RĪGAS TEHNISKĀ UNIVERSITĀTE

RTU Course "Enterprise Information Technology Architecture, Applications and Integration"

33000 Datorzinātnes, informācijas tehnoloģijas un enerģētikas fakultāte

General data

Code	DE0738
Course title	Enterprise Information Technology Architecture, Applications and Integration
Course status in the programme	Compulsory/Courses of Limited Choice
Responsible instructor	Jānis Grabis
Academic staff	Jānis Pekša
Volume of the course: parts and credits points	1 part6.0 ECTS credits
Language of instruction	LV, EN
Abstract	Commercially available enterprise information systems are often used in implementation and automation of enterprise business processes. The objective of the course is to master main principles of enterprise information systems, their deployment and modification. Main topics covered in the course are business process modeling, application of ERP, workflow and other enterprise systems in process automation, modification and deployment of enterprise information systems, integration of enterprise information systems and adoption service-oriented computing in enterprise systems. Technologies for the modification of enterprise systems are explored in laboratories.
Goals and objectives of the course in terms of competences and skills	To learn various alternatives of using enterprise applications for automation of business processes in the framework of overall enterprise information technology architecture
Structure and tasks of independent studies	There are two main assignments: 1. Readings – students search for scientific papers devoted to subject areas given by an instructor and write synopsis of these papers. 2. Business process automation proposal – students find the most appropriate solution for automating a selected business process automation problem, perform fit-gap analysis and design necessary modifications. Methods for completing the assignment are discussed during lectures, students submit intermediate deliverables during the course and present their solution at the end of the course.
Recommended literature	Obligātā/Obligatory: 1. Dumas, M. et al. (2018), Fundamentals of Business Process Management, Springer. 2. Magal, S., Word, J. (2013), Integrated Business Processes with ERP Systems, Wiley. 3. Weston (2019) Learn Microsoft PowerApps, Packt Publishing. Papildu/Additional: 1. Grabis, J. (2019). Optimization of Gaps Resolution Strategy in Implementation of ERP Systems. In Proceedings of the 21st International Conference on Enterprise Information Systems - Volume 1: ICEIS, ISBN 978-989-758-372- 2. Grabis, J. Predicting Next Wave of Digitalization: Towards a Theory of Evolution of Enterprise Applications. No: BIR-WS 2019 [online]: BIR 2019 Workshops and Doctoral Consortium: Joint Proceedings of the BIR 2019 Workshops and Doctoral Consortium co-located with 18th International Conference on Perspectives in Business Informatics Research (BIR 2019), Polija, Katowice, 23.-25. septembris, 2019. Aachen: RWTH, 2019, 98.-106.lpp. 3. Michael J. Kavis (2014) Architecting the Cloud : Design Decisions for Cloud Computing Service Models (SaaS, PaaS, and IaaS) 4. Diogo R. Ferreira (2013) Enterprise Systems Integration: A Process-Oriented Approach, Springer
Course prerequisites	Database systems

Course contents

Content	Full- and part-time intramural studies		Part time extramural studies	
	Contact Hours	Indep. work	Contact Hours	Indep. work
Introduction: Enterprise value chain and enterprise applications	4	6	0	0
Enterprise Information Technology architecture and COTS applications	4	6	0	0
Enterprise Resource Planning (ERP) Systems: Introduction	6	9	0	0
Implementation of ERP systems	4	6	0	0
Methodologies of implementation of ERP systems	4	6	0	0
Modification of ERP systems	8	12	0	0
Vendors of ERP systems	4	6	0	0
Configuration of enterprise applications	4	6	0	0
Enterprise portal	4	6	0	0
Workflow systems	8	12	0	0
Composite applications	4	6	0	0
Enterprise integration and integration standards	4	6	0	0
Current trends in enterprise Information technology architecture and applications	4	6	0	0
Course summary	2	3	0	0

Total:	64	96	0	0

Learning outcomes and assessment

Learning outcomes	Learning outcomes assessment methods and assessment criteria
To know main functional capabilities of enterprise applications and their application areas	Test
Ability to select the most appropriate solution for business process automation	Coursework and examination
To understand implementation life-cycle of enterprise applications and main implementation activities	Examination
Ability to document implementation of enterprise applications	Coursework
Ability to configure enterprise applications and to modify user interface, reports and elements of enterprise portal	Laboratory work
Ability to orchestrate executable business processes and knowledge of integration standards	Laboratory work

Course tests

Tests	% of final assessment
Reading assignment	10
Mid-term exam	30
Course work	20
Exam	40
Total:	100

Course planning

Part	Semester			CP	Academic hours			Tests		
	Autumn	Spring	Summer		Lectures	Practical	Lab.	Test	Exam	Work
1.		*		6.0	32.0	16.0	16.0		*	