.ac.uk/Dave/C/CE.html > 2. J. Maasen: C for Java Programmers. [online] < http://www.cs.vu.nl/~jason/college/dictaat.pdf > 3. Bruce Eckel: Thinking in C. [online] < http://mindview.net/CDs/ThinkingInC >	
Course language:	

Notes:					
Course assessment					
Total number of assessed students: 115					
A	B	C	D	E	FX
52.17	24.35	7.83	2.61	9.57	3.48
Provides: RNDr. Zuzana Bednárová, PhD.					
Date of last modification: 07.09.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ PRO1a/15		Course name: Project I.			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 33					
A	B	C	D	E	FX
72.73	0.0	21.21	6.06	0.0	0.0
Provides: Mgr. Alexander Szabari, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ PRO1b/15		Course name: Project II.			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 18					
A	B	C	D	E	FX
44.44	22.22	16.67	11.11	0.0	5.56
Provides: Mgr. Alexander Szabari, PhD., RNDr. Róbert Novotný, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ PMdi/15		Course name: Project management			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 7					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: Mgr. Alexander Szabari, PhD., RNDr. Rastislav Krivoš-Belluš, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PMSP/14	Course name: Project Management in the SAP ERP
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 1 Per study period: 42 / 14 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., N	
Prerequisites: ÚINF/ZMSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Business process overview in SAP, project structure definition, project planning, resource planning, costs and revenues, record project activities.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 14	
abs	n
92.86	7.14
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PBS/15	Course name: Pro-seminar to bachelor thesis
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 1 Per study period: 14 Course method: present	
Number of credits: 1	
Recommended semester/trimester of the course: 6.	
Course level: I.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 206	
abs	n
91.26	8.74
Provides: RNDr. Ľubomír Antoni, PhD., RNDr. Ondrej Krídlo, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚGE/ DPZ/13		Course name: Remote sensing			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course: Remote Sensing includes – electromagnetic radiation, electromagnetic spectrum, radiometric quantities. Radiation sources, interaction with the surrounding, reflection, impact of the atmosphere, diffusion in the atmosphere, absorption in the atmosphere, landscape objects and their identification and appreciation, data acquire - basic division, cameras, film material, types of aerial images, radiometer, mechanical scanner, electronic scanner, carriers, satellites and their instrumentation, principals of remote sensing data postprocessing, interpretation of satellite and aerial images, remote sensing applications.					
Recommended literature: Lillesand, T. M., Kiefer, R. W., 2002: Remote Sensing and Image Interpretation., New York, John Wiley&Sons, x, 724 s.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 2					
A	B	C	D	E	FX
0.0	0.0	100.0	0.0	0.0	0.0
Provides: Mgr. Michal Gallay, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/APSP/14	Course name: SAP Applications in Public Administration / a Company
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., N	
Prerequisites: ÚINF/ZSSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: Description of the processes and procedures in the area of SAP budgeting, financing and asset management, SAP for human resources and payroll, SAP Administrative Office system, outputs - reporting in the SAP environment, output options, training outputs, output processing, and exporting data further processing in the environment of Excel, Word ..., inputs - import data in the SAP environment, preparation of input data, the procedure for importing data.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 80	
abs	n
100.0	0.0
Provides: Ing. Katarína Nináčová, RNDr. Edita Vojtová, Ing. Slávka Šimková, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PUSP/14	Course name: SAP for Advanced Users
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., N	
Prerequisites: ÚINF/APSP/14	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course: One of the training modules: HR (Human Resources), FI (Financial) + CO (Controlling), MM (Material Management).	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 78	
abs	n
100.0	0.0
Provides: Ing. Katarína Nináčová, RNDr. Edita Vojtová, Ing. Slávka Šimková, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/SWI1a/15		Course name: Software engineering			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites: ÚINF/DBS1a/15 or ÚINF/DBdi/15					
Conditions for course completion:					
Learning outcomes: To provide information concerning the principal activities related to the development of software products.					
Brief outline of the course: System, subsystem, software system. Software processes. Introduction to project management. Requirements gathering. Software modelilng. Software architectures. Software development methodologies. Verification and validation. Resource management.					
Recommended literature: 1. BERKUN, S. The Art Of Project Management. O Reilly, 2005. 2. BJORNER, D. Software engineering 1,2,3. Springer-Verlag Berlin, 2006. 3. SOMMERVILLE, I. Software Engineering. Addison-Wesley, 2007.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 209					
A	B	C	D	E	FX
11.96	14.83	21.05	22.01	28.71	1.44
Provides: doc. RNDr. Gabriel Semanišin, PhD., Mgr. Alexander Szabari, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/SWI1b/15		Course name: Software engineering			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites: ÚINF/SWI1a/15					
Conditions for course completion:					
Learning outcomes: To learn principles and to developed fundamental skills concerning software modelling, development and implementation.					
Brief outline of the course: Software modelling in UML - the syntax and the semantics of UML diagrams. Foundation of Model Driven Architecture. Selected aspects of project management. Selected legal aspects of SW engineering. Pattern design.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 167					
A	B	C	D	E	FX
37.72	16.77	14.97	11.38	17.96	1.2
Provides: Mgr. Alexander Szabari, PhD., doc. RNDr. Gabriel Semanišin, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/BZP1a/15	Course name: Special seminar to bachelor thesis
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 7.	
Course level: I.	
Prerequisites: ÚINF/PBS/15	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature: 1. KATUŠČÁK, D.: Ako písať vysokoškolské a kvalifikačné práce, 2. vydanie Bratislava, 1998 2. ISO 690: 1987 Documentation - Bibliographic references. Content, form and structure. 3. ISO 2145: 1978 Documentation - Numbering of divisions and subdivisions in written documents. 4. Special and research literature connected to Bachelor theses according to recommendations of supervisor.	
Course language:	
Notes:	
Course assessment Total number of assessed students: 40	
abs	n
87.5	12.5
Provides: RNDr. František Galčík, PhD., RNDr. Ľubomír Antoni, PhD., RNDr. Ondrej Krídlo, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/BZP1b/15	Course name: Special seminar to bachelor thesis
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 8.	
Course level: I.	
Prerequisites: ÚINF/BZP1a/15	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature: 1. KATUŠČÁK, D.: Ako písať vysokoškolské a kvalifikačné práce, 2. vydanie Bratislava, 1998 2. ISO 690: 1987 Documentation - Bibliographic references. Content, form and structure. 3. ISO 2145: 1978 Documentation - Numbering of divisions and subdivisions in written documents. 4. Special and research literature connected to Bachelor theses according to recommendations of supervisor.	
Course language:	
Notes:	
Course assessment Total number of assessed students: 32	
abs	n
96.88	3.13
Provides: RNDr. Ľubomír Antoni, PhD., RNDr. Ondrej Krídlo, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Gabriel Semanišin, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ MSU/07		Course name: Statistical Methods of Data Analysis			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 3., 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Exam					
Learning outcomes: Introduction to probability theory and mathematical statistics.					
Brief outline of the course: General introduction to theory of probability, random processes and mathematical statistics.					
Recommended literature: 1) L. Lyons, Statistics for Nuclear and Particle Physics, CUP, 1989. 2) L. Lyons, A Practical Guide to Data Analysis for Physical Science Students, CUP, 1991. 3) J.R. Taylor, An Introduction to Error Analysis: The Study of Uncertainties in Physical Measurements, University Science Books, 1997.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 32					
A	B	C	D	E	FX
21.88	9.38	12.5	3.13	53.13	0.0
Provides: doc. RNDr. Jozef Urbán, CSc., RNDr. Adela Kravčáková, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/SXM1/15		Course name: Structure formats and representation of data			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Evaluation of partial assignments within larger project. Evaluation of multiple assignments corresponding to learning blocks.					
Learning outcomes: Become acknowledged with theoretical concepts and methodologies with structured and semistructured data. Acquire programming skills with implementations of these concepts.					
Brief outline of the course: Representation of semi-structured data in XML, valid and well-formed XML document. XML parsers: DOM, SAX, StAX. Java API of XML parsers. Schemas for XML documents: DTD, XML Schema. Addressing in XML: XPath. Transformations of XML documents: XSLT. Other formats for semistructured data: JSON, YAML. API for data binding in Java: Jackson (JSON), SnakeYAML (YAML), JAXB (XML).					
Recommended literature: 1. Eliotte "Rusty" Harold. XML Bible, Gold Edition. Wiley, 2001. ISBN 978-0764548192. 2. Grigoris Antoniou, Frank Van Harmelen. A Semantic Web Primer, Second Edition. MIT Press, 2008. ISBN 978-0262012423. 3. Michael Kay. XSLT 2.0 Programmer's Reference, 3rd Edition. Wrox, 2004. ISBN: 978-076456909.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 14					
A	B	C	D	E	FX
21.43	21.43	21.43	21.43	14.29	0.0
Provides: RNDr. Peter Gurský, PhD., RNDr. František Galčík, PhD., doc. RNDr. Gabriela Andrejková, CSc.					
Date of last modification: 01.06.2015					

Approved: doc. RNDr. Gabriel Semanišin, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/SPR1a/15		Course name: System programming			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites: ÚINF/JAC1/15					
Conditions for course completion: Implementation of final project and its oral defense.					
Learning outcomes: Provide and demonstrate basic concepts of Linux and Android system programming.					
Brief outline of the course: Programming language C.					
Recommended literature: 1. Mark L. Mitchell, Alex Samuel, Jeffrey Oldham: Advanced Linux Programming. Sams, 2001. ISBN: 978-0735710436. 2. Mark L. Murphy: The Busy Coder's Guide to Android Development. CommonsWare, LLC, 2009. ISBN: 978-0981678009 3. W. Frank Ableson, Robi Sen, Chris King and C. Enrique Ortiz: Android in Action Third Edition. Manning, 2011. ISBN 9781617290503					
Course language: English					
Notes:					
Course assessment Total number of assessed students: 140					
A	B	C	D	E	FX
50.71	18.57	10.71	3.57	8.57	7.86
Provides: doc. Ing. Štefánia Gallová, CSc., RNDr. PhDr. Peter Pisarčík					
Date of last modification: 02.07.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ TVP1/15		Course name: Testing and verification of programs			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 5					
A	B	C	D	E	FX
20.0	20.0	40.0	20.0	0.0	0.0
Provides: doc. RNDr. Gabriela Andrejková, CSc., Mgr. Alexander Szabari, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ePOS2a/15	Course name: User environments of operating systems
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Test - solving practical tasks. final test	
Learning outcomes: To be familiar in user interfaces of operation systems Windows and Linux, to know their options, advantages, disadvantages and differences. To know, how to configure basic parameters, to install basic system software and to use internal and external devices.	
Brief outline of the course: OS Windows - user accounts management, sharing, mounting remote directories. Processes, monitoring and modification of system parameters. Connecting to the Internet, settings and monitoring, firewall. Basic features of FAT a NTFS file systems. Disk management, backups, recovery. File and directory permissions. Making links to files and directories. Virtualization and emulation of OS. OS GNU/Linux, directories structure, shell. Running jobs, scheduling, jobs on background. Managing with files and directories, backups, file permissions, user groups. Connecting to the Internet. Firewall. Programs installation, Package managers, actualization. Backups on local and remote storage. Imaging. RAID field Management.	
Recommended literature: 1. O. Bitto: Microsoft Windows 7, Podrobná uživatelská příručka, Computer Press, 2011. 2. P. Broža, J. Hlavenka, J. Bednařík: Microsoft Windows XP (Uživatelská příručka), Computer Press, 2006. 3. S. Shah, W. Soyinka: Administrace systému Linux, Grada, 2007. 4. Linux - Dokumentační projekt, Computer Press, 2007.	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 8					
A	B	C	D	E	FX
75.0	0.0	0.0	0.0	12.5	12.5
Provides: RNDr. JUDr. Pavol Sokol, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Gabriel Semanišin, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ WBdi/15		Course name: Web a návrh používateľských rozhraní			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 0 / 3 Per study period: 0 / 42 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Solving partial assignments and active participation in discussions in a virtual classroom.					
Learning outcomes: Create accessible and usable Web Sites, used the standards (X) HTML and CSS. Apply the rules for the page layout. Maintain website and use the basic procedures for their promotion.					
Brief outline of the course: Web Development using (X) HTML and CSS. Tools for web development. Standards of accessibility and usability of the web sites. Cycle of development web site and its promotion.					
Recommended literature: Basic sources for distance courses will be published in LMS Moodle. TITTEL, Ed a Jeff NOBLE. HTML, XHTML & CSS. 7th ed. Hoboken, NJ: Wiley, c2011, xx, 392 p. --For dummies. ISBN 04-709-1659-1. KRUG, Steve. <i>Nenuťte užívateľa premýšľať!</i>: praktický průvodce testováním a opravou chyb použitelnost webu</i>. Vyd. 1. Brno: Computer Press, 2010, 165 s. ISBN 978-80-251-2923-4. Slovensko. Výnos Ministerstva financií Slovenskej republiky z 9. júna 2010 o štandardoch pre informačné systémy verejnej správy. In: <i>312/2010</i>. 2010. Dostupné z: http://informatizacia.sk/ext_dok-vynos_a_prilohy_2010-312/7431c					
Course language: slovak					
Notes:					
Course assessment Total number of assessed students: 70					
A	B	C	D	E	FX
14.29	8.57	10.0	17.14	24.29	25.71
Provides: doc. RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD.					
Date of last modification: 03.05.2015					

Approved: doc. RNDr. Gabriel Semanišin, PhD.
