RTU Course "Software Applications in Education"

12307 Sistēmu teorijas un projektēšanas katedra

General data

Code	DSP710
Course title	Software Applications in Education
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	Alla Anohina-Naumeca
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 main attention of the course theoretical part is devoted to the relationship between goals and activities of the learning process and appropriate types of supporting software and necessary functionality of this software, as well as to design principles and evaluative and selective criteria of educational software applications. The practical part of the course is directed towards the review, comparison and use of available software applications.
Goals and objectives of the course in terms of competences and skills	The objective of the course is to provide knowledge and skills needed for the use and development of different educational software applications intended to support the learning and teaching process. At the end of the course students will be able to identify goals and activities of the learning process which can be supported by different educational software, as well as be able to evaluate and choose corresponding software solutions for specific learning situations and issues.
Structure and tasks of independent studies	Students must complete practical work covering the main topics of the course.
Recommended literature	Sutherland, R., Robertson, S., John, P. Improving Classroom Learning with ICT, Routledge, 2009, 256p. Monteith, M. ICT for curriculum enhancement, Intellectual Book, 2004, 160p. Handbook on Information Technologies for Education and Training, Series: International Handbooks on Information Systems, Adelsberger, H.H.; Kinshuk, P.; Pawlowski, J.M.; Sampson, D. (Eds.) 2nd ed., Springer, 2008, 466p. Buzzetto-More, N.A. Advanced Principles of Effective e-learning. Informing Science, 2007, 310p. Shelly, G.B. Cashman, T.J., Gunter, G.A., Gunter, R.E. Teachers Discovering Computers: Integrating Technology and Digital Media in the Classroom. Course Technology, 2007, 596p. As additional material scientific papers on software applications in education will be used.
Course prerequisites	Knowledge and skills in software design and implementation.

Course outline

Theme	Hours
Terminology used in the field of virtual learning	8
Support of learning by software applications	12
Virtual and managed learning environments	4
Review of different groups of educational software applications	16
Principles of educational software development	8
Evaluation of educational software	16

Learning outcomes and assessment

Learning outcomes	Assessment methods
Students will be able to classify, recognize and give examples of different ICT supported learning types.	Practical work and an exam.
Students will be able to identify goals, issues and activities of the learning process which can be supported by the use of educational software applications.	Practical work and an exam.
Students will be able to compare, evaluate and choose software solutions for specific learning situations and issues.	Practical work and an exam.
Students will be able to apply specific development principles when designing educational software.	Practical work and an exam.
Students will be able to use educational software applications of different types.	Practical work and an exam.

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work

1.	4.0	6.0	2.0	2.0	0.0		*	