Course Unit Descriptor

Study Programme: Information Technology Management

Course Unit Title: System Analysis and Design

Course Unit Code: OAS217

Name of Lecturer(s): Assistant Professor Zoltan Kazi, PhD

Type and Level of Studies: Bachelor Academic Degree

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Winter

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to-face

Number of ECTS Allocated: 7

Prerequisites: None

Course Aims:

Students need to learn the basic concepts in the business processes system analysis, and in the design of data models and databases, and to learn how to design different other model types for future system solutions of software, hardware, org-ware and life-ware.

Learning Outcomes:

Training students for system analysis, business process analysis, and data model design, software object model design using examples and CASE tools.

Syllabus:

Theory

Methods and techniques for system analysis. User requirements specification. Structural system analysis. Modeling business process. Flow diagrams. Data dictionary. Description of the logic for primitive business processes. CASE tools, software design types and their application. Data model. Model objects - connections and model extensions. Relational data model. Data Modeling Standards. Object data model. Object Oriented Design. UML diagrams. Designing a user interface. Generating the project documentation.

Practice

Students should learn through individual work techniques and methods for system analysis and design on the concrete examples using CASE tool. Practical exercises are performed in a computer laboratory and include solving specific tasks and examples from the thematic areas covered by theoretical teaching.

Required Reading:

1. Alan Dennis, Barbara Haley Wixom, Roberta M. Roth. System Analyses and Design, John Wiley & Sons Inc., 2012.

2. Gary B. Shelly, Harry J. Rosenblatt. System Analyses and Design, Course Technology, Cengage Learning, 2012.

3. James Rumbaugh, Ivar Jacobson, Grady Booch. The Unified Modeling Language Reference Manual, Addison Wesley Longman, Inc., 1999.

Weekly Contact Hours: 4	**Lectures:** 2	**Practical work:** 2

Teaching Methods:

Verbal teaching methods. Illustrative teaching methods.

Demonstration teaching methods. Laboratory-Experimental methods using computers.

Knowledge Assessment (maximum of 100 points): 100			
Pre-exam obligations	points	**Final exam**	points
Active class participation	10	Written exam	40
Seminar(s)	50		