

Transilvania University of Braşov, România

Study program: Mobile Applications and Internet Technologies in e-Business (in German)

Faculty: Mathematics and Compute Science

Study period: 2 years (master)

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Integrated software and hardware systems	SH1	6	1	2	-	-

Course description (Syllabus): Knowledge on the development of integrated System-on-Chip and methods of developing and validation of digital systems; Developing HW/SW integrated systems; Partial functions

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Web Technologies and Images Processing	TW1	6	2	-	1	-

Course description (Syllabus): Advanced elements with Photoshop; HTML , Bootstrap and AngularJS; Advanced elements in JavaScript; Animation with Python; Project developing;

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Mobile and Internet Databases	MB1	6	2	-	1	-

Course description (Syllabus): Design of mobile databases in Internet; Distributed databases administration; Cloud databases; Performance of distributed databases; Connecting mobile devices todistributed databases.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
ABAP OO	AO1	6	2	1	-	-

Course description (Syllabus): Classes, attributes, methods ; Inheritance in OOP ; Polymorphism ; Interfaces, events ; Defining of an OO application; Implementing an OO application

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
POO – Simulation and Games	PO2	5	2	-	2	-

Course description (Syllabus): Fractal Theory in simulation; Machine learning and R- programming; Processing with Android; Advanced animation with Greenfoot;

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Architectures Based on Micro Services	AB2	4	2	-	1	-

Course description (Syllabus): Integration services based on the latest software techniques; Event management techniques based on control by state; Assessment of quality of service, security and access policy; Developing user interfaces for e-Services

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Efficient Graph Algorithms	AE2	4	2	1	-	-

Course description (Syllabus): Maximal flows and minimum cuts in networks; Minimal flows in networks.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Optional 1	AS1	6	2	-	1	-

Course description (Syllabus): Various courses are proposed by members from the Department and by the professors from the partner universities from Germany or England; after an election process, the most popular choice is taught.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Optional 2	DM2	4	2	-	1	-

Course description (Syllabus): Various courses are proposed by members from the Department and by the professors from the partner universities from Germany or England; after an election process, the most popular choice is taught.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Optional 3	SS2	4	2	1	-	-

Course description (Syllabus): Various courses are proposed by members from the Department and by the professors from the partner universities from Germany or England; after an election process, the most popular choice is taught.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Optional 4	SA2	4	2	2	-	-

Course description (Syllabus): Various courses are proposed by members from the Department and by the professors from the partner universities from Germany or England; after an election process, the most popular choice is taught.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Optional 5	ML2	5	2	1	1	-

Course description (Syllabus): Various courses are proposed by members from the Department and by the professors from the partner universities from Germany or England; after an election process, the most popular choice is taught.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Legal issues in Internet and Marketing	MK3	3	1	1	-	-

Course description (Syllabus): Applicable legislation in the field of technology information and Internet; Network security and public information; Marketing activities in digital environment; Information systems vulnerability.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Network Algorithms	AR3	3	2	1	-	-

Course description (Syllabus): Notions about distributed computing systems, parallel algorithms, middleware, web services; Socket programming; Web services; Using distributed algorithm.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Techniques of Writing the Dissertation Work	TR3	4	1	1	-	-

Course description (Syllabus): Methods of preparation of dissertation; Using LaTeX in preparation of dissertation thesis; Logical structure of a document; Paragraph and Math views.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Practical Placement	SP3	18	-	-	-	8

Course description (Syllabus): Qualified company personal attendance to student's practical training; practicing the competences regarding human relations within working conditions; increasing students' motivation regarding their theoretical and practical preparation by offering them a better knowledge about their future profession.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Ethics and Academic Integrity	EI3	2	1	-	-	-

Course description (Syllabus): Learning about ethic principles in research and academic work; Copyright rights in publishing, software creation.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Communication in Virtual Teams (CMC)	CV4	4	1	-	2	-

Course description (Syllabus): Learning about virtual teams management; Techniques and tools for virtual meeting and work; Advantages and disadvantages of working in virtual teams/projects.

Course title	Code	No. of credits	Number of hours per week			
			course	seminar	laboratory	project
Develop dissertation thesis and preparation the dissertation exam	EL4	2 6	-	-	-	4

Course description (Syllabus): Writing the dissertation thesis.