RĪGAS TEHNISKĀ UNIVERSITĀTE

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Study programme "Finance management information systems"

Main attributes

Title	Finance management information systems
Identification code	DCP0
Education classification code	42484
Level and type	First-Cycle Higher Education (Professional Bachelor) Studies
Higher education study field	Information Technology, Computer Engineering, Electronics, Telecommunications, Computer Control and Computer Science
Head of the study field	Agris Ņikitenko
Deputy head of the study field	Jurģis Poriņš
Department responsible	Faculty of Computer Science, Information Technology and Energy
Head of the study programme	Ingars Eriņš
Professional classification code	2512 02
The type of study programme	Full time
Language	English
Accreditation	29.11.2023 - 30.11.2029; Accreditation certificate No 2023/44-A
Volume (credit points)	240.0
Duration of studies (years)	Full time studies - 4.0
Degree or/and qualification to be obtained	Professional bachelor's degree in computer systems and qualification of programming engineer
Qualification level to be obtained	The 6th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF); the 6th level of professional qualification
Programme prerequisites	Secondary education

Description

Abstract	The study programme is a joint study programme implemented in collaboration between Riga Technical University and BA School of Business and Finance. The study programme meets the requirements set in the occupational standard “Software Engineer”. The study programme comprises the study courses aimed at developing knowledge and competence in programming, software engineering, maintenance, implementation, testing and requirement setting, as well as study courses on financial issues and economics.
Aim	To prepare highly qualified specialists in the changing socio-economic conditions of the local and international labour market. To prepare programming engineers (according to the professional standard of the programming engineer) for professional activities in the field of software engineering with professional knowledge in programming languages, software development technologies, data structures and algorithms, software development project management, basic database technologies, computer systems design and operation, as well as competitive knowledge, skills, and competencies in financial management.
Tasks	Tasks of the study programme: - to provide competitive higher professional education in software engineering and to prepare students for practical work in financial field; - to provide knowledge in software engineering, computer hardware, database technologies, basic methods of artificial intelligence and to provide insight into the best practices of the industry; - to provide knowledge and practical skills in the design and development of information systems, envisaging the development of relevant documentation and ensuring the functioning of the said information system; - to develop students' abilities to use theoretical knowledge for specific tasks and solutions; - to develop students' skills to develop appropriate software, learn and use software environments and software tools; - to develop students' skills to independently acquire, evaluate and use new software products; - to develop students' ability to design information, database, intellectual and software systems; - to provide practical work experience, offering the student to apply the acquired knowledge in practice, solving engineering issues; - to provide students with a comprehensive knowledge and understanding of financial management and the regularities of economic development, investment project development and portfolio building, financial markets and instruments, new financial technologies and financial risks; - to develop students' research and creative work skills and abilities. - to promote the development of students into a free, responsible and creative personality; - to develop students' general competencies required in today's labour market, including foreign language skills; - to improve students' ability to independently increase the level of academic and professional knowledge; - to promote further improvement of the content of the study program and the study process in accordance with the development of the national economy, international market and technologies.

Learning outcomes	In accordance with the level of the 6th Latvian Qualification Framework and the standard "Programming Engineer", the following study results are determined in the programme: KNOWLEDGE: • knows software development (systems analysis, design, coding, testing), software implementation and maintenance. SKILLS: - is able to prepare software documentation in accordance with the requirements of software engineering standards; - is able to understand and analyse software design descriptions, requirements specifications, maintenance system documentation and code, as well as make changes to it; - is able to use software development environments and tools; - is able to choose adequate algorithms, methods, software products and tools to solve the problem; - is able to think creatively to develop new methods and approaches to problem solving through computer systems; - is able to use a good programming style and apply industry best practices; - is able to develop software appropriate to the task, learn and use software environments and software tools; - is able to develop programming guidelines; - is able to participate in project development, management, teamwork and lead, plan and coordinate the team; - is able to manage assets, prepare financial statements and calculate taxes; - is able to apply quantitative methods of financial analysis to ensure efficient operation of the company; - is able to forecast the financial result of the company's economic activity, prepare the company's financial plans and budget, prepare investment projects, assess and manage financial risks; - is able to apply IT and financial industry standards and act in accordance with professional ethics; - is able to use professional terminology in the state language; - is able to acquire professional literature in a foreign language; - is able to independently plan work activities. COMPETENCES: - understands the current tendencies and regularities of financial development, orientates in the processes taking place in the financial environment and is able to explain them, discuss them with arguments and make decisions in accordance with the changes in the situation; - is able to perform professional activities, formulate and analytically describe information, problems and solutions in his / her profession, using a scientific approach; - is able to learn new models, methods and technologies, as well as understands the need for continuous professional development.
Final/state examination procedure, assessment	Upon completion of the study programme, students pass the national examination, including the defence of the bachelor thesis at the open meeting of the State Examination Commission (SEC). Simultaneously, testing of the essential fundamental, theoretical industry specific and field of specialization specific knowledge is carried out. SEC shall include at least five members. The Head of the commission and at least a half of its members shall be representatives of professional industry organizations or employers. SEC collegially assess the knowledge, skills and competences of the students according to a 10-grade scale.
Description of the future employment	Software engineers are educated and trained for work in different financial sector enterprises, including banks and other financial institutions.
Special enrollment requirements	English language proficiency equivalent to at least CEFR B2 level.
Opportunity to continue studies	The knowledge obtained within the study programme allows continuing studies at the master degree study programmes.

Courses

No	Code	Name	Credit points
A		**Compulsory Study Courses**	**144.0**
A1		**General Education Study Courses**	**20.0**
1	PA0406	Law	3.0
2	PA0407	Environmental Protection, Civil Defense and Labour Safety Organization	5.0
3	PA0408	Economics	6.0
4	PA0409	International and Commercial Law	3.0
5	PA0410	Business Organization	3.0
A.2		**Field-Specific Theoretical Basic and IT Study Courses**	**55.0**
1	DE0028	Mathematics	13.0
2	DE0132	Discrete Mathematics	5.0
3	DE0470	Financial Mathematics	3.0
4	DA0215	Physics	3.0
5	DE0283	Database Management Systems	6.0
6	DE0027	Introduction to Study Field	1.0
7	DE0013	Operating Systems	4.0
8	DE0577	Introduction to Artificial Intelligence	3.0
9	DE0035	Banking Information Systems	4.0
10	DE0915	Algorithmization and Programming of Solutions	8.0
11	DE0917	Programming Languages	5.0
A.3		**Field-Specific Professional Study Courses**	**69.0**
1	DE0292	Data Models in Database Systems	3.0
2	DE0575	WEB Technologies	6.0
3	PA0411	Financial Management	12.0
4	DE0285	Systems Analysis and Knowledge Acquisition	3.0
5	DE0299	Fundamentals of Computer Systems Design	3.0
6	DE0567	Process-Oriented Systems Development (study project)	3.0
7	DE0573	Web-application Creation (study project)	3.0
8	PA0412	Management Accounting and Business Finance	9.0
9	DE0585	Financial Mobile Application Development	6.0
10	DE0586	Object-Oriented Programming Practice (study project)	3.0
11	DE0918	Data Structures and Algorithms	7.0
12	DE0008	Object-Oriented Programming	4.0
13	DE0010	Introduction to Computer Architecture	4.0
14	DE0609	Cloud computing	3.0
B		**Compulsory Elective Study Courses**	**39.0**
B1		**Field-Specific Study Courses**	**27.0**
1	PA0413	Accounting System	3.0
2	PA0414	Risk Management in Finance	3.0
3	DE0566	Information Systems Security	3.0
4	DE0578	Object-Oriented System Analysis	3.0
5	DE0156	Actuarial Mathematics	5.0
6	DE0175	Applied Financial Analysis	4.0
7	DE0914	Introduction to Data Analytics	3.0
8	PA0400	Organization of Financial System	2.0
9	PA0421	Taxes and Audit System	5.0
10	PA0401	Online Financial Services	3.0
11	PA0402	Research Methods in Finance	2.0
12	PA0403	Effective Process Management	3.0
13	PA0404	Service Design	3.0
14	DE0296	Automated Functional and Load Testing of Web Solutions	6.0
B2		**Humanities and Social Sciences Study Courses**	**6.0**
1	IV0189	Project Management	3.0
2	PA0415	Sales Skills and Cross-Cultural Communication	3.0
3	PA0405	Design Methods in Management	3.0
B6		**Languages**	**6.0**
1	PA0416	Business German	3.0
2	PA0417	Business English	3.0
3	PA0418	English for Specific Purposes	3.0

4	PA0419	German for Specific Purposes	3.0
5	PA0420	The Latvian Language	3.0
C		**Free Elective Study Courses**	**9.0**
D		**Practical Placement**	**30.0**
1	DE0588	Practical Placement	30.0
E		**Final Examination**	**18.0**
1	DE0595	Bachelor Thesis Including Project	18.0