Óbuda University– Alba Regia Technical Faculty	Institute of Engineering

Subject name and code: NRKSA2VSND – Advanced ABAP			Credit: 3	
Full time course	*2014/15 Academic Year*		*Semester:2*	

Training Programs running this course: Engineering Informatics BSc

Subject leader.		Dr. Orosz Gábor Tamás	Teachers:	Dr. Orosz Gábor Tamás Dr. Rádai Levente	

Prerequisites:				
Weekly lessons:	Lectures: 1	Practices: 0	Laboratories: 2	Consulting: 0
Measuring points:	midterm mark based on lecture tests and midterm tests			

Course program

Learning objectives: the student will know the object oriented concept of ABAP and use it with SAP Enjoy Controls tools. (ALV, Picture, split, HTML-viewer, etc.). Furthermore will be able to develop dynamic programs, RFC functions, web services and WebDynpro and will be able to extend standard transactions with Exit-, Badi- and Enhancement tools.

Topics (Lectures and Laboratories)	Hours
1. OOP basics and SAP OO syntax: objects, class relations, local classes, instantiating, visibility, methods, method calls, Pretty Printer.	3
2. Using OOP in ABAP: Constructors, static classes, global classes and types, Interfaces.	3
3. Inheritance, Type conversion, casting, exclusion classes, events.	3
4. Persistency, shared memory objects, RTTS.	3
5. Dynamic programming (way of program creating, data and type definitions).	3
6. Enjoy Controls: control framework, Picture, Containers, HTML-Viewer.	3
7. Enjoy Controls: ALV functions, data storage and handling.	3
8. Interfaces: RFC and Web-Services.	3
9. SAP extensions w/o modification of standard components: modification levels, DDIC component extensions, Customer Exit.	3
10. SAP extensions w/o modification of standard components: BTE, BAdI, Enhancement Framework: Enhancement points, sections, implicit enhancements).	3
11. WebDynpro basics (SAP and Web development, ITS, BSP, MVC, WD architecture)	3
12. WebDynpro program (definitions, elements, context, controls, texts, screen components).	3
13. Use of WebDynpro (programs, relationships, assistant classes, input helps).	3
14. WebDynpro special elements (messages, dialog window, component call, dynamic platform, data content modification)	3

Measuring points

Supplement midterm exams:	According to the Training and Exam Regulations
Requirements of Teacher's Signature	Laboratory Attendance is compulsory. Supplements of attendance according to the Training and Exam Regulations, Average result of weekly tests at least 50%. Submission of Practical assignments according to the deadlines.

Grading (Midterm mark): 0-50% Fail, 51% Pass, 61% Satisfactory, 71% Good, 81% Excellent
34% gives the average result of weekly tests,
66% gives the average results of midterm exams

Maximum number of missed lectures and laboratories:	3 times

Compulsory literature:	SAP UAC presentations and case studies
Recommended literature:	ABAP Object Oriented Programming, SAP Press

Valid from 7th of January, 2015 until further modification