

Implementation plan Finished

Study unit	Developing ICT Systems (A0107), 10.0
Implementation	NIA1121: 2/2011-2012 (02.01.2012 - 19.06.2012)
Type	INITIATION OF PROFESSIONAL GROWTH (A029)
Groups	Primary: NIA11SN Others :
Involved in the project	
Lecturers	
Number of participants	Minimum: Maximum:
Enrolment period	28.11.2011 08:00 - 04.12.2011
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, Web/virtual Language: English Virtuality: 4 cr Integration of R&D: 4 cr
Implementation class	
Focus areas	
Evaluation at the latest	17.07.2012 Storing of graded material ends.: 17.06.2013
Exam days	Re-exams: 31.03.2011, 05.05.2011, 09.06.2011
Having completed the study unit the student is able to	• analyze and explain the behaviour of simple programs involving the fundamental programming constructs covered by this unit • design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions • choose appropriate conditional and iteration constructs for a given programming task • implement object-oriented programming in working life projects. • 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 • design, develop and manage the database system • describe the structure of the World Wide Web as interconnected hypertext documents
Previous studies	Designing ICT Systems
Learning objectives	This course is designed to give students a solid foundation in the development process of ICT systems.
Contents	Section-1: Fundamentals of programming (5 CR) • information technology: purpose, use, value • programming basics including variables, operators, expressions, statements and modifier • control/Block structures • class and methods • Object-oriented programming - overloading, encapsulation, constructors, inheritance, exception and IO Section-2: Relational Database Design and Development (5 CR)

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	• introduction to Database Systems • data models and Object modeling • relational database model and ER modeling • advance data modeling and normalization of database tab • structure Query Language • create and manage Databases
Study material	Virtual Learning Environment will be provided
Project (name)	Massidea.org / EXPAT Systems
R&D methods	Applied Research / Action Research
Other arrangements	Complete details will be given during Induction class.

Learning events

Date	o'clock/at h		Subject	Content	Status	Teachers
02.02.2012	14.00	1	Orientation	Induction of study unit at Laurea SHOWROOM - campus at Kemppe. Group and workshop activities to explore the study unit objectives.	Done	Antonius De Arruda Camara, Paresh Rathod
09.02.2012	9.30	2	Database	Introduction to databases; relational model Learning how to use Viope Method: Self-study Viope online topic 1 and 2 on class and answering multiple-questions.	Computer Lab	Antonius De Arruda Camara
09.02.2012	12.30	3	Programming	Introduction to programming and writing first program in Java Method: Hands on practice & Self-study Viope topic 1, 2,3 , 4	Computer Lab	Paresh Rathod
16.02.2012	9.30	2	Programming	Demonstration of Java Program & individual guidance Method: Hands on practice and workshop activities	Computer Lab	Paresh Rathod
16.02.2012	12.30	4	Database	Introduction to database design (2 hours) Antonius presentation (30 mins) First SQL sentence (1 hour) Method: Self-study on class and answering online multiple questions	Computer Lab	Antonius De Arruda Camara
23.02.2012	12.30	3	Programming	Printing, reading, operators & Control flow statements Method: Hands on practice, individual guidance and workshop activities	Computer Lab	Paresh Rathod
01.03.2012	9.30	2	Database	Questions&Answers: INSERT, UPDATE, SELECT Online hands-on Test (1 hour) Method: Online assessment test	Computer Lab	Antonius De Arruda Camara
01.03.2012	12.30	3	Programming	Control flow & Methods Making Difference - Project Task - 01 Method: Hands on practice, individual guidance and workshop activities	Computer Lab	Paresh Rathod