RTU Course "Portfolio Management Technologies"

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General data

Code	DE0645
Course title	Portfolio Management Technologies
Course status in the programme	Compulsory/Courses of Limited Choice
Responsible instructor	Jānis Grabis
Academic staff	Bohdan Haidabrus Rūta Pirta
Volume of the course: parts and credits points	1 part, 6.0 credits
Language of instruction	LV, EN
Annotation	The development of new products and identification of growth directions is an important enterprise strategic planning problem. It also has to be balanced with current enterprise objectives, resources and competencies. The study course explores different solutions to this problem using business process modelling, multi-criteria decision-making methods and product and project feasibility analysis methods. The main attention is devoted to the integration of portfolio management into the overall life-cycle of information systems development. Technological solutions used in the evaluation of alternative projects and for integration with other information systems development tools are explored in laboratory work.
Goals and objectives of the course in terms of competences and skills	The aim of the study course is to teach information technology project identification and project portfolio management methods and technologies The tasks of the study course are to create an understanding of the challenges and solutions of the implementation of several interrelated projects in the context of the organization, as well as to teach to use of appropriate portfolio management methods and technologies.
Structure and tasks of independent studies	In the coursework students propose an innovative product development project and analyse project feasibility in the context of the existing project portfolio. Appropriate portfolio management technologies are used in the coursework.
Recommended literature	Obligātā/Obligatory: 1. Safe 4.0 distilled: applying the scaled agile framework for lean software and systems engineering / Richard Knaster, Dean Leffingwell. (2017). 2. Safe 4.0 reference guide: scaled agile framework for lean software and systems engineering / Dean Leffingwell. (2017). 3. Essential Scrum: a practical guide to the most popular agile process / Kenneth S. Rubin. (2013). 4. Scaling Agile with Jira Align: A practical guide to strategically scaling agile across teams, programs, and portfolios in enterprises, Dean MacNeil and Aslam Cader (2020). 5. Scaling Scrum Across Modern Enterprises: Implement Scrum and Lean-Agile techniques across complex products, portfolios, and programs in large organizations, Cecil Rupp and Manjit Singh (2020). 6. Large-Scale Scrum: More with LeSS (Addison-Wesley Signature Series), Craig Larman and Bas Vodde (2016). Papildu/Additional: 1. H.A. Levine (2005), Project Portfolio Management: A Practical Guide to Selecting Projects, Managing Portfolios, and Maximizing Benefits, Jossey-Bass. 2. Bonham, S. (2004) IT Portfolio Management, Norwood Artech House Books. 3. Grabis J., Minkēviča V., Haidabrus B., Popovs R. (2020) Is Team Always Right: Producing Risk Aware Effort Estimates in Agile Development. In: Buchmann R.A., Polini A., Johansson B., Karagiannis D. (eds) Perspectives in Business Informatics Research. BIR 2020. Lecture Notes in Business Information Processing, vol 398. Springer, Cham. 4. Haidabrus B., Grabis J., Protsenko S. (2021) Agile Project Management Based on Data Analysis for Information Management Systems. In: Ivanov V., Trojanowska J., Pavlenko I., Zajac J., Peraković D. (eds) Advances in Design, Simulation and Manufacturing IV. DSMIE 2021. Lecture Notes in Mechanical Engineering. Springer, Cham. 5. Dingsøyr, T., Fægri, T.E. & Itkonen, J. 2014, What is large in large-scale? a taxonomy of scale for agile software development. Product-Focused Software Process Improvement. PROFES 2014. Lecture Notes in Computer Science, vol 8892. Springer.
Course prerequisites	Enterprise information systems.

Course contents

Content	Full- and part-time intramural studies		Part time extramural studies	
	Contact Hours	Indep. work	Contact Hours	Indep. work
Introduction: projects and project portfolio.	8	12	0	0
Project identification and development of project portfolio.	8	12	0	0
Project portfolio optimization.	8	12	0	0
Project portfolio management methodologies and SAF framework.	8	12	0	0
Agile ways of working, Scrum, Kanban, resource allocation.	8	12	0	0
Multi-criteria analysis of project portfolio.	8	12	0	0

Development of project portfolio management information system.	8	12	0	0
Project portfolio management dashboard.	8	12	0	0
Total:	64	96	0	0

Learning outcomes and assessment

Learning outcomes	Assessment methods
Is able to determine project portfolio efficiency measures and allocate resources to competing projects.	Class exercises and case studies on evaluation of project portfolio efficiency measures.
Is able to analyse the project portfolio and identify the most promising projects.	Class exercises and coursework on project portfolio analysis.
Is able to integrate portfolio management into enterprise information technology architecture.	Examination questions on interactions between portfolio management and business process management and enterprise information technology architecture.
Is able to design a technological environment for portfolio management.	Laboratory work on deployment and configuration of portfolio management tools.

Evaluation criteria of study results

Criterion	%
Class exercises, case studies, laboratory work	30
Coursework	30
Examination	40
Total:	100

Study subject structure

Part	CP	Hours			Tests		
		Lectures	Practical	Lab.	Test	Exam	Work
1.	6.0	32.0	16.0	16.0		*	