

THE DETAILED DESCRIPTION OF EACH LEARNING PATH PER MOBILITY SCHEMA

Learning Paths without UNIBZ

EMSE 2015-2017 onward

A course of local language is EMSE compulsory at each academic year on top of the 120 ECTS

UNIKL					UPM																		
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.															
1	WV	Safety and Reliability of Embedded Systems	4	En	I	Internship	8	En	<table border="1"> <thead> <tr> <th>Elective</th> <th>ECTS</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Elective	ECTS												
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	TS	Performance Modeling of Distributed Systems	4	En	TS	Management, Relationships and Communication in Working Groups	4	En															
	RDSS	Requirements Engineering	4	En	FC	Choice among	12	En															
ATSE	Middleware for Heterogeneous Distributed Information Systems	8	En																				
SPPM	Quality Management software and System (A1)	4	En																				
	TS	Product Line Engineering	4	En																			
semester 28					semester 24																		
2	WV	Formal Specification and verification Techniques	8	En	T	Thesis	30	En	<table border="1"> <thead> <tr> <th>Elective or alternatives</th> <th>ECTS</th> </tr> </thead> <tbody> <tr> <td>Data Engineering</td> <td>4</td> </tr> <tr> <td>Management, Relationships and Communication in Working Groups</td> <td>4</td> </tr> <tr> <td>Challenges for accessible computing for people with functional diversity</td> <td>4</td> </tr> <tr> <td>Agile Software Development: Agile Practices and Agile Usability</td> <td>4</td> </tr> <tr> <td>Distributed and Outsourced Software Engineering</td> <td>4</td> </tr> <tr> <td>Rigorous Software Development</td> <td>4</td> </tr> </tbody> </table>	Elective or alternatives	ECTS	Data Engineering	4	Management, Relationships and Communication in Working Groups	4	Challenges for accessible computing for people with functional diversity	4	Agile Software Development: Agile Practices and Agile Usability	4	Distributed and Outsourced Software Engineering	4	Rigorous Software Development	4
	Elective or alternatives	ECTS																					
	Data Engineering	4																					
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Distributed and Outsourced Software Engineering	4																						
Rigorous Software Development	4																						
SPPM	Software Project and Process Management	4	En																				
RDSS	Software Architecture of Distributed Systems (A2)	8	En																				
TS	Process Modelling	4	En																				
ESER	Software Engineering Seminar	4	En																				
ESER	Empirical Model Building and Methods	4	En																				
semester 32					semester 30																		
year 60					year 54																		
Total					Total																		
					114																		

UNIKL					UoO								
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.					
1	WV	Safety and Reliability of Embedded Systems	4	En	I	Principles of Project Management	3	En	<table border="1"> <thead> <tr> <th>Elective</th> <th>ECTS</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Elective	ECTS		
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SPPM	Quality Management software and System (A1)	4	En	TS	Interaction Design	4	En						
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TS	Process Modelling	4	En										
ESER	Software Engineering Seminar	4	En										
ESER	Empirical Model Building and Methods	4	En										
semester 24					semester 30								
year 52					year 60								
Total					Total								
					112								

UPM					UoO								
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.					
1	RDSS	Requirements Engineering	6	En	I	Principles of Project Management	3	En	<table border="1"> <thead> <tr> <th>Elective</th> <th>ECTS</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Elective	ECTS		
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	ATSE	Interaction Design	6	En									
ESER	Experimental Software Engineering	6	En										
RDSS	Software Architecture	4	En										
	WV	Software Quality Management	4	En									
semester 30					semester 30								
year 60					year 60								
Total					Total								
					120								

UPM					UNIKL								
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	SPPM	Models and Methods for Process Improvement and Assessment	4	En	FC	Software Engineering Seminar	8	En					
	SPPM	Software Project Management	4	En	FC	Middleware for Heterogeneous and Distributed Information Systems - Module: Performance	4	En					
ESER	Software Metrics	4	En	ATSE	modelling of distributed systems	4	En						
WV	Verification and Validation	6	En	ATSE	Advances in Software Engineering - Module: Safety & Reliability of Embedded systems	4	En						
	TS	Software Economics	3	En	TS	Product Line Engineering	4	En	<table border="1"> <thead> <tr> <th>Elective or alternatives</th> <th>ECTS</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Elective or alternatives	ECTS		
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semester 30					semester 30								
year 60					year 54								
Total					Total								
					114								

UoO					UNIKL								
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.					
1	SPPM	Software Development in Global Environment	5	En	I	Software Project	8	En	<table border="1"> <thead> <tr> <th>Elective</th> <th>ECTS</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Elective	ECTS		
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	ESER	Open Source Software Development	4	En	FC	Software Engineering Seminar	8	En					
SPPM	Software Engineering Management, Measurement and Improvement	5	En	FC	Middleware for Heterogeneous and Distributed Information Systems	4	En						
WV	Software Quality and Testing	5	En	ATSE	Advances in Software Engineering - Module: Performance modelling of distributed systems	4	En						
Total					Total								
					114								

UNIKL		UPM	
Elective	ECTS	Elective or alternatives	ECTS

UNIKL		UoO	
Elective	ECTS	Elective or alternatives	ECTS

UPM		UoO	
Elective	ECTS	Elective or alternatives	ECTS

UPM		UNIKL	
Elective	ECTS	Elective or alternatives	ECTS

UoO		UNIKL	
Elective	ECTS	Elective or alternatives	ECTS

	RDDS	Realtime Distributed Software Development	6	En
	ESER	Advanced Topic in Software Engineering	5	En
semester 30				
2	ATSE	Software Production and Maintenance	5	En
	RDDS	Embedded Software Development	5	En
	TS	IT Infrastructure	5	En
	ATSE	Programmable Web Project	5	En
	VV	Advanced Topic in Software Testing	5	En
	TS	Mobile and Social Computing	5	En
semester 30				
year 60				
Total				
				114

	ATSE	Advances in Software Engineering - Module: Safety & Reliability of Embedded systems	4	En	
	TS	Product Line Engineering	4	En	
semester 24					
T	Thesis			30	En
semester 30					
year 54					

Uso

ES	Topic	Title	ECTS	Lang.
1	SPPM	Software Development in Global Environment	5	En
	ESER	Open Source Software Development	4	En
	SPPM	Software Engineering Management, Measurement and Improvement	5	En
	VV	Software Quality and Testing	5	En
	RDDS	Realtime Distributed Software Development	6	En
	ESER	Advanced Topic in Software Engineering	5	En
semester 30				
2	ATSE	Software Production and Maintenance	5	En
	RDDS	Embedded Software Development	5	En
	TS	IT Infrastructure	5	En
	ATSE	Programmable Web Project	5	En
	VV	Advanced Topic in Software Testing	5	En
	TS	Mobile and Social Computing	5	En
semester 30				
year 60				
Total				
				114

UPM

Topic	Title	ECTS	Lang.		
I	Internship	8	En		
TS	Management, Relationships and Communication in Working Groups	4	En		
FC	Choice among	12	En		
semester 24					
T	Thesis			30	En
semester 30					
year 54					

Uso

Elective

UPM

Elective or alternatives	ECTS
Data Engineering	4
Management, Relationships and Communication in Working Groups	4
Challenges for accessible computing for people with functional diversity	4
Agile Software Development: Agile Practices and Agile Usability	4
Distributed and Outsourced Software Engineering	4
Rigorous Software Development	4

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Legend	Acronym
Modules	
Software Project / Process Management	SPPM
Verification and Validation	VV
Requirements and Design of Software Systems	RSS
Empirical Software Engineering Research	ESER
Advanced Topic in Software Engineering	ATSE
Transversal Skills	TS
Internship	I
Free Choice	FC
Thesis	T

UNIBZ					UNIKL				UNIBZ		UNIKL		
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	
1	SPPM	Software Process Management	8	En	I	Software Project	8	En	[Orange Box]	[Green Box]			
	TS	Statistical Methods	4	En	FC	Software Engineering Seminar	8	En					
	RSSS	Requirements and Design of Software Systems	8	En	FC	Middleware for Heterogeneous and Distributed Information Systems	4	En					
	TS	Data Mining	8	En	ATSE	Performance modelling of distributed systems	4	En					
			semester		32								
2	VV	Software Reliability and Testing	8	En	T	Thesis	30	En					
	ESER	Empirical Software Measurement	8	En									
	SPPM	Software Factory	8	En									
	ATSE	Advanced Internet Technologies	8	En									
			semester		30								
			year		60						year		62
										Total		122	

UNIBZ					UPM				UNIBZ		UPM		
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	
1	SPPM	Software Process Management	8	En	I	Internship	8	En	[Orange Box]	[Green Box]	Challenges for accessible computing for people with functional diversity	4	
	TS	Statistical Methods	4	En	TS	Management, Relationships and Communication in Working Groups	4	En					
	RSSS	Requirements and Design of Software Systems	8	En	FC	Choice among	12	En					
	TS	IT and Service Management	8	En									
			semester		24								
2	VV	Software Reliability and Testing	8	En	T	Thesis	30	En					
	ESER	Empirical Software Measurement	8	En									
	SPPM	Software Factory / Quality Software Factory	8	En									
	ATSE	Advanced Internet Technologies	8	En									
			semester		30								
			year		60						year		54
										Total		114	

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ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	
1	SPPM	Software Process Management	8	En	I	Principles of Project Management	3	En	[Orange Box]	[Green Box]			
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	RSSS	Requirements and Design of Software Systems	8	En	ESER	Software Engineering Research	7	En					
	TS	IT and Service Management	8	En	ESER	Research Methods	5	En					
			semester		28								
2	VV	Software Reliability and Testing	8	En	TS	Interaction Design	4	En					
	ESER	Empirical Software Measurement	8	En									
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			year		60						year		62
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semester 32
year 60

semester 30
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Total	120
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ES	Topic	Title	ECTS	Lang.
	VV	Safety and Reliability of Embedded Systems	4	En
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1	ATSE	Middleware for Heterogeneous Distributed Information Systems	8	En
	SPPM	Quality Management software and System (A1)	4	En
	TS	Product Line Engineering	4	En

semester 28

Topic	Title	ECTS	Lang.
ATSE	Mobile System Engineering	8	En
FC	Seminars in Software and IT Engineering	4	En
I	Internship	8	En
FC	Elective	8	En
ESER	Research Methods	2	En

semester 30

Elective	ECTS	Elective or alternatives	ECTS
Lean start up	8	A1: Software Quality Assurance	
Requirements	8	A2: Service Oriented Architecture	
IT and service management	8		

ES	Topic	Title	ECTS	Lang.
	VV	Formal Specification and verification Techniques	8	En
	SPPM	Software Project and Process Management	4	En
	RDSS	Software Architecture of Distributed Systems (A2)	8	En
2	TS	Process Modelling	4	En
	ESER	Software Engineering Seminar	4	En
	ESER	Empirical Model Building and Methods	4	En

semester 32

Topic	Title	ECTS	Lang.
T	Thesis	30	En

semester 30

year 60

Total	120
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ES	Topic	Title	ECTS	Lang.
	RDSS	Requirements Engineering	6	En
	SPPM	Models and Methods for Process Improvement and Assessment	4	En
	SPPM	Software Project Management	4	En
1	ESER	Software Metrics	4	En
	VV	Verification and Validation	6	En
	TS	Software Economics	3	En
	TS	Critical Software	3	En

semester 30

Topic	Title	ECTS	Lang.
ATSE	Mobile System Engineering	8	En
FC	Seminars in Software and IT Engineering	4	En
I	Internship	8	En
FC	Elective	8	En
ESER	Research Methods	2	En

semester 30

Elective	ECTS	Elective or alternatives	ECTS
Lean start up	8		
Requirements	8		
IT and service management	8		

ES	Topic	Title	ECTS	Lang.
	ATSE	Agent Based Software Engineering	6	En
	RDSS	Software Design	4	En
	ATSE	Interaction Design	6	En
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Requirements	8		
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semester 30

semester 30

year 60

year 60

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