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

**33000 null**

*General data*

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| Code | DOP700 |
| Course title | Enterprise Information Technology Architecture, Applications and Integration |
| Course status in the programme | Compulsory/Courses of Limited Choice |
| Responsible instructor | Jānis Grabis |
| Volume of the course: parts and credits points | 1 part, 6.0 credits |
| Language of instruction | LV, EN |
| Annotation | 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:<br>1. Readings – students search for scientific papers devoted to subject areas given by an instructor and write synopsis of these papers.<br>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 | Obligātie/Mandatory<br>Dumas, M. et al. (2018), Fundamentals of Business Process Management, Springer.<br>Magal, S., Word, J. (2013), Integrated Business Processes with ERP Systems, Wiley.<br>Weston (2019) Learn Microsoft PowerApps, Packt Publishing.<br><br>Papildu/Supplementary<br>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-<br>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.<br>Michael J. Kavis (2014) Architecting the Cloud : Design Decisions for Cloud Computing Service Models (SaaS, PaaS, and IaaS)<br>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 |

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|---|---|---|---|---|
| Total: | 64 | 96 | 0 | 0 |

*Learning outcomes and assessment*

| Learning outcomes | Assessment methods |
|---|---|
| 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 |

*Evaluation criteria of study results*

| Criterion | % |
|---|---|
| Reading Assignment | 10 |
| Mid-term exam | 30 |
| Course work | 20 |
| Exam | 40 |
| Total: | 100 |

*Study subject structure*

| Part | CP | Hours | | | Tests | | |
|---|---|---|---|---|---|---|---|
| | | Lectures | Practical | Lab. | Test | Exam | Work |
| 1. | 6.0 | 2.0 | 1.0 | 1.0 | | * | |