



RTU Course "Service Science, Management, and Engineering"

12307 Sistēmu teorijas un projektēšanas katedra

General data

Code	DSP707
Course title	Service Science, Management, and Engineering
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Post-graduate Studies
Course type	Academic
Field of study	Computer Science
Responsible instructor	Mārīte Kirikova
Academic staff	Gundars Alksnis
Volume of the course: parts and credits points	1 part, 4.0 Credit Points, 6.0 ECTS credits
Language of instruction	LV, EN
Possibility of distance learning	Not planned
Abstract	The course is about service oriented approach in business and information systems and software engineering. It concerns vertical (inside the enterprise) and horizontal (inter-organisational) service provision situations. The emphasis is put on new innovative service development. The course comprises service design methods, basics of building service oriented architectures (SOA), and other topics of service engineering. Students will experiment with various service development and running technologies. They will learn approaches to service governance according to most popular service management methods and standards. Students are expected to have basic knowledge in business process modelling, systems theory and portfolio management. The course concerns also research advances in SOA.
Goals and objectives of the course in terms of competences and skills	The course objective is to provide theoretical knowledge and skills enabling students to systematically design, develop and govern services.
Structure and tasks of independent studies	Individual and group assignments relevant to course topics.
Recommended literature	IBM Academic Initiative materials https://www.ibm.com/developerworks/university/courseware/ :
Course prerequisites	Business process modelling, systems theory, portfolio management

Course outline

Theme	Hours
Introduction to Service Science, Management, and Engineering (SSME)	4
Service innovation management and productivity	4
Service research	4
Service design	4
Service compliance management	4
Principles of Service Oriented Architecture (SOA)	4
SOA model development	8
SOA in detail	4
Service engineering	8
IT service development	4
Service governance	8
Outsourcing and services	4
Introduction to global service company management	4

Learning outcomes and assessment

Learning outcomes	Assessment methods
Is able to explain basic principles, pros, and cons of SSME and SOA; recognizes elements of SOA infrastructure and SOA life cycle.	Written examination that includes theoretical questions as well as situation description for which the student should suggest service based improvement for the business process.
Can assess and explain the necessity (or the opposite) of service introduction according to organisational goals and enterprise/business architecture.	The student has to develop a business improvement plan for for a given business case using ready-made service components.
Using service development tools is able to integrate services into the business process by choosing the services which are most suitable to business goals of the enterprise.	Independently completed laboratory work.
Is able to monitor service performance of business processes, identify the need for performance improvement, and suggest a service improvement plan.	Independently completed laboratory work.

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	4.0	6.0	2.0	0.0	2.0		*	