RĪGAS TEHNISKĀ UNIVERSITĀTE

Reģ.Nr.90000068977, Ķīpsalas iela 6A, Rīga, LV-1048, Latvija
Tālr.:67089999; Fakss:67089710, e-pasts:rtu@rtu.lv, www.rtu.lvwww.rtu.lv

Study programme "Information Technology"

Main attributes

Title	Information Technology
Identification code	DDI0
Education classification code	51481
Level and type	Doctoral (Third Cycle) 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 and Information Technology
Head of the study programme	Jānis Grabis
Professional classification code	
The type of study programme	Full time, Extramural
Language	Latvian
Accreditation	31.05.2013 - 31.12.2023; Accreditation certificate No 2020/80
Volume (credit points)	192.0
Duration of studies (years)	Full time studies - 4,0; Extramural - 5,0
Degree or/and qualification to be obtained	Doctor of Science (Ph.D.) in Engineering and Technology / –
Qualification level to be obtained	The 8th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF)
Programme prerequisites	Master of Engineering

Description

Abstract	The Doctoral Information Technology study programme at Riga Technical University prepares the highest level information technology professionals conducting cutting edge research and solving highly complex industrial problems. The main areas of emphasis of the study programme are modeling and optimization of complex systems, intelligent methods for decision analysis and systems integration.
Aim	The objective of the Doctoral study programme is to prepare highly qualified professionals conducting the cutting edge research and solving highly complex industrial problems in information technology.
Tasks	•To prepare students for independent research and development career in academia and industry •To promote knowledge transfer to industry •To develop individual talents of students and to provide stimulating studying experience and environment •To nurture recognition of the need for and an ability to engage in continuing professional development •To promote critical and systematical thinking and to develop collaboration and cooperation skills •To explain and to promote information technology in the society

Learning outcomes	• Knowledge and understanding:
	  oBroad knowledge in Information Technology and a systematic understanding of research;
	  oFamiliarity with scientific methodology.
	• Skills and abilities:
	  oAn ability for scientific analysis and synthesis and independent, critical assessment of new and complex phenomena, issues and situations;
	  oAn ability to critically, independently, creatively and with scientific precision and formulate issues and to plan and use appropriate methods to conduct research and other advanced tasks within specified timeframes and to review and evaluate such work;
	  oAn ability to significantly contribute to development of knowledge;
	  oAn ability to both orally and in writing present and discuss research and research in dialogue with the scientific community and society in general;
	  oAn ability to identify needs for further knowledge;
	  oAn ability to advance professional and social development and to support the learning of others.
	• Values and attitudes
	  oDemonstrate intellectual independence and scholarly integrity and ability to make ethical assessments;
	  oA deeper insight into the possibilities and limitations of information technology, its role in society and human responsibility for its use.
	•Concentration areas
	  oAn ability to elaborate new modeling and optimization methods, algorithms and methodologies;
	  oAn ability to elaborate and to analyzed complex data sets;
	  oAn ability to develop new system development, integration and configuration methods and Technologies.

Final/state examination procedure, assessment	Doctoral thesis defense at promotional council.

Description of the future employment	Graduates can work as leading information technology consultants, application developers, information technology managers and system analysis and modeling specialists. They work for research and higher education institutions and information technology development and consulting companies as well as companies and organizations using complex information technology solutions.
Special enrollment requirements	
Opportunity to continue studies	

Courses

No	Code	Name	Credit points
A		**Compulsory Study Courses**	**15.0**
1	DID611	Intelligent Computer Technologies	10.0
2	DPI641	Concepts of Object-Oriented Software	5.0
B		**Compulsory Elective Study Courses**	**21.0**
B1		**Field-Specific Study Courses**	**21.0**
1	DOP620	Optimisation and Adaptation of Complex Systems	10.0
2	DID616	Intelligent Decision Support Systems	10.0
3	DMI626	Computer Simulation Software	10.0
4	DMS668	Stochastic Analysis of Securities Trading	10.0
5	DID617	Artificial Neural Systems for Information Processing	5.0
6	DMI630	Methodology of Complex Systems Simulation	5.0
7	DMS669	Stochastic Differential Equations	5.0
8	DOP610	Specialized Scientific Seminars	6.0
9	DMI694	Specialized Research Seminars	6.0
C		**Free Elective Study Courses**	**6.0**
E		**Final Examination**	**150.0**
1	DID009	Research Work	150.0
2	DMI009	Research Work	150.0
3	DMS009	Research Work	150.0
4	DOP009	Research Work	150.0