Information Systems

Official Length of Programme, Mode of study
240 credits, full-time studies, four year studies

Qualification Degree
Bachelor of Computing

Field of Study
Information Systems

Faculty
Faculty of Informatics

State Code
6121BX011

Head of the Field's Study Programmes
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Objective(s) of a Study Programme:

To prepare graduates, who have good knowledge of mathematics, programming, management, law, project management and specific in-deep knowledge of information systems engineering, and are also able to practically analyse, design, implement and support information systems conforming with the modern information technology requirements.

Access to Professional Activity

The graduate can perform information systems design, programming, management and other engineering duties at various enterprises and organizations, can apply for such jobs an information systems analyst, architect, developer, database administrator, project manager, researcher and positions alike.

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Information Systems

	Module code	Module title and description	ECTS credits
1 Semester	P175B505	Computer Graphics	6
	T120B196	Introduction to Studies of Informatics	9
	P130B001	Mathematics 1	6
		Electives 1	9

	Module code	Module title and description	ECTS credits
2 Semester	P130B002	Mathematics 2	6
	P190B101	Physics 1	6
	P175B100	The First Principles of Digital Logic	6
		Electives 2	6
	Electives of Philosophy and Sustainable Development 2019 (Select One)		
	H120B111	Media Philosophy	6
	S183B001	Sustainable Development	6

	Module code	Module title and description	ECTS credits
3 Semester	H570B104	Academic and Technical Communication in English (Level C1)	6
	P175B125	Computer Architecture	6
	P170B008	Discrete Structures	6
	P160B003	Theory of Probability and Statistics	6
		Electives 3	6

	Module code	Module title and description	ECTS credits
4 Semester	P175B602	Databases	6
	P170B400	Design and Analysis of Computer Algorithms	6
	P175B304	Operating Systems	6
	P175B314	Software Engineering	6
	P175B121	Software Project Management and Development	6

	Module code	Module title and description	ECTS credits
5 Semester	T120B145	Computer Networks and Internet Technologies	6
	P170B103	Data Warehouses and Business Intelligence	6
	P170B114	Fundamentals of Information Systems	6
		Optional Subjects 2019	6
	Subjects of Specializations (Select One)		
		Databases Management and Programming	6
		Information Systems Analysis and Design	6

	Module code	Module title and description	ECTS credits
6 Semester	P170B126	Information Systems Graphical User Interface	6
	T120B195	Project of Information Technology Product Development	12
	Subjects of Specializations (Select One)		
		Databases Management and Programming	12
		Information Systems Analysis and Design	12

	Module code	Module title and description	ECTS credits
7 Semester	T120B148	Information System Design and CASE Technology	6
		Optional Subjects 2019	6
	Electives of Socioeconomic Environment Knowledge 2019 (Select One)		
	S180B103	Engineering Economics	6
	S210B003	Sustainable Human Development	6
	Subjects of Specializations (Select One)		
		Databases Management and Programming	12
		Information Systems Analysis and Design	12

	Module code	Module title and description	ECTS credits
8 Semester	P000B113	Final Degree Project	15
	P000B112	Final Practice	15

Information Systems

Learning outcomes:

Underlying Conceptual Basis for Informatics

A1   understanding of the key concepts and ideas of the field of information systems;

A2   understanding of fundamental subjects that the field of information systems requires or is based on;

Analysis, Design and Implementation

B1   skills of formalization and specification of the real-world problems whose solutions involve the use of informatics;

B2   knowledge and skills required to model activities of enterprises and to perform detailed business analysis;

B3   knowledge and skills required to analyze enterprise needs, specify information systems development and modernization requirements;

B4   knowledge and skills required to design information systems and databases, prepare the design documentation;

B5   knowledge and skills required to program, test, integrate, administer and install databases, user interface, business and other modules of information systems;

B6   knowledge and skills required to create multidimensional data warehouses and analyze the data stored in them;

B7   knowledge and skills required to plan and manage IS development, installation and expansion projects;

B8   knowledge and skills required to audit and evaluate IS designs and working information systems;

B9   skills required to apply information technologies (CASE tools, database managements systems, prototyping and programming environments, business modeling packages, etc.) for the solution of tasks;

Technological and Methodological Skills

C1   skills of combining theory and practice to solve tasks that may arise during the development and operation of information systems;

C2   knowledge and skills required to plan and conduct practical research, examine results;

C3   theoretical understanding of state-of-the-art software and hardware technologies and tools and the skills required to use them;

C4   literature analysis skills and the recognition of the need for life-long learning;

Other Professional Competences

D1   skills required to communicate effectively with colleagues, (potential) clients, information systems users and general public on any information systems related issues;

D2   skills required to systemically evaluate various tasks and situations, define their parameters, and break them down into smaller tasks at the same time providing suggestions on how to solve them;

D3   skills of engineering solutions evaluation with regards to ethics, social, legal and security requirements;

D4   skills required to work effectively both individually and in a team, assign tasks and responsibilities, manage projects and their teams;