

Implementation plan Finished

Study unit	Service Oriented Architecture (SOA): Principles of Service Design (A0114), 10.0
Implementation	NIA1111: 1/2011-2012 (29.08.2011 - 19.12.2011)
Type	DEVELOPMENT OF CORE COMPETENCES IN THE FIELD (A030)
Groups	Primary: NIA10SN Others :
Involved in the project	
Lecturers	Rathod Paresch, De Arruda Camara Antonius
Number of participants	Minimum: Maximum:
Enrolment period	23.05.2011 08:00 - 05.06.2011
Main timing for implementation	
Applicability	For exchange students: Yes For elective studies: No Open UAS student: No Suitable for virtual UAS: No
Teachers	Rathod Paresch (Teacher in charge), De Arruda Camara Antonius (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: 4 cr
Implementation class	
Focus areas	
Evaluation at the latest	20.01.2012 Storing of graded material ends.: 20.12.2012
Exam days	Re-exams: 11.11.2010, 09.12.2010, 20.01.2011, 24.02.2011
Having completed the study unit the student is able to	• understand the key concept and principle of Service Oriented Architecture and service design • clearly establish the criteria for solution logic to be classified as service-oriented • analyze and explain – what is the service-orientation design paradigm • document specific design characteristics realized by the application of individual design principles • understand the link between the design characteristics realized by service-orientation and the strategic goals associated with SOA and service-oriented computing • demonstrate an understanding of the origins of service-orientation and identify – how this paradigm differs from other design approaches
Previous studies	Designing ICT Systems or equivalent knowledge.
Previous studies, more information	You need to pass following study unit successfully to participate in the course: 01120 - Designing ICT Systems: Relational database with object-oriented analysis and design
Learning objectives	The course introduces students to the principles and concepts of service-orientation in computing using service oriented architecture for service design. The main aim of the study unit is to learn - how and where design principles can and should be applied with the ultimate goal of producing high quality services. This course intends to provide practical, comprehensive, and in-depth coverage of the service-orientation design paradigm, which encompasses the official definition and detailed explanation of eight key principles.
Contents	Section-1: Fundamentals (5 CR) • introduction to Service-Oriented Computing and Service-Oriented Architecture • goals and benefits of SOA • challenges using Service-Orientation • effects of Service-Orientation on enterprises • SOA and web services • Business Process Management(BPM) • Enterprise Application Integration(EAI)

Implementation plan Finished

	• aspect-Oriented programming • understanding Design Principles Section- 2 : Design Principles (5 CR) • standardization and Design - Service Contract • intra-service and consumer dependency – Service Coupling • service abstraction and reusability • service autonomy and statelessness • service discoverability and composition • service-Orientation and Object-Orientation: Comparison of concepts
Study material	Title:SOA : principles of service design / Thomas Erl. E-journals and other literature study.
Tutoring and communication	Week - 37 to 51 Personal meeting with your tutor: On request Optima - Learning Management System is the main tool for communication Laurea e-mail
Evaluation criteria and methods	Will be posted later on
Project (name)	Will be posted later on
R&D methods	LbD - Action and Applied Research
Work strain	270 hoursWeek - 37 to 51Regular classes/workshops - Thursday full-day (Morning 09:00 - 11:30, Afternoon 12:30 - 16:00) Workshops (Student Centric) 80 hours Individual Project Work 60 hours Group Project Work 60 hours Group Discussion 30 hours Self study, Guidance and Other 40 hours Total 270 hours
Other arrangements	Student centric workshops and classes

Learning events

Date	o'clock/at h	Subject	Content	Status	Teachers
14.09.2011	9.00-11.30	Introduction to the course	Introduction to the course, evaluation criteria, project work (Forming teams for workshops & project work)	Done	Antonius De Arruda Camara, Paresh Rathod
14.09.2011	12.30-14.30	Student's Quality Assurance	Presentation and discussion with student about Student's Quality Assurance . How to implement in our study unit?	Done	Antonius De Arruda Camara, Paresh Rathod

**Implementation plan Finished**

21.09.2011	9.00-11.30	2	Introduction to the course continued	Introduction to the course continued (Evaluation criteria, Forming the project teams) Project Task - 01: Finding SOA working life case	Done	Antonius De Arruda Camara, Paresh Rathod
21.09.2011	12.30-15.30	30	Special Presentation	Presentation - Director of International Activities (Arja Majakulma) ,Continue working on project task - 01	Done	Antonius De Arruda Camara, Paresh Rathod
28.09.2011	9.00-11.30	2	Workshop - Student Centric	Workshop-01 Introduction to service-oriented Computing and SOA (with case study background)Conducted by WS1(Workshop team - 01): Juho Patovirta, Lu Ding	Open	Antonius De Arruda Camara, Paresh Rathod
28.09.2011	12.30-16.00	30	Workshop and Project Work	Workshop-02 Service-OrientationWorkshop conducted by WS2: Patrick Aboagye; Salah MohammadThe project team will continue working on project task.	Open	Antonius De Arruda Camara, Paresh Rathod
05.10.2011	9.00-11.30	2	Workshop-03	Workshop-03 Understanding Design Principles (with case study background)Workshop conducted by WS3: Tapio Satola; Oleksandr Yakovyshyn	Open	Antonius De Arruda Camara, Paresh Rathod
05.10.2011	12.30-16.00	30	Workshop-04	Presenting Project Task - 01: SOA working life case (10 minutes for each group)	Open	Antonius De Arruda Camara, Paresh Rathod
12.10.2011	9.00-16.00	6	Project Work	Execution of project work in team	Open	Paresh Rathod
19.10.2011	9.00-16.00	6	Workshop & Project Work	9.00-11.30 Workshop-04 Service Contracts (with case study example)(Conducted by WS4: Michael Stauffer; Sandro Schimd)12.30-16.00 Workshop-05 Service Coupling (with case study example)(Conducted by WS5: Matti Santasalo; Tomi Hopponen) Continue working on Project Work	Open	Antonius De Arruda Camara, Paresh Rathod
26.10.2011	9.00-16.00	6	Workshop & Project Work	9.00-11.30 Workshop-06 Service Abstraction (with case study example)(Conducted by WS6: Ikenna Ikegwuonu; Yasin Lossini)12.30-16.00 Workshop-07 Service Reusability (with case study example)(Conducted by WS7: Ying Liu; Shan Yu) Continue working on Project Work	Open	Antonius De Arruda Camara
02.11.2011	9.00-16.00	6	Workshop &	9.00-11.30	Open	Antonius De

Implementation plan Finished

			Project Work	Workshop-08 Service Autonomy (with case study example)(Conducted by WS8: Shan Wu; Ji Zhang)12.30-16.00 <u>Continue working on Project Work</u>		Arruda Camara, Paresh Rathod
09.11.2011	9.00-16.00	06	Workshop & Project Work	9.00-11.30 Workshop-09 Service Statelessness(with case study example)(Conducted by WS9: Adewale Adeyemo; Kwame Afreh)12.30-16.00 <u>Continue working on Project Work</u>	Open	Antonius De Arruda Camara
11.11.2011	16.00 - 20:00	4	Real World Case Test	The competence and skill can be achieved by demonstrating the fulfillment of the study unit implementation plan on SoleOPS & Optima (refer section – “Having completed the study unit the student is able to”). The tests are designed to keep you focused on important issues of working life scenarios. The diverse real world case based tests give an opportunity to achieve it. The tests include real world case and are based on quizzes, short questions, fill-in the gaps, true and false statements and short notes.	Open	Paresh Rathod