

Implementation plan Finished

Study unit	Designing ICT Systems: Relational database with object-oriented analysis and design (01120), 10.0
Implementation	NIA0921: 2/2009-2010 (04.01.2010 - 18.06.2010)
Type	APPLIED ICT SYSTEMS (0329)
Groups	Primary: NIA09SN Others :
Involved in the project	
Lecturers	Rathod Paresh, Takala Jouni and Uutela Juha
Number of participants	Minimum: Maximum:
Enrolment period	30.11.2009 08:00 - 06.12.2009
Main timing for implementation	
Applicability	For exchange students: Yes For elective studies: No Open UAS student: No Suitable for virtual UAS: No
Teachers	Rathod Paresh (Teacher in charge), Takala Jouni (Other teacher), Uutela Juha (Other teacher)
Campus	Laurea Leppävaara
Main location for implementation	
Implementation method	Optima realization/student group, Other method of implementation, Project/venture/R&D Language: English Virtuality: 0 cr Integration of R&D: 0 cr
Implementation class	
Focus areas	
Evaluation at the latest	18.07.2010 Storing of graded material ends.: 18.06.2011
Exam days	
Having completed the study unit the student is able to	# analyze to differentiate and use key terms such as: information, data, database, database management system, metadata, and data mining # explain the role of data, information, and databases in organizations # describe and interpret Entity Relationship and Object Modeling # formulate and test SQL queries # understanding of the principles, methods, strengths and difficulties of object-oriented system development # understanding the strategy for using modern methods and techniques in development of object-oriented systems # understand modelling and designing of object-oriented system using the industry standard systematically and effectively # critically evaluate and apply object-oriented techniques in object-oriented system development
Previous studies	
Generic competences	verkosto-osaamisen kuvaus, eettisen osaamisen kuvaus, globalisaatio-osaamisen kuvaus, innovaatio-osaamisen kuvaus, reflektio-osaamisen kuvaus
Previous studies, more information	-You need to finish following course successfully to participate in the course: Becoming a Business Information Systems Professional or equivalent knowledge
Learning objectives	The module introduces students to the design process of ICT systems. The module begins with the current industry standard technology for database management system,

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	SQL and object-oriented system modeling and design. It discusses the significance of using the standard in modern system development and demonstrates how it is used to support system development in practice through the development process. It also introduces design patterns for reusability in object-oriented systems and discusses how they can enhance reusability in system design and coding. Construction of object-oriented systems with new system development methods and techniques such as model-driven architecture (MDA) is also discussed with the aim of developing systems systematically and effectively.
Contents	Section-1 (5 CR) • introduction to Database Systems • modeling and Object modeling • structure Query Language • create and manage Databases Section -2 (5 CR) • introduction of System Development Life Cycle • principles of object-oriented analysis and designing • methods and Techniques in development of object-oriented systems • modelling and designing an object-oriented system
Study material	Section-1: Database Systems: Design, Implementation, and Management, 9/E by Peter Rob, Carlos Coronel Section-2: Developing Software with UML: Object-Oriented Analysis and Design in Practice, 2/E by Bernd Oestereich Java How to Program – Early Objects Version, 8/E by Deitel & Deitel Note: i.e., 8/E = 8th Edition
Evaluation criteria and methods	50% - Project work 30% - Competency 20% - Individual Assignments
Project (name)	1) Nuuksia national park 2) DELI 3) LbD conference 4) Project of University of the West of Scotland's professor
R&D methods	LbD, Workshops, Action and Applied Research
Work strain	150 hours for each section Workshops / Teaching / Supervision 40 hours Individual Lab Work 20 hours LbD-project work, Self study, Guidance 90 hours Total 150 hours