

Learning Paths without RUB

EMSE 2014-2016 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	VV	Safety and Reliability of Embedded Systems	4	En	I	Internship	8	En	
	TS	Performance Modelling 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	VV	Formal Specification and verification Techniques	8	En	T	Thesis	30	En	
	SPPM	Software Project and Process Management	4	En					
	RDSS	Software Architecture of Distributed Systems (A2)	8	En					
	TS	Process Modelling	4	En					
	ESEER	Software Engineering Seminar	4	En					
	ESEER	Empirical Model Building and Methods	4	En					
semester 32					semester 30				
year 60					year 54				
Total					Total				
					114				

UNIKL		UPM	
Elective	ECTS	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 Outsource Software Engineering	4
		Agile Software Development	4

UNIKL					UOQ				
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	
1	VV	Safety and Reliability of Embedded Systems	4	En	I	Principles of Project Management	3	En	
	TS	Performance Modelling of Distributed Systems	4	En	I	Project I	11	En	
	RDSS	Requirements Engineering	4	En	ESEER	Software Engineering Research	7	En	
	ATSE	Middleware for Heterogeneous Distributed Information Systems	8	En	ESEER	Research Methods	5	En	
	SPPM	Quality Management software and System (A1)	4	En	TS	Interaction Design	4	En	
	TS	Product Line Engineering	4	En					
semester 28					semester 30				
2	VV	Formal Specification and verification Techniques	8	En	T	Thesis	30	En	
	SPPM	Software Project and Process Management	4	En					
	RDSS	Software Architecture of Distributed Systems (A2)	8	En					
	TS	Process Modelling	4	En					
	ESEER	Software Engineering Seminar	4	En					
	ESEER	Empirical Model Building and Methods	4	En					
semester 24					semester 30				
year 52					year 60				
Total					Total				
					112				

UNIKL		UOQ	
Elective	ECTS	Elective or alternatives	ECTS

UPM					UOQ				
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	
1	RDSS	Requirements Engineering	6	En	I	Principles of Project Management	3	En	
	SPPM	Models and Methods for Process Improvement and Assessment	4	En	I	Project I	11	En	
	SPPM	Software Project Management	4	En	ESEER	Software Engineering Research	7	En	
	ESEER	Software Metrics	4	En	ESEER	Research Methods	5	En	
	VV	Verification and Validation	6	En	TS	Interaction Design	4	En	
	TS	Software Economics	3	En					
	TS	Critical Software	3	En					
semester 30					semester 30				
2	ATSE	Agent Based Software Engineering	6	En	T	Thesis	30	En	
	RDSS	Software Design	4	En					
	ATSE	Interaction Design	6	En					
	ESEER	Experimental Software Engineering	6	En					
	RDSS	Software Architecture	4	En					
	VV	Software Quality Management	4	En					
semester 30					semester 30				
year 60					year 60				
Total					Total				
					120				


UPM		UOQ	
Elective	ECTS	Elective or alternatives	ECTS

UPM					UNIKL				
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	
1	RDSS	Requirements Engineering	6	En	I	Software Project	8	En	
	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	4	En	
	ESEER	Software Metrics	4	En	ATSE	Advances in Software Engineering - Module: Performance Modelling of distributed systems	4	En	
	VV	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	
	TS	Critical Software	3	En					
semester 30					semester 24				
2	ATSE	Agent Based Software Engineering	6	En	T	Thesis	30	En	
	RDSS	Software Design	4	En					
	ATSE	Interaction Design	6	En					
	ESEER	Experimental Software Engineering	6	En					
	RDSS	Software Architecture	4	En					
	VV	Software Quality Management	4	En					
semester 30					semester 30				
year 60					year 54				
Total					Total				
					114				

UPM		UNIKL	
Elective	ECTS	Elective or alternatives	ECTS

UOQ					UNIKL				
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	
1	SPPM	Software Development in Global Environment	5	En	I	Software Project	8	En	
	ESEER	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	
	VV	Software Quality and Testing	5	En	ATSE	Advances in Software Engineering - Module: Performance Modelling of distributed systems	4	En	
	RDSS	Realtime Distributed Software Development	6	En	ATSE	Advances in Software Engineering - Module: Safety & Reliability of Embedded systems	4	En	
	ESEER	Advanced Topic in Software Engineering	5	En	TS	Product Line Engineering	4	En	
semester 30					semester 24				
2	ATSE	Software Production and Maintenance	5	En	T	Thesis	30	En	
	RDSS	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					

UOQ		UNIKL	
Elective	ECTS	Elective or alternatives	ECTS

semester 30					semester 30							
year 60					year 54							
Total										114		
LHD					UPM					LHD	UPM	
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	ECTS	Lang.		
1	SPPM	Software Development in Global Environment	5	En	I	Internship	8	En	Elective 	Elective or alternatives 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 Pervasive Software Development 4		
	ESEK	Open Source Software Development	4	En	TS	Management, Relationships and Communication in Working Groups	4	En				
	SPPM	Software Engineering Management, Measurement and Improvement	5	En	FC	Choice among	12	En				
	VV	Software Quality and Testing	5	En								
	RDSK	Realtime Distributed Software Development	6	En								
ESEK	Advanced Topic in Software Engineering	5	En									
semester 30					semester 24							
2	ATSE	Software Production and Maintenance	5	En	T	Thesis	30	En				
	RDSK	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					semester 30							
year 60					year 54					Total		114

Learning paths with FUB

EMSE 2016-2017 onward

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

FUB					UNIXL					FUB					UNIXL				
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	Elective	ECTS	Elective or alternatives	ECTS			
	SPPM	Software Process Management	8	En		I	Software Project	8	En										
	TS	Statistical Methods	4	En		FC	Software Engineering Seminar	8	En										
	RDDS	Requirements and Design of Software Systems	8	En		FC	Middleware for Heterogeneous and Distributed Information Systems	4	En										
	1	TS	Data Mining	8		En	ATSE	Performance modelling of distributed systems	4								En		
semester 28																			
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 32																			
year 60																			
Total																	122		

FUB					UPM					FUB					UPM				
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	Elective	ECTS	Elective or alternatives	ECTS			
	SPPM	Software Process Management	8	En		I	Internship	8	En										
	TS	Statistical Methods	4	En		TS	Management, Relationships and Communication in Working Groups	4	En										
	RDDS	Requirements and Design of Software Systems	8	En		FC	Choice among	12	En										
	1	TS	IT and Service Management	8		En													
semester 28																			
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 32																			
year 60																			
Total																	114		

FUB					UoO					FUB					UoO				
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	Elective	ECTS	Elective or alternatives	ECTS			
	SPPM	Software Process Management	8	En		I	Principles of Project Management	3	En										
	TS	Statistical Methods	4	En		I	Project II	11	En										
	RDDS	Requirements and Design of Software Systems	8	En		ESER	Software Engineering Research	7	En										
	1	TS	IT and Service Management	8		En	ESER	Research Methods	5								En		
semester 28																			
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 32																			
year 60																			
Total																	120		

UNIXL					FUB					FUB					UNIXL				
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	Elective	ECTS	Elective or alternatives	ECTS			
	VV	Safety and Reliability of Embedded Systems	4	En		ATSE	Mobile System Engineering	8	En										
	TS	Performance Modelling of Distributed Systems	4	En		FC	Seminars in Software and IT Engineering	4	En										
	RDDS	Requirements Engineering	4	En		I	Internship	8	En										
	1	ATSE	Middleware for Heterogeneous Distributed Information Systems	8		En	FC	Elective	8								En		
	SPPM	Quality Management software and System (A1)	4	En		ESER	Research Methods	2	En										
	TS	Product Line Engineering	4	En															
semester 32																			
year 60																			
Total																	120		

semester 28				semester 30					
2	VV	Formal Specification and verification Techniques	8	En	T	Thesis	30	En	
	SPPM	Software Project and Process Management	4	En					
	RODS	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 60					
Total								120	

UPM					FUB				FUB		UPM		
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	
1	RODS	Requirements Engineering	6	En	pass/fail	ATSE	Mobile System Engineering	8	En	Loan start up	8		
	SPPM	Models and Methods for Process Improvement and Assessment	4	En		FC	Seminars in Software and IT Engineering	4	En		Requirements		8
	SPPM	Software Project Management	4	En		I	Internship	8	En		IT and service management		8
	ESER	Software Metrics	4	En		FC	Elective	8	En				
	VV	Verification and Validation	6	En		pass/fail	ESER	Research Methods	2	En			
	TS	Software Economics	3	En									
	TS	Critical Software	3	En									
semester 30					semester 30								
year 60					year 60								
Total												120	

UoO					FUB				FUB		UoO		
ES	Topic	Title	ECTS	Lang.	Topic	Title	ECTS	Lang.	Elective	ECTS	Elective or alternatives	ECTS	
1	SPPM	Software Development in Global Environment	5	En	pass/fail	ATSE	Mobile System Engineering	8	En	Loan start up	8		
	ESER	Open Source Software Development	4	En		FC	Seminars in Software and IT Engineering	4	En		Requirements		8
	SPPM	Software Engineering Management, Measurement and Improvement	5	En		I	Internship	8	En		IT and service management		8
	VV	Software Quality and Testing	5	En		FC	Elective	8	En				
	RODS	Realtime Distributed Software Development	6	En		pass/fail	ESER	Research Methods	2	En			
ESER	Advanced Topic in Software Engineering	5	En										
semester 30					semester 30								
year 60					year 60								
Total												120	