

Learning paths with FUB

EMSE 2015-2016 onward

A course of local language of 2 ECTS is EMSE compulsory at each academic year on top of the 120 ECTS

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ES	Topic	Title	ECTS	Topic	Title	ECTS	
1	SPPM	Software Process Management	8	VV	Safety & Reliability of Embedded systems	4	
	TS	Statistical Methods	4	PST	Performance modelling of distributed systems (A)	4	
	RE	Requirements and Design of Software Systems I	4	I	Internship	8	
	SD	Requirements and Design of Software Systems II	4	TS	Product line Engineering	4	
	PST	IT and Service Management	8	PST	Middleware for Heterogeneous and Distributed Information Systems	8	
				ESER	Software Engineering Seminar	4	
			semester	28			
					semester	28	
2	VV	Software Reliability and Testing	8	T	Thesis	30	
	ESER	Empirical Software Measurement	8				
	SPPM	Software Factory / Quality Software Factory	8				
	PST	Advanced Internet Technologies	8				
			semester	32			
					semester	30	
			year	60			
					year	58	
						Total	118

Alternative	ECTS

Alternative	ECTS

Legend

Core Areas

Software Project / Process Management

Verification and Validation

Software Design

Requirements engineering

Partner Specific Topic in Software Engineering

Transversal Skills

Empirical Software Engineering Research

Internship

Thesis

Acronym

SPPM

VV

SD

RE

PST

TS

ESER

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ES	Topic	Title	ECTS	Topic	Title	Lang.	
1	SPPM	Software Process Management	8	I	Software Internship	14	
	TS	Statistical Methods	4	PST	Alternatives	8	
	RE	Requirements and Design of Software Systems I	4	TS	Transversal Skills	8	
	SD	Requirements and Design of Software Systems II	4				
	PST	IT and Service Management	8				
			semester	28			
					semester	30	
2	VV	Software Reliability and Testing	8	T	Thesis	30	
	ESER	Empirical Software Measurement	8				
	SPPM	Software Factory / Quality Software Factory	8				
	PST	Advanced Internet Technologies	8				
			semester	32			
					semester	30	
			year	60			
					year	60	
						Total	120

Alternative	ECTS

Alternative	ECTS

Data Engineering

Management, Relationships and Communication in Working Groups

Challenges for accessible computing for people with functional diversity

Agile Software Development: Agile Practices and Agile Usability

Distributed and Outsourced Software Engineering

Rigorous Software Development

4

4

4

4

4

4

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ES	Topic	Title	ECTS	Topic	Title	ECTS
1	VV	Safety and Reliability of Embedded Systems	4	I	Software Internship	14
	PST	Performance Modeling of Distributed Systems	4	PST	Alternatives	8
	RE	Requirements Engineering	4	TS	Transversal Skills	8
	PST	Middleware for Heterogeneous Distributed Information Systems	8			
	PST	Quality Management software and System (A1)	4			
	TS	Product Line Engineering	4			
			semester	28		
						semester
						30
2	VV	Formal Specification and verification Techniques	8	T	Thesis	30
	SSPM	Software Internship and Process Management	4			
	SD	Software Architecture of Distributed Systems (A2)	8			
	TS	Process Modelling	4			
	ERM	Empirical Model Building and Methods and Software Engineering Seminar	8			
				semester	32	
						semester
						30
			year	60		
						year
						60

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ES	Topic	Title	ECTS	Topic	Title	ECTS
1	VV	Safety and Reliability of Embedded Systems	4	TS	Principles of Internship Management	3
	PST	Performance Modeling of Distributed Systems	4	I	Internship II	11
	RE	Requirements Engineering	4	ERM	Software Engineering Research	7
	PST	Middleware for Heterogeneous Distributed Information Systems	8	ERM	Research Methods	5
	PST	Quality Management software and System (A1)	4	TS	Interaction Design	4
	PST	Product Line Engineering	4			
			semester	28		
						semester
						30
2	VV	Formal Specification and verification Techniques	8	T	Thesis	30
	SSPM	Software Internship and Process Management	4			
	SD	Software Architecture of Distributed Systems (A2)	8			
	SSPM	Process Modelling	4			
	ERM	Empirical Model Building and Methods and Software Engineering Seminar	8			
				semester	24	
						semester
						30
			year	52		
						year
						60

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Alternative	ECTS	Alternative	ECTS
A1: Software Quality Assurance		Data Engineering	4
A2: Service Oriented Architecture		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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Alternative	ECTS	Alternative	ECTS
A1: Software Quality Assurance			
A2: Service Oriented Architecture			

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ES	Topic	Title	ECTS	Topic	Title	ECTS
1	RE	Requirements Engineering	6	TS	Principles of Project Management	3
	SPPM	Models and Methods for Process Improvement and Assessment	4	I	Project II	11
	SPPM	Software Project Management	4	ERM	Software Engineering Research	7
	ESER	Software Metrics	4	ERM	Research Methods	5
	VV	Verification and Validation	6	TS	Interaction Design	4
	TS	Software Economics	3			
	PST	Critical Software	3			
			semester	30		
			semester	30		

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Alternative

Alternative

2	PST	Agent Based Software Engineering	6	T	Thesis	30
	SD	Software Design	4			
	TS	Interaction Design	6			
	ESER	Experimental Software Engineering	6			
	SD	Software Architecture	4			
	VV	Software Quality Management	4			
			semester	30		
			semester	30		
			year	60		
			year	60		

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ES	Topic	Title	ECTS	Topic	Title	ECTS
1	RE	Requirements Engineering	6	VV	Safety & Reliability of Embedded systems	4
	SPPM	Models and Methods for Process Improvement and Assessment	4	PST	Performance modelling of distributed systems (A)	4
	SPPM	Software Internship Management	4	I	Internship	8
	ESER	Software Metrics	4	TS	Product line Engineering	4
	VV	Verification and Validation	6	PST	Middleware for Heterogeneous and Distributed Information Systems	8
	TS	Software Economics	3	ESER	Software Engineering Seminar	4
	PST	Critical Software	3			
			semester	30		
			semester	20		

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Alternative

Alternative

2	PST	Agent Based Software Engineering	6	T	Thesis	30
	SD	Software Design	4			
	TS	Interaction Design	6			
	ESER	Experimental Software Engineering	6			
	SD	Software Architecture	4			
	VV	Software Quality Management	4			
			semester	30		
			semester	30		
			year	60		
			year	50		

Total						
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ES	Topic	Title	ECTS	Topic	Title	ECTS
1	PST	Software Development in Global Environment	5	VV	Safety & Reliability of Embedded systems	4
	PST	Open Source Software Development	4	PST	Performance modelling of distributed systems (A)	4
	SPPM	Software Engineering Management, Measurement and Improvement	5	I	Project	8
	VV	Software Quality and Testing	5	TS	Product line Engineering	4
	SD	Realtime Distributed Software Development	6	PST	Middleware for Heterogeneous and Distributed Information Systems	8
	ESER	Advanced Topic in Software Engineering	5	ESER	Software Engineering Seminar	4
			semester	30		
					semester	20

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Alternative

Alternative

2	RE	Software Production and Maintenance	5	T	Thesis	30
	SD	Embedded Software Development Environments	5			
	TS	IT Infrastructure	5			
	PST	Programmable Web Project	5			
	VV	Advanced Topic in Software Testing	5			
	TS	Mobile and Social Computing	5			
			semester	30		
					semester	30
			year	60		
					year	50

Total

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ES	Topic	Title	ECTS	Topic	Title	ECTS
1	PST	Software Development in Global Environment	5	I	Software Project	14
	PST	Open Source Software Development	4	PST	Alternatives	8
	SPPM	Software Engineering Management, Measurement and Improvement	5	TS	Transversal Skills	8
	VV	Software Quality and Testing	5			
	PST	Realtime Distributed Software Development	6			
	ESER	Advanced Topic in Software Engineering	5			
			semester	30		
					semester	30

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Alternative

Alternative	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

2	SPPM	Software Production and Maintenance	5	T	Thesis	30
	PST	Embedded Software Development Environments	5			
	TS	IT Infrastructure	5			
	PST	Programmable Web Project	5			
	VV	Advanced Topic in Software Testing	5			
	TS	Mobile and Social Computing	5			
			semester	30		
					semester	30
			year	60		
					year	60

Total

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ES	Topic	Title	ECTS	Topic	Title	Lang.
1	SPPM	Software Process Management	8	TS	Principles of Internship Management	3
	TS	Statistical Methods	4	I	Internship	11
	RE	Requirements and Design of Software Systems I	4	ERM	Software Engineering Research	7
	SD	Requirements and Design of Software Systems II	4	ERM	Research Methods	5
	PST	IT and Service Management	8	TS	Interaction Design	4

semester 28

semester 30

2	VV	Software Reliability and Testing	8	T	Thesis	30
	ESER	Empirical Software Measurement	8			
	SPPM	Software Factory / Quality Software Factory	8			
	PST	Advanced Internet Technologies	8			

semester 32

semester 30

year 60

year 60

Total

120

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ES	Topic	Title	ECTS	Topic	Title	Lang.
1	VV	Safety and Reliability of Embedded Systems	4	PST	Mobile System Engineering	8
	PST	Performance Modeling of Distributed Systems	4	ESER	Seminars in Software and IT Engineering	4
	RE	Requirements Engineering	4	I	Internship	8
	PST	Middleware for Heterogeneous Distributed Information Systems	8	PST	Elective	8
	VV	Quality Management software and System (A1)	4	ESER	Research Methods	2
	TS	Product Line Engineering	4			

semester 28

semester 30

2	VV	Formal Specification and verification Techniques	8	T	Thesis	30
	SPPM	Software Project and Process Management	4			
	SD	Software Architecture of Distributed Systems (A2)	8			
	TS	Process Modelling	4			
	ESER	Empirical Model Building and Methods and Software Engineering Seminar	8			

semester 32

semester 30

year 60

year 60

Total

120

Alternative ECTS

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Alternative ECTS

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Alternative ECTS

Lean start up	8
Requirements	8
IT and service management	8

Alternative ECTS

A1: Software Quality Assurance
A2: Service Oriented Architecture

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ES	Topic	Title	ECTS	Topic	Title	Lang.	
1	RE	Requirements Engineering	6	PST	Mobile System Engineering	8	
	SPPM	Models and Methods for Process Improvement and Assessment	4	ESER	Seminars in Software and IT Engineering	4	
	SPPM	Software Project Management	4	I	Internship	8	
	ERM	Software Metrics	4	PST	Elective	8	
	VV	Verification and Validation	6	ESER	Research Methods	2	
	PST	Software Economics	3				
	PST	Critical Software	3				
	semester			30	semester		

Alternative	ECTS
Lean start up	8
Requirements	8
IT and service management	8

Alternative	ECTS

2	PST	Agent Based Software Engineering	6	T	Thesis	30	
	SD	Software Design	4				
	PST	Interaction Design	6				
	ERM	Experimental Software Engineering	6				
	SD	Software Architecture	4				
	VV	Software Quality Management	4				
semester			30	semester			30
year			60	year			60

Total						120
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ES	Topic	Title	ECTS	Topic	Title	Lang.	
1	PST	Software Development in Global Environment	5	PST	Mobile System Engineering	8	
	PST	Open Source Software Development	4	ESER	Seminars in Software and IT Engineering	4	
	SPPM	Software Engineering Management, Measurement and Improvement	5	I	Internship	8	
	VV	Software Quality and Testing	5	PST	Elective	8	
	SD	Realtime Distributed Software Development	6	ESER	Research Methods	2	
	ESER	Advanced Topic in Software Engineering	5				
semester			30	semester			30

Alternative	ECTS
Lean start up	8
Requirements	8
IT and service management	8

Alternative	ECTS

2	RE	Software Production and Maintenance	5	T	Thesis	30	
	SD	Embedded Software Development Environments	5				
	TS	IT Infrastructure	5				
	PST	Programmable Web Project (transversal skills)	5				
	VV	Advanced Topic in Software Testing	5				
	TS	Mobile and Social Computing	5				
semester			30	semester			30
year			60	year			60

Total						120
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