

Module Descriptions

Master of Science in Information Systems (PO 2010) School of Business and Economics University of Münster July 2015



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Information Management: Managing the Information Age Organization

Module Title english: Information Management: Managing the Information Age Organization					n Age Organization	
Cou	rse Program:	Master Information Systems PO 2010/2014				
1	Module No: IM1	State: Elective	Language of Instruction: English			
2	Turn: each winter term	Duration: 1 term	Semester: 1 or 2	CP: 6	Workload (h): 180	

Module Structure:

3	

No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
1	Lecture	Managing the Information Age Organization	4	30 h (2 CH)	90
2	Exercise Tutorial on Managing the Information Age Organization		2	30 h (2 CH)	30

Module Contents:

Background and relations to other courses:

The lecture Managing the Information Age Organization assumes that students have a basic understanding of Business Administration, Management Studies, and business applications of information technology as conveyed in Bachelor Programs in IS and related fields.

Main topics and learning objectives:

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The lecture provides students with a sound understanding of management and management theories as well as with the foundations of the information society. On the basis of this understanding, students are confronted with management challenges prevalent in the information age. While doing this, special emphasis is laid on how information technology affects the capabilities of an organization to compete in the information economy. Teaching is conducted through traditional lectures complemented with case study work and discussions in the classroom. Additional reading material is provided in order to allow students to review parts of the content at their leisure and to extend their knowledge in areas of personal interest.

Learning outcomes:

Academic:

After attending the course students should be familiar with the foundations of management, i.e. (strategic) planning, controlling, organization, and leadership. They should understand the specific conditions organizations are exposed to in the "Information Age" and be able to explain the technological, social and economic phenomena constituting it. Furthermore, they are expected to have an idea of how the information age challenges traditional management concepts and what appropriate responses to these challenges might look like.

Soft skills

The course introduces students to the analysis of case studies in small groups and furthers their ability to actively participate in classroom discussions.

Description of possible electives within the modules:

The module can be taken as part of the track Information Management or as an elective. Within the electives a minimum of 2 seminars has to be taken.

7	Examination: Final Module Exam						
8	Relevant Work: Number and Type; Connection to Course Final written exam	Duration up to 120 min.	Part of final mark in %				
9	Study Work: Number and Type; Connection to Course none Duration						
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.						
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)						
12	Module Prerequisites: none						
13	Presence: Presence is recommended						
14	Use of the module for other course programs: Master Business Administration, Master Information Systems						
15	Responsible Lecturer: Prof. Dr. Stefan Klein Department: School of Business and Economics						
16	Misc.:						

Information Management: Tasks and Techniques

Mod	dule Title english:	glish: Information Management: Tasks and Techniques					
Cou	Durse Program: Master Information Systems PO 2010/2014						
1	Module No: IM2	State: Elective	Language of Instruction: English				
2	Turn: each winter term	Duration: 1 term	Semester: 1 or 2 CP: 6 Workload (h): 180				
	Module Structure:						
			1	i	ı		

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No	Type Course		СР	Presence (h + CH)	Self-Study (h)
1	Lecture	Tasks and Techniques	4	30 h (2 CH)	90
2	2 Exercise Exercise on Tasks and Techniques		2	30 h (2 CH)	30

Module Contents:

Background and relations to other courses:

The course requires a sound understanding of both management studies and information processing in business. This course interlinks with the course "Managing the Information Age Organization", which deepens the students' understanding of management basics that this course builds upon. In order to provide students from a non IS-background with the managerial understanding of information processing necessary for participating successfully in this course, an extensive script on this subject is provided at the beginning of the semester.

Main topics and learning objectives:

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The lecture provides students with an overview of executives' duties in managing an organization's information and communication capabilities. These duties include tasks such as strategic information planning, strategy implementation, as well as sourcing and organizing the information function. These tasks are structured in a comprehensive framework based on management theory. While identifying critical IM tasks and responsibilities, the course presents methods and techniques that can be applied to deal with them. Class discussions on case studies give students the opportunity to consolidate their newly acquired knowledge and apply the techniques presented to typical problems. In addition, occasional discussions with IT executives allow students to reflect their conceptual knowledge in light of real world practices.

Learning outcomes:

Academic:

The course provides students with skills indispensable for an IT executive. In particular, students will obtain a comprehensive overview of the field of IT management and get acquainted with the typical tasks IT managers are charged with. They will also get to know prominent frameworks and techniques to solve IM tasks as proposed in textbooks.

Soft skills:

In addition to expertise in the fields mentioned above, students will deepen their skills in constructively analyzing and solving case studies in both classroom settings and as part of individual assignments.

Description of possible electives within the modules:

The module can be taken as part of the track Information Management or as an elective. Within the electives a minimum of 2 seminars has to be taken.

7	Examination: Final Module Exam					
8	Relevant Work: Number and Type; Connection to Course Final Written Exam	Duration 120 min.	Part of final mark in %			
9	Study Work: Number and Type; Connection to Course none					
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Business Administration, Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Stefan Klein Department: School of Business and Economics					
16	Misc.:					

Information Management: Theories

Mod	Module Title english: Information Management: Theories						
Cou	rse Program:	Master Information Systems PO 2010/2014					
1	Module No: IM3	State: Elective	Language of Instruction: English				
2	Turn: each summer term	Duration: 1 term	Semester: 1 or 2 CP: 6 Workload (h): 180				
	Module Structure:						
	_			Preser	ice (h + Self-Study		

No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
1	Lecture	Theories	3	30 h (2 CH)	60
2	Exercise	Exercise on Theories	3	30 h (2 CH)	60
	1	1 Lecture	1 Lecture Theories	1 Lecture Theories 3	1 Lecture Theories 3 30 h (2 CH)

Module Contents:

Background and relations to other courses:

A sound understanding of management and information management as provided in the courses "Managing the Information Age Organization" and "Information Management Tasks & Techniques".

Main topics and learning objectives:

This course deepens the students' understanding of IM tasks and techniques in that it enables them to assess underlying theoretical propositions in more detail. To this end, the lecture introduces important management theories, including market, resource and capability based theories of strategic information systems, IT strategy theory, IT value and productivity theory, organization theory of IT and theories of sourcing and governing the information function.

Moreover, on the basis of this theoretical knowledge, critical issues of IM are discussed in the light of the controversial academic discussions surrounding them. The course builds on well-prepared class discussions rather than traditional lectures. The lecturer will support learning by carefully selecting papers and placing them into a broader "theoretical landscape". He will moderate and facilitate the discussions, and provide feedback on the assignments during the semester (reading papers, preparing presentations, writing minutes).

Learning outcomes:

Academic:

The overall aim of this course is to give students access to the academic debate on IM. More specifically, the course is intended to introduce students to the international academic debate on the most important or discussed issues of information management. The students will gain insight into the theories underlying the frameworks and techniques proposed for solving IM tasks and will be able to assess these tools and the underlying theories critically.

Soft skills

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In addition to providing students with the capabilities to deal with academic literature reflectively, the course helps to further the students' ability to take an active part in academic discussions. This ability is based on a combination of reading, thinking, writing, discussing and listening skills.

Description of possible electives within the modules:

The module can be taken as part of the track Information Management or as an elective. Within the electives a minimum of 2 seminars has to be taken.

7	Examination: Examinations for every part of the module						
	Relevant Work: Number and Type; Connection to Course Duration Part of final mark in '						
	Final Written Exam	120 min.	60 %				
8	Presentation (groups of 3-4 students)	ca. 20 min.	15 %				
	Written Report	ca. 3 pages	10 %				
	12 written comments on weekly reading	ca. 1 page per comment	15 %				
	Study Work:						
9	Number and Type; Connection to Course		Duration				
	none						
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work completed.	ork and study work	c have been successfully				
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)						
12	Module Prerequisites:						
13	Presence: Presence is recommended.						
14	Use of the module for other course programs: Master Business Administration, Master Information Systems						
15	Responsible Lecturer: Prof. Dr. Stefan Klein Department: School of Business and Economics						
16	Misc.:						

Process Management: Information Modeling

Module Title english: Process Manage				Process Manageme	nent: Information Modeling				
Cou	rse Pro	ogram:		Master Information Systems PO 2010/2014					
1	Module No: PM1 State: Elective			Language of Instru	ctio	n: Englis	h		
2	Turn: each winter term Duration: 1 term			Semester: 1 or 2	С	CP: 6 Worklo		oad (h): 180	
	Module Structure:								
3	No	Туре	Cou	ırse		СР	Present CH)	ce (h +	Self-Study (h)
	1	Lecture	Info	ormation Modeling		3	30 h (2	CH)	60
	2	Exercise	Exe	ercise on Information	Modeling	3	30 h (2 CH)		60

Module Contents:

Background and relations to other courses:

The lecture is on one of the core topic areas in Information Systems: Conceptual Modeling (i.e., process modeling, data modeling, organizational modeling etc.) with a focus on the use and reuse of conceptual models in business. Hence, the focus is not on how to create a conceptual model, but on what are the preconditions of models to really be usable in practice and on approaches and methodologies supporting model use and reuse, especially model analysis. The lecture therefore provides a theoretical basis for courses applying modeling techniques, such as PM2, PM3, BI1, ISD1, ISD2, ISD3, PR1, PR2, and PR3.

Main topics and learning objectives:

Themes	Learning objectives			
Meta modeling / meta meta modeling / meta modeling tools	To be able to design modeling languages with meta models, and to be able to design modeling tools and meta modeling tools with meta model and meta model-based databases.			
Modeling frameworks	To be able to provide an overview of modeling frameworks, to be able to evaluate and compare them, and to be able to apply selected parts of them.			
Model variant management	To be able to apply selected approaches on model variant management onto models of different modeling languages.			
Model disambiguation	To know why unambiguous models are a precondition for actually using them for business purposes, and to apply selected methodologies on model disambiguation.			
Model analysis	To know different areas of model analysis, for instance process improvement, process compliance, model transformation, model comparison, model integration, or business activity monitoring, and to be able to apply selected approaches on model analysis. The focus is on pattern-based model querying.			

		<u> </u>					
	Domain-specific modeling	To explain domain favor and against t					
5	Learning outcomes: Academic: Impart a broad and profound understanding of the main tasks and challenges of conceptual modeling. Facilitate understanding of different modeling and model analysis approaches and judge their appropriateness for specific contexts of application. Soft skills: The ability to organize small working groups independently and to give presentations in front of a large audience.						
6	Description of possible electives within the modules: The module can be taken as part of the track Process Management or as an elective. Within the electives a minimum of 2 seminars has to be taken.						
7	Examination: Examinatio	ns for every part of t	:he mod	ıle			
	Relevant Work: Number and Type; Connection to Course			on		Part of final mark in %	
8	Final Written Exam	120 mi	120 min.		90 %		
	10 case studies in groups students, 4 presentation	4-8 pages/case study, ca. 20 min/presentation			10 %		
9	Study Work: Number and Type; Conne	ection to Course			Duration		
10	Prerequisites for Credit Portion The credit points will be goompleted.		ant worl	k and study work	k have be	en successfully	
11	Weight of the module gra 5% (6 of 120 CP)	de for the overall g	ade:				
12	Module Prerequisites:		_		_	_	
13	Presence: Presence is recommended	d.	_				
14	Use of the module for oth Master Business Administ			Systems			
15	Responsible Lecturer: PD Dr. Patrick Delfmann Department: School of Business and Economics						

16	Misc.:

Process Management: Enterprise Architecture Management

Mod	dule Ti	tle english:		Process Management: Enterprise Architecture Management					t
Cou	rse Pr	ogram:		Master Information Systems PO 2010/2014					
1	Module No: PM2			State: Elective	Language of Instruction: English				
2	Turn: each summer term			Duration: 1 term	Semester: 1 or 2	CP: 6		Workload (h): 180	
	Module Structure:								
3	No	Туре	Cou	rse		СР	Presence (h + CH)		Self-Study (h)
	1	Lecture	Ente	rprise Architecture <i>N</i>	lanagement	3	30 h (2	CH)	60
	2	Exercise	Exer	cise on Enterprise Ar	chitecture	3	30 h (2	CH)	60

Module Contents:

Background and relations to other courses:

Management

This course stresses the aspect of IM as an engineering discipline, in contrast to being a management discipline only. The fundamental idea is to describe organizations as a whole, consisting of goals and strategies, business models, processes, people and information technology. Enterprise Architecture Management propagates a holistic approach that primarily aims at aligning the spheres of business and IT within one or across several companies and at facilitating and governing transformation processes. The Information Manager thereby has the role of an architect of the corporate information infrastructure. The Module "Managing IT in the Information Age" introduces students to the tasks and tools in Information Management thus setting the scene for this Module.

Main topics and learning objectives:

This course provides insights into the concepts and methods of Enterprise Architecture Management. The need for architectures in complex organizations as an instrument for transformation is motivated by the challenges enterprises face in today's business. Architectures support the effective planning and governance of enterprises as a whole consisting of business and IT. Consistently implemented, they facilitate the understanding of business entities' interrelationships, set them in relation to strategic goals and help define the desired to-be state and the roadmap for its realization. For this purpose, concepts, methods, models and tools are discussed and enriched with insights from practice. The introduction of a specialized modeling language introduces the students to the creation of architectural artifacts. The concrete architecture realization process is underlined by the study of architecture frameworks currently discussed in research and practice.

Themes	Learning objectives
	To learn about the challenges today's enterprises are facing and the answers Enterprise Architecture Management provides in this context.

4

1							
	Positioning Enterprise Architecture Management		ion and major concepts of the state of the s				
	Management areas and best practices To learn about the management areas relevant to Enterprise Architecture Management and associated best practices commonly applied.						
	Modeling of Enterprise Architectures To learn how to create different architectural artifacts and to connect them to create a holistic, purposeful picture of the enterprise. Moreover, to learn to use viewpoints to generate stakeholder-specific views of the architecture.						
	Frameworks in Enterprise Architecture Management To learn why frameworks play an important role in Enterprise Architecture Management and to get to know prominent frameworks that are vividly discussed in research and practice.						
5	An understanding of currimplementation should be and governing such arch be conveyed with work of Soft skills: Students are encouraged follow-up work in teams. Chair. The case study is cooperate in teams and tregularly by the groups in presentation and discuss and semantically defined	Learning outcomes: Academic: The students' ability to develop and manage Enterprise Architectures is the course's major goal. An understanding of current developments and frameworks in the domain of architecture implementation should be obtained. Students are equipped with methods for planning, creating and governing such architectures. Furthermore, practical skills in architecture development will be conveyed with work on case studies and presentation of the results.					
6	Description of possible e The module can be taker electives a minimum of 2	as part of the track	Process Management or	as an	elective. Within the		
7	Examination: Examination	ons for every part of t	he module				
	Relevant Work: Number and Type; Conn	Duration		Part of final mark in			
8	Final Written Exam	120 min.		60 %			
	Case Study with EAM-So Presentation	oftware,	ca. 40 pages, ca. 40 min. presentation 40 %				
	Study Work:			l			
9	Number and Type; Conn	ection to Course		Dura	tion		
	none						

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.				
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)				
12	Module Prerequisites:				
13	Presence: Presence is recommended.				
14	Use of the module for other course programs: Master Business Administration, Master Information Systems				
15	Responsible Lecturer: Prof. DrIng. Bernd Hellingrath	Department: School of Business and Economics			
16	Misc.:				

Process Management: Workflow Management

electives a minimum of 2 seminars has to be taken.

Module Title english:				Process Management: Workflow Management						
Course Program:				Master Information Systems PO 2010/2014						
1	Mod	ule No: PM3		State: Elective	Language of Instr	ucti	on: Engli	ish		
2	Turn:	: each summ	er	Duration: 1 term	Semester: 1 or 2		CP: 6 W		Workload (h): 180	
	Mod	ule Structure	:							
3	No	Туре	Cour	se		СР	Presen CH)	ce (h +	Self-Study (h)	
	1	Lecture	Work	flow Management		2	30 h (2	CH)	30	
	2	Exercise	Exerc	ise on Workflow Ma	nagement	4	30 h (2	CH)	90	
4	PR3. Main	topics and l		Learning objectives To be able to provide an overview of the entire process of workflow implementation and to explain its relevance. To be able to understand and create workflow definitions.						
4	(2) (Basics of Wornagement Conceptual w	kflow	Learning objection To be able to implementati	provide an overviev on and to explain it	s re	levance.	·		
4	(1) E Man (2) (defi	Basics of Wornagement	kflow orkflo	Learning objection To be able to implementation To be able to To be able to	provide an overviev on and to explain it	eate	levance. workflov workflov	w definit	ss of workflow	
4	(1) E Man (2) (4) V	Basics of Wornagement Conceptual winition	kflow orkflo rkflow	Learning objection To be able to implementation To be able to and to explain the state of the	provide an overview on and to explain it understand and cre understand and cre	eate eate eate veen	workflow workflow (2) and	v definit v implei (3).	ss of workflow tions. mentations,	
5	(1) E Man (2) (4) V System Learn Acad The atthe composition of the attention of the at	Basics of Wornagement Conceptual winition Technical worldementation Workflow Martems Ining outcome Jemic: Ability to manipulation	kflow rorkflow nagem	Learning objection To be able to implementation To be able to and to explain the state of the	provide an overview on and to explain it understand and creations between the relations between the relations used in projects in organization.	es re eate veen racti	workflow (2) and rkflows v ce. zations,	w definit w impler (3). vith Wor an unde	ss of workflow tions. mentations, rkflow erstanding of hem.	

7	Examination: Examinations for every part of the module					
	Relevant Work: Number and Type; Connection to Course	on	Part of final mark in %			
8	Final Written Exam	120 mi	n.	60 %		
	Four presentations of intermediate results of an accompanying case study, prepared in groups of 5 - 6 min. students			40 %		
9	Study Work: Number and Type; Connection to Course		Duration			
	none					
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites: none					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Business Administration, Master Information Systems					
15		Department: School of Busi	iness and	l Economics		
16	Misc.:					

Business Networks: Interorganizational Systems

Module Title english:		Business Networks: Interorganizational Systems				
Course Program:		Master Information Systems PO 2010/2014				
1	Module No: BN1	State: Elective Language of Instruction: English		sh		
2	Turn: each winter term	Duration: 1 term	Semester: 1 or 2	CP: 6	Workload (h): 180	

Presence (h + | Self-Study

30 h (2 CH)

30 h (2 CH)

(h)

75

Module Structure:

3	No	Туре	Course
	1	Lecture	Interorganizational Systems
	2	Exercise	Exercise on Interorganizational Systems

Module Contents:

Main topics and learning objectives:

Networks have become ubiquitous forms of organizing in and between economy, public administration and society at large. On the backdrop of this development this module introduces interorganizational systems and networks in a business context, yet with linkages to public administration (e.g. customs) and social networks. It aims to explore the contingencies and strategies that lie behind the evolution and use of interorganizational information infrastructures and applications (IOS). Further, students will examine the impact of IOS on distributed forms of value generation such as electronic markets and various types of networks. Drawing on case examples as well as theoretical concepts, a life cycle perspective of IOS management will be introduced. The implications of IOS will be discussed from various perspectives such as industry transformation, intermediation, strategic management, organization, information management and IS development. This discussion will be informed by theories addressing networking issues such as institutional economics, collective action or organization theory.

Learning outcomes:

Academic:

The course will provide students with analytical skills enabling them to explain the emergence of networks. Students should be able to both identify specific network management tasks (networkability) and apply prominent theories and frameworks to explain the impact of IOS.

Soft skills:

In addition to providing students with the capabilities to deal with academic concepts and literature reflectively, the course helps to further the students' ability to take an active part in discussions. This ability is based on a combination of reading, thinking, writing, discussing and listening skills. Moreover, students will develop skills in applying these techniques to practical problems, e.g. through problem based learning exercises. Course assignments will be organized as group work, so that students can practice their collaboration skills and learn techniques for efficient collaboration.

Description of possible electives within the modules:

The module can be taken as part of the track Business Networks or as an elective. Within the electives a minimum of 2 seminars has to be taken.

Examination: Examinations for every part of the module

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	Relevant Work:					
	Number and Type; Connection to Course	Duration	Part of final mark in %			
8	Final Written Exam	120 min.	50 %			
	Group Presentation (ca 3-5 students)	Ca. 15 min.	10 %			
	2 written elaborations	Ca. 5 pages/elaboration	40 %			
	Study Work:					
9	Number and Type; Connection to Course		Duration			
	none					
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Business Administration, Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Stefan Klein Department: School of Business and Economics					
16	Misc.:					

Business Networks: Information Security

Mod	dule Ti	tle english:		Business Networks: Information Security					
Cou	rse Pro	ogram:		Master Information Systems PO 2010/2014					
1	Modu	ule No: BN2	2 State: Elective Language of Instruction: English						
2	Turn:	each summ	er	Duration: 1 term	Duration: 1 term Semester: 1 or 2			CP: 6 Workload (h): 180	
	Module Structure:								
3	No	Туре	Cou	rse		СР	Presence CH)	:e (h +	Self-Study (h)
	1	Lecture	Info	nation Security			30 h (2	CH)	60
	2	Exercise	Exer	cise on Information S	Security	3	30 h (2	CH)	60

Module Contents:

Main topics and learning objectives:

This lecture covers the foundations of information security including the specification of protection goals, adversary models, security mechanisms (e.g., identification, access control) and cryptographic primitives to enforce protection goals in distributed systems (e.g., symmetric and asymmetric encryption, integrity protection). Security mechanisms will be discussed both from the perspective of a system operator, who protects a larger distributed system, as well as from the end users' point of view, who may wish to use security technology to self-protect against untrustworthy system operators.

4	Themes	Learning objectives
	Lecture: Theoretical Security, Practical Security, Security Strategy, Privacy Exercise: Primer on Information Theory, Primer on Coding Theory, Primer on Number Theory, Primer on Computational Complexity, Block Cipher Operating Modes, exercises accompanying the lecture	This course contributes to ensure that every graduate who potentially makes decisions with security impact has sufficient knowledge to a) identify security issues, b) communicate effectively with security experts, c) keep aware of changing technological limits, d) evaluate security advises critically and comprehensively, e) oversee the implementation of security measures, and f) assume responsibility for their effects and potential sideeffects.

Learning outcomes:

Academic

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a) identify security issues c) keep aware of changing technological limits d) evaluate security advises critically and comprehensively e) oversee the implementation of security measures

b) communicate effectively with security experts f) assume responsibility for their effects and potential sideeffects

6	Description of possible electives within the modules: The module can be taken as part of the track Business Networks or as an elective. Within the electives a minimum of 2 seminars has to be taken.					
7	Examination: Examinations for every part of the mod	ule				
8	Relevant Work: Number and Type; Connection to Course Oral examination One written exercise Duration Ca. 20 min. 80 % Ca. 10 pages 20 %					
9	Study Work: Number and Type; Connection to Course none Duration					
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Business Administration, Master Information Systems					
15	Responsible Lecturer: Prof. DrIng. Rainer Böhme Department: School of Business and Economics					
16	Misc.:					

Business Networks: Network Economics

Мо	dule Ti	tle english:	nglish: Business Networks: Network Economics						
Cou	ırse Pro	ogram:		Master Information Systems PO 2010/2014					
1	Mod	Module No: BN3 State: Elective Language of Instruction: English							
2	Turn: each summer term		ner	Duration: 1 term	Semester: 1 or 2		CP: 6	Workl	oad (h): 180
	Module Structure:								
3	No	Туре	Cou	rse		СР	Presence CH)	ce (h +	Self-Study (h)

Module Contents:

2

Lecture

Exercise

Background and relations to other courses:

Network Economics

Exercise on Network Economics

There is intentional overlap with the module BN Interorganizational Systems, which complements this course by taking a qualitative-holistic approach to questions in the scope of network economics.

Main topics and learning objectives:

This course blends an introduction to network economics with selected topics in computer networking. It teaches technical and formal economics skills in a unique combination tailored to students of Information Systems. Emphasis is put on simple models lending themselves to rigorous solutions. Participants immerse in the notion that network graphs form the social and economic fabric of an information society, and grasp the emergent properties of design choices in the Internet technology. They learn by many practical examples to appreciate the power of networks as well as ways to control it. Successful graduates are equipped with essential skills that qualify them for assuming responsibility in strategy teams of network industries (including startups), policy-making bodies, or research institutions.

4

Themes

History and foundations of network economics, agents, incentives, externalities, information regimes; network topologies, random graphs, degree distributions; non-cooperative network games, congestion, risk propagation; network formation, dynamics, standards, adoption; network management and regulation, pricing, strategic partnerships, competition; analysis tools, including primers on game and graph theory, computational aspects, approximation, software tools, simulation, visualization; Internet protocols as practical examples

Learning objectives

a) Students learn to "think in networks". They get a deep understanding of the role of network topology as a distinctive factor that defines the properties of complex social and technical systems. They get used to the ideas of emergence, feedback loops and equilibria. b) They dispose of models to describe as well as analytical tools to analyze and explain phenomena arising in networks. c) They can apply their knowledge in unprecedented ways to study new real-world problems with the lens of network economics. This enables them to d) contribute to theoretical and empirical research as well as to e) create and shape practical socio-technical systems based on

30 h (2 CH)

30 h (2 CH)

3

60

60

	well-founded principles. f) Awareness of the limitations of formal models, taught by examples of failure, prevents blind reliance and encourages responsible action.				
5	Learning outcomes: Academic: b) They dispose of models to describe as well as analytical tools to analyze and explain phenomena arising in networks d) Contribute to theoretical and empirical research e) Create and shape practical socio-technical systems based on well-founded principles. Soft skills: a) Students learn to "think in networks". They get a deep understanding of the role of network topology as a distinctive factor that defines the properties of complex social and technical systems. They get used to the ideas of emergence, feedback loops and equilibria c) They can apply their knowledge in unprecedented ways to study new real-world problems with the lens of network economics f) Awareness of the limitations of formal models, taught by examples of failure, prevents blind reliance and encourages responsible action.				
6	Description of possible electives within the module The module can be taken as part of the track Busine electives a minimum of 2 seminars has to be taken	ess Networks or as	s an elective. Within the		
7	Examination: Final Module Exam				
8	Relevant Work: Number and Type; Connection to Course Final Written Exam	Duration 120 min.	Part of final mark in %		
9	Study Work: Number and Type; Connection to Course none		Duration		
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.				
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)				
12	Module Prerequisites:				
13	Presence: Presence is recommended.				
14	Use of the module for other course programs: Master Business Administration, Master Information Systems				
15	Responsible Lecturer: Prof. DrIng. Rainer Böhme Department: School of Business and Economics				

16	Misc.:

Business Intelligence: Management Information Systems and Data Warehousing

Мо	dule Title english:	Business Intelligence: Management Information Systems and Data Warehousing			
Course Program: Master Information Systems PO 2010/2014					
1	Module No: Bl1	State: Elective	Language of Instruction: English		
2	Turn: each winter term	Duration: 1 term	Semester: 1 or 2	CP: 6	Workload (h): 180

Module Structure:

3

	No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
3	1	Lecture	Management Information Systems and Data Warehousing	3	30 h (2 CH)	60
	2	Exercise	Exercises on Management Information Systems and Data Warehousing	3	30 h (2 CH)	60

Module Contents:

Background and relations to other courses:

Business Intelligence (BI) refers to a variety of methods and techniques for the analysis of business data such as data warehousing (DWH), reporting, Online Analytical Processing (OLAP), and data mining. This course addresses the methodical design and implementation of data warehouse systems in support of management's decision making, particularly via appropriate use of multidimensional schema design, ETL, and OLAP techniques. All relevant concepts are demonstrated from both a theoretical and a practical perspective. In this course, traditional lectures are complemented by student presentations that provide additional content. In addition, exercises and case studies provide ample opportunities to perform the various development phases in realistic and practical settings.

Main topics and learning objectives:

Students will be able to explain the problems, issues, solutions, techniques, tools, and applications relating to BI and DWH. They will be able not only to design and implement ETL processes and OLAP solutions but also to discuss differences among OLAP design approaches and to evaluate the quality of multidimensional schemata.

Themes	Learning objectives
Data Warehousing Fundamentals	To define architectures and use cases of data warehousing and management information systems and to assess their roles for companies
OLAP Processing and Optimization	To compare differences between OLTP and OLAP; to contrast OLAP workloads and demonstrate appropriate OLAP optimization techniques
ETL Design	To compare different ETL processes and tools; to design simple ETL processes

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	OLAP Modeling		of functional dependenci ructures; to design multio	ies for the identification of dimensional structures		
	OLAP Modeling Approaches		DLAP modeling approache g of scenarios according t	es; to demonstrate to an appropriate approach		
	OLAP To describe the architecture and functionality of OLAP systems; to implement reports with a standard BI platform according to a case study					
	Modern Architectures	To characterize modern architectures addressing hardware trends (multi/many core, in-memory), novel data requirements (big data, streaming data), and increased user expectations (situational BI)				
	Project Management	To compare different approaches to engage in an MIS/DWH project; to evaluate different BI strategies in organizations and understand their implementation.				
5	Learning outcomes: Academic: To understand and to be able to apply the addressed topics Soft skills: To manage and to organize group work regarding given tasks and presentations					
6	Description of possible electives within the modules: The module can be taken as part of the track Business Intelligence or as an elective. Within the electives a minimum of 2 seminars has to be taken.					
7	Examination: Examina	tions for every part of	the module			
	Relevant Work:					
	Number and Type; Cor	nection to Course	Duration	Part of final mark in %		
8	Final Written Exam		120 min.	60 %		
	4 Exercises, case stud	y with presentation	Each 10 pages + 20 mir presentation	n. 40 %		
	Study Work:					
9	Number and Type; Cor	nnection to Course		Duration		
	none					
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module § 5% (6 of 120 CP)	grade for the overall g	rade:			
12	Module Prerequisites:					

13	Presence: Presence is recommended.				
14	Use of the module for other course programs: Master Business Administration, Master Information Systems				
15	Responsible Lecturer: Prof. Dr. Dr. h.c. Dr. h.c. Jörg Becker, Prof. Dr. Gottfried Vossen	Department: School of Business and Economics			
16	Misc.:				

Business Intelligence: Data Analytics - I

Bu:	JIII C.									
Мо	dule Ti	tle english:	E	Business Intelligence: Data Analytics - I						
Cou	Course Program: Master Information Systems PO 2010/2014									
1	Modu	ı le No: Bl2	9	State: Elective	Language of Instru	ctio	n: Engli	sh		
2	Turn:	each winter	[Duration: 1 term	Semester: 1 or 2	С	P: 6	Workload (h): 180		
	Mod	ıle Structure	:							
3	No	Туре	Cours	se		СР	Presen	ce (h +	Self-Study (h)	
	1	Lecture	Data	Analytics I		3	30 h (2	: CH)	60	
	2	Exercise	Exerc	cise on Data Analyti	cs - I	3	30 h (2	: CH)	60	
	semi supp	rack "Busine nar, offers a v osed to be fa	ss Inte way to ımiliar	start a career in da with the basic con	i: omplemented by ele otabase managemen cepts from probabili	t an	d the lik	e. The s	tudents are	
4	semi supp Main The la topic	rack "Busine nar, offers a v osed to be fa topics and l e ecture focuss is unsupervi he lecture ar	ss Inte way to amiliar earning ses on sed le	elligence" ideally co start a career in da with the basic con- ag objectives: multivariate statist earning. Practical ex	omplemented by ele- stabase managemen cepts from probabili cical methods in the ercises using the sta	t and ty th cont	d the lik eory an ext of d	e. The sid statist	tudents are ics.	
4	semi supp Main The lot into t	rack "Busine nar, offers a v osed to be fa topics and l e ecture focuss is unsupervi he lecture ar	ss Inte way to imiliar earning ses on sed le nd a tu	elligence" ideally constart a career in day with the basic consists of the constant of the care of the	omplemented by ele- stabase managemen cepts from probabili cical methods in the ercises using the sta	t and ty th cont	d the lik leory an lext of d lical Soft	e. The sid statist	tudents are ics. ng. The main are integrated	
4	semi supp Main The li topic into t	rack "Busine nar, offers a vosed to be fatopics and lecture focuss is unsupervihe lecture ar	ss Inte way to imiliar earning ses on sed le ind a tu	elligence" ideally constart a career in day with the basic consists of the second of t	omplemented by electabase management cepts from probabilitical methods in the tercises using the state. ives	t and ty the contactist	d the lik leory an ext of d ical Soft	e. The sid statist ata mini ware Ra	tudents are ics. ng. The main are integrated detection,	
5	Thei Data Unsi Learr Acad The s data pract Soft s	rack "Busine nar, offers a vosed to be fatopics and lecture focuse is unsupervihe lecture ar ar Preprocessi upervised Lecture denics analysis as vical task.	ss Interway to amiliar earning ses on service arning earning e	elligence" ideally constart a career in day with the basic configuration of	omplemented by electabase management cepts from probabilitical methods in the tercises using the state or iori to quantitative ivariate normality	t and ty the contraction of the	d the like eory and ext of dical Soft	e. The sod statist ata mini tware R and soutlier ional Sc	tudents are ics. ng. The main are integrated detection, aling multivariate	
	Thei Data Unsi Learn Acad The s data pract Soft s Team Desc The n	rack "Busine nar, offers a vosed to be fatopics and lecture focuse is unsupervihe lecture ar Preprocessi upervised Lecture and uperv	ss Interway to amiliar earning ses on sed lend a turning essible e take	elligence" ideally constart a career in day with the basic configuration of the basic configuration of the basic configuration of the basic configuration of the basic care in the ability to choose the basic checks for multiple of the basic checks for multiple of the ability to choose the basic checks within the basic care in techniques.	cives circinate normality cipal Components, N citations of state of the and implement are and implement are citations. city of the state of the citations of the state and implement are citations. city of the state of the citations of the c	t and ty the contraction of the	d the like eory and ext of dical Soft	e. The sod statist ata mini tware R and stati	tudents are ics. ng. The main are integrated detection, aling multivariate que for a given	
5	Thei Data The semi supp Main The letopic into t Their Data Unsi	rack "Busine nar, offers a vosed to be factore focuse is unsupervihe lecture ar	ss Interway to amiliar earning ses on sed lend a turn of ses on tation sessible e take um of sessible was sessible e take um of sess	elligence" ideally constart a career in day with the basic configuration of the basic configuration of the basic configuration of the basic configuration of the basic care in the ability to choose the ability to choose the basic care in techniques the above of the basic care in the	cives cives citanding of state of the and implement are and implement are and implement are taken.	t and ty the contraction of the	d the like eory and ext of dical Soft	e. The sod statist ata mini tware R and stati	tudents are ics. ng. The main are integrated detection, aling multivariate que for a given	

	Number and Type; Connection to Course	Duration		Part of final mark in %	
	Final Written Exam	120 min.		60 %	
	Case study with R software, presentation	Case study with R software, presentation Report: ca 15 pages, presentation: ca 40 min.			
	Study Work:				
9	Number and Type; Connection to Course		Durati	on	
	none				
10	Prerequisites for Credit Points: The credit points will be granted after all recompleted.	evant work and study wor	k have l	been successfully	
11	Weight of the module grade for the overall 5% (6 of 120 CP)	grade:			
12	Module Prerequisites:				
13	Presence: Presence is recommended.				
14	Use of the module for other course program Master Business Administration, Master Inf				
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Department: School of Busi	iness ar	nd Economics	
16	Misc.:				

Business Intelligence: Data Analytics - II

Мо	dule Ti	tle english:	Module Title english: Business Intelligence: Data Analytics - II							
Course Program: Master Information Systems PO 2010/2014										
1	Modu	ı le No: Bl3		State: Elective	Language of Instr	ucti	on: Engli	sh		
2	Turn:	each summ	er	Duration: 1 term	Semester: 1 or 2		CP: 6 Work		Workload (h): 180	
	Modu	ıle Structure	:							
3	No	Туре	Cours	se		СР	Presen CH)	ce (h +	Self-Study (h)	
	1	Lecture	Data /	Analytics - II		3	30 h (2	CH)	60	
	2	Exercise	Exerci	ise on Data Analyti	cs - II	3	30 h (2	CH)	60	
4	seming suppose	nar, offers a vosed to be fa topics and lo ecture focuss	way to amiliar earning ses on d learn	start a career in da with the basic cond g objectives: multivariate statist ning. Practical exerc	omplemented by ele tabase managemen cepts from probabili ical methods in the cises using the statis	t an ty th	d the like leory and eext of da	e. The s d statist ata mini	tudents are tics.	
4	seming suppose	nar, offers a vosed to be fatopics and leecture focussis supervise ecture and a f	way to amiliar earning ses on d learn	elligence" ideally co start a career in da with the basic cond g objectives: multivariate statist ning. Practical exerc	omplemented by ele tabase managemen cepts from probabili ical methods in the cises using the statis	t an ty th	d the like leory and eext of da	e. The s d statist ata mini	tudents are tics.	
4	seming suppose	nar, offers a vosed to be fatopics and leecture focussis supervise ecture and a f	way to amiliar earning ses on d learn tutorial	elligence" ideally co start a career in da with the basic cond g objectives: multivariate statist ning. Practical exerc l.	emplemented by ele tabase managemen cepts from probabili ical methods in the cises using the statis ctives	t an ty th conf	d the lik leory and ext of da I Softwa	e. The s d statist ata mini re R are	tudents are tics. ing. The main integrated int	
4	seminal suppose suppos	nar, offers a vosed to be factories and left to be factore focussis supervise ecture and a factories and a fac	way to amiliar earning ses on d learn tutorial	elligence" ideally co start a career in da with the basic cond g objectives: multivariate statist ning. Practical exerc l. Learning obje Data quality a of missing val	emplemented by ele tabase managemen cepts from probabili ical methods in the cises using the statis ctives	t an ty th conf stica	d the lik neory and ext of da l Softwa nalysis, s	e. The s d statist ata mini re R are	tudents are tics. ing. The main integrated int	
5	There is supposed to picture is supposed in the left supposed in the left supposed in the supp	nar, offers a vosed to be factorics and lefecture focuses is supervised ecture and a factorie and a factorie and a factorie decreased by the composite of the c	way to amiliar earning ses on tutorial ng ning es:	elligence" ideally constart a career in darwith the basic condense of some objectives: multivariate statist ning. Practical exercit. Learning objective of missing valuation of selected regree of the base of th	emplemented by ele tabase managemen cepts from probabili ical methods in the cises using the statis ctives -priori to quantitativ ues	t an ty th constitution of the area to the	d the like like like like like like like lik	e. The s d statist ata mini re R are specifica ches	tudents are tics. ing. The main integrated	
	Seminal suppose Main The lettopic the lettop	nar, offers a vosed to be factorics and lefecture focuses is supervise ecture and a factorie and	way to amiliar earning ses on d learn tutorial ng ning es: poposed vell as matation etaker	elligence" ideally constart a career in darwith the basic condense of start a career in darwith the basic condense of start at career in darwith the basic condense of start at career in darwith a career in the ability to choose of techniques	emplemented by ele tabase management cepts from probabilical methods in the cises using the statistics. ctives -priori to quantitatives ession and classificates and implement are and implement are celebrated by the complete celebrates.	t an ty th confistica /e ar ation	d the like like like like like like like lik	e. The s d statist ata mini re R are specifica ches	tudents are tics. ing. The main integrated	
5	Seminal Suppose Main The letter The letter Suppose Main The letter The letter Suppose Main The standard The s	nar, offers a vosed to be factorics and lecture focuss is supervise ecture and a factoric analysis as voical task. Skills: work, preservices a minimal and a factoric and	way to amiliar earning ses on d learn tutorial mg ming ses: poposed well as matation etaken um of 2	elligence" ideally constart a career in darwith the basic condense of start a career in darwith the basic condense of start a career in darwith the basic condense of start a career in darwith the basic condense of start a career in darwith a career in techniques electives within the nas part of the trace	e modules: ck Business Intellige te taken.	t an ty th confistica /e ar ation	d the like like like like like like like lik	e. The s d statist ata mini re R are specifica ches	tudents are tics. ing. The main integrated	

	Number and Type; Connection to Course	Duration		Part of final mark in %
	Final Written Exam 120 min.			60 %
	Case study with R software, presentation	Ca 40 Min. (presentation) pages (report)	, ca 15	40 %
	Study Work:		ĺ	
9	Number and Type; Connection to Course		Durati	on
	none			
10	Prerequisites for Credit Points: The credit points will be granted after all recompleted.	elevant work and study wor	k have	been successfully
11	Weight of the module grade for the overall 5% (6 of 120 CP)	grade:		
12	Module Prerequisites:			
13	Presence: Presence is recommended.			
14	Use of the module for other course program Master Business Administration, Master In			
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Department: School of Bus	siness a	nd Economics
16	Misc.:			

Information Systems Development: Logic Specification and **Programming**

Мо	dule Ti	tle english:	Information Systems Development: Logic Specification and Programming						
Cou	rse Pr	ogram:		Master Information	n Systems PO 2010/2014				
1 Module No: ISD1 State: Elective Language of Instruction				ctior	ı: Englis	sh			
2	Turn: each winter term Duration: 1			Duration: 1 term	Semester: 1 or 2	CP: 6 Workload (h): 180		oad (h): 180	
	Mod	ule Structur	e:						
3	No Type Course				СР	Preser + CH)	nce (h	Self-Study (h)	
				gic Specification and	ic Specification and Programming		30 h (2	2 CH)	45
	2	Exercise	Exe	ercise on Logic Specif	ise on Logic Specification and			2 CH)	75

Module Contents:

Background and relations to other courses:

Programming

It is assumed that the students have some experience with programming and software development as taught in the bachelor program. Depending on the subject of the intended master thesis, the taught material can be helpful.

Main topics and learning objectives:

The course consists of lectures providing the theoretical background and of accompanying biweekly exercises.

Themes	Learning objectives
Logics	Expressing the relationships between real-world entities in logic. Knowing how to transform a logic specification into an executable Prolog program.
Prolog	Knowing the features of the logic programming language Prolog, such as Horn-rules, unification, SLD-resolution, backtracking, negation, and cut. Being able to program in Prolog.
Constraint Solving	Expressing real-world relationships as constraints over a suitable domain. Knowing how to solve such constraints using a constraint solver from Prolog.
Business Rules Management Systems	Knowing how to express volatile business logic by rules. Including these rules into a business rules management system (BRMS) such as Drools. Knowing how the BRMS evaluates the rules. Integrating a BRMS into an information system.
Temporal Logics and Model Checking	Expressing temporal relationships by temporal logics such as CTL and LTL. Knowing how to automatically check information systems for compliance with a temporal specification. Being able to apply a model checker such as Java PathFinder to guarantee the correctness of e.g. Java programs.

	Datalog and Deductive Databases Knowing the syntax and semantics of the logic programming language Databases.							
5	Learning outcomes: Academic: The students learn to specify complex real-world relationships using logic and to transform such a specification into an executable logic program possibly including constraints or to handle it using model checking. Soft skills: The exercises are solved in teams of 3-5 students. Hence, the students get some experience with teamwork.							
6	The module can be t	ble electives within th aken as part of the tra a minimum of 2 semir	ck Informat	ion Systems Dev	/elopm	ent or as an elective.		
7	Examination: Exami	nations for every part	of the mod	ule				
	Relevant Work: Number and Type; Connection to Course Duration Part of final mark in %							
8	Final Written Exam		120 min.			70 %		
	6 exercises solved i students	n groups of ca. 5	Ca 15 page code lines	es/exercise – Ca. /page	· 45	30 %		
9	Study Work: Number and Type; (Connection to Course			Durati	on		
	none							
10	Prerequisites for Cre The credit points wil completed.	edit Points: I be granted after all re	elevant worl	k and study work	k have l	peen successfully		
11	Weight of the modul 5% (6 of 120 CP)	e grade for the overal	l grade:					
12	Module Prerequisites:							
13	Presence: Presence is recommended.							
14	Use of the module for other course programs: Master Business Administration, Master Information Systems							
15	Responsible Lecture Prof. Dr. Herbert Kuc			Department: School of Busi	ness ar	nd Economics		

16	Misc.:

Information Systems Development: Data Integration

Мос	Module Title english: Information Systems Development: Data Integration								
Cou	rse Pro	ogram:		Master Information Systems PO 2010/2014					
1	Modu	ule No: ISD2		State: Elective	Language of Instru	ctio	n: Englis	sh	
2	Turn: each winter term Duration: 1 term Semester: 1 or 1				Semester: 1 or 2	С	Workload (h): 180		oad (h): 180
	Mod	ule Structure	:						
3	No Type Course				СР	Presen CH)	ce (h +	Self-Study (h)	
	1 Lecture Data In			a Integration		3	30 h (2 CH)		60
	2	Exercise	Exe	ercise on Data Integra	tion	3	30 h (2	CH)	60

Module Contents:

Background and relations to other courses:

Data Integration is a core requirement for diverse information system development tasks, ranging from Web search and mash-ups to data warehousing and business intelligence. In this course, a collection of tools and techniques is presented that can be applied in modern data integration tasks; these range from view construction and query processing in heterogeneous distributed databases to schema mapping and matching, Web services and mash-up APIs. In this course, lectures are complemented by student presentations that provide additional content. In addition, exercises provide ample opportunities to apply the various techniques in realistic and practical settings.

Main topics and learning objectives:

Students will become able to explain the problems, issues, solutions, techniques, and tools relating to data integration. They will be able not only to locate and present relevant sources and research in the area, but also to apply data integration techniques in practical scenarios. Moreover, they will be familiarized with the current research literature in the field.

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Themes	Learning objectives
Introduction, Background, Architectures	To familiarize the audience with the problems, issues, solutions, techniques, and tools relating to data integration
Distributed Query Processing and Optimization	To become able to apply classical optimization techniques in distributed scenarios
Web Crawling, Search Engines, and Recommendation	To discuss and apply integration on the Web as the currently most dominating integration application
MapReduce	To discuss and apply tools for massive data integration and analysis
Mash-up creation	To get hands-on experience in a data integration task
Data cleansing, data fusion, data quality	To learn about basic activities in data integration

	Schema matching, schema To appreciate formal issues arising when data schemas are present or given						
	GaV/LaV Modeling To recognize the importance of traditional database topics (in this case relational algebra) in the novel context of data integration						
5	Learning outcomes: Academic: In the oral presentation, the student should demonstrate the ability • to select, engage with, assess, and apply pieces of literature, • to build a concise, yet coherent argument, and • to identify open issues. In the written examination, the student should demonstrate the ability • to integrate and apply several concepts, • to apply the concepts to a data integration scenario. Soft skills: All assignments are group assignment. Hence the student should demonstrate the ability • to productively work in groups, • to coordinate with a peer.						
6	Description of possible electives v The module can be taken as part o Within the electives a minimum of	f the tra	ck Information Systems Dev	velopme	ent or as an elective.		
7	Examination: Examinations for evo	ery part	of the module				
	Relevant Work:		1		ı		
	Number and Type; Connection to	Course	Duration		Part of final mark in %		
8	Final Written Exam		120 min.		60 %		
	Case Study accompanied by 5 Exe presentation	ercises,	Ca 8 pages/exercise + ca 2 min/presentation	20	40 %		
	Study Work:			1			
9	Number and Type; Connection to	Course		Duratio	on		
	none						
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.						
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)						
12	Module Prerequisites: Basic database knowledge						
13	Presence: Presence is recommended.						
14	Use of the module for other course programs: Master Business Administration, Master Information Systems						

15	Responsible Lecturer: Prof. Dr. Gottfried Vossen	Department: School of Business and Economics
16	Misc.:	

Information Systems Development: Advanced Concepts in Software Engineering

Module Title english:		Information Systems Development: Advanced Concepts in Software Engineering			
Cou	rse Program:	Master Information Systems PO 2010/2014			
1	Module No: ISD3	State: Elective	Language of Instruction: English		
2	Turn: each summer term	Duration: 1 term	Semester: 1 or 2	CP: 6	Workload (h): 180
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Module Structure:

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3	No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
	1	Lecture	Advanced Concepts in Software Engineering	3	30 h (2 CH)	45
	2	Exercise	Exercise on Advanced Concepts in Software Engineering	3	30 h (2 CH)	75

Module Contents:

Background and relations to other courses:

It is assumed that the students have some experience with programming and software development as they are taught in the bachelor program. The learned concepts and techniques are (often) helpful in the master thesis.

Main topics and learning objectives:

The course consists of lectures providing the theoretical background of topical softwareengineering concepts such as enterprise application integration and model-driven software development. Moreover, it consists of 5 assignments where these concepts are applied to develop and connect example information system.

Themes Le		Learning objectives	
11	prise Application ration (EAI) epts	Knowing and being able to evaluate typical EAI topologies and possible integration layers. Knowing corresponding communication paradigms.	
	applications and leware	Knowing typical concepts and frameworks for the development of enterprise applications. Being able to use these frameworks for developing enterprise applications with e.g. Java.	
Web	Services	Being able to connect existing enterprise applications using webservice technologies.	
	age-oriented leware	Being able to connect enterprise applications using message- oriented middleware.	
11	el-Driven Software lopment (MDSD)	Understanding the main concepts of MDSD such as automatically transforming a model to e.g. executable code as well as meta- and metameta-modeling.	

5	Learning outcomes: Academic: The students learn to know and apply current integration technologies for software systems within a company and across collaborating enterprises. Moreover, they learn how to increase the productivity of software development by automatically transforming abstract models to desired artifacts such as executable code. Soft skills: The exercises are solved in teams of about 5 students. Thus, the students are trained to collaborate in teams.					
6	Description of possible electives within th The module can be taken as part of the tra Within the electives a minimum of 2 semir	ck Informati		elopme	ent or as an elective.	
7	Examination: Examinations for every part	of the modu	le			
	Relevant Work: Number and Type; Connection to Course Duration Part of final mark in %					
8	Final Written Exam	120 min.			70 %	
	4 Software Artifacts in groups of ca 5 students Ca 20 pages/artifact, 45 code lines/code page					
	Study Work:					
9	Number and Type; Connection to Course			Duratio	on	
	none					
10	Prerequisites for Credit Points: The credit points will be granted after all recompleted.	elevant work	and study work	have b	een successfully	
11	Weight of the module grade for the overal 5% (6 of 120 CP)	l grade:				
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Business Administration, Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Herbert Kuchen Department: School of Business and Economics					
16	Misc.:					

Logistics, Production and Retail: Supply Chain Management

Module Title english:				Logistics, Production and Retail: Supply Chain Management					
Cou	rse Pro	ogram:		Master Information Systems PO 2010/2014					
1	Mod	ule No: LPR1		State: Elective	Language of Instruction: English				
2	Turn: each winter term Duration: 1 term			Semester: 1 or 2	С	P: 6 Worklo		oad (h): 180	
	Module Structure:								
3	No	Туре	Coi	ırse	rse			ce (h +	Self-Study (h)
	1	Lecture	Su	oply Chain Managem	oly Chain Management			CH)	60
	2	Exercise	Exe	ercise on Supply Chai	n Management	3	30 h (2	CH)	60

Module Contents:

Background and relations to other courses:

Supply chains focus onto value creation networks of often legally independent companies that are tightly connected via different linkages or flows (e.g. material, information and financial flows). The course "Supply Chain Management (SCM)" elaborates those linkages across companies and specifically addresses issues of supply chain design, planning, coordination and optimization. Collaborative process concepts integrating the different business activities of the companies in the supply chain are investigated in detail. For each lectured topic related IT-Systems are introduced and their application in Supply Chain Management is discussed. Furthermore, the different modes of usage and architectures of Information Systems in Supply Chain Management are examined. Case studies carried out with the help of SCM tools currently used in practice underline the practical aspects of the contents taught.

Main topics and learning objectives:

The production and retail module studies companies in the context of the intra- and interorganizational processes of all acting companies in a supply chain. The Supply Chain Management course encompasses topics like the principle tasks of designing, planning, and executing a supply chain under the usage of different modelling approaches and related information systems. It complements the other industry-driven courses of the module (Production Planning and Control, Retail) by introducing general Supply Chain concepts interlinking the activities of retail and production. The adaption of these concepts to specific industry sectors is part of the other courses of the track.

Themes	Learning objectives
Basic Principles of Supply Chain Management	To learn about basic terms, ideas, challenges and targets of Supply Chain Management.
Supply Chain Modeling	To learn about the basic elements to be modeled in a supply chain. To understand the intention and objectives of modeling supply chains and to be able to create such a model.
Supply Chain Design	To learn about the relevant influencing factors for supply chain design decisions and to understand design options and principles.

	Supply Chain Planning Deing used for demand planning, network planning, supply planning, production planning and distribution planning as well as the objectives and key indicators of order promising.						
	Supply Chain Execution	To learn about the scope of supply chain execution. To get a basic understanding of the basic concepts and functions of Supply Chain Event Management.					
	IT-Systems in Supply Chain Management	To get an idea of features and characteristics of different SCM software systems.					
5	Learning outcomes: Academic: The course's major academic outcome is a broad and profound understanding of supply chains' challenges, targets, and related concepts for managing supply chain activities. Furthermore, a profound knowledge in actual methods and concepts of supply chain design, modeling, planning, and optimization should be obtained. Soft skills: Students are encouraged to prepare the contents of the lecture and exercise and to perform follow-up work in teams. This is supported by a Learnweb discussion forum that is guided by the chair. Case studies that accompany the lecture especially in Supply Chain Design and Planning provide the opportunity for students to get acquainted to selected SCM tools and to apply them in a realistic scenario. The case studies are organized as group work and thus promote the students' ability to cooperate in teams. The intermediary results are presented regularly by the groups in front of the complete audience. This enhances the students' presentation and discussion skills.						
6	Description of possible electives within the modules: The module can be taken as part of the track Logistics, Production and Retail or as an elective. Within the electives a minimum of 2 seminars has to be taken.						
	Within the electives a i	illillillilli of 2 sellilliais lias to	De laken.				
7		tions for every part of the mo					
7							
	Examination: Examina	tions for every part of the mo			Part of final mark in %		
7	Examination: Examina Relevant Work:	tions for every part of the mo	dule				
	Relevant Work: Number and Type; Cor	ntions for every part of the mo	dule Duration	a.	%		
	Relevant Work: Number and Type; Cor Final Written Exam Documentation/Prese	ntions for every part of the mo	Duration 120 min. Ca. 40 pages/c	a.	% 60 %		
8	Relevant Work: Number and Type; Cor Final Written Exam	nnection to Course	Duration 120 min. Ca. 40 pages/c	a.	% 60 % 40 %		
	Examination: Examination: Examination: Examination: Examination: Examination: Examination Preserved Study Work:	nnection to Course	Duration 120 min. Ca. 40 pages/c	1:	% 60 % 40 %		
8	Examination: Examination: Examination: Examination: Examination Relevant Work: Final Written Exam Documentation Preserved Study Work: Number and Type; Connone Prerequisites for Credi	nnection to Course	Duration 120 min. Ca. 40 pages/c 30 min.	Dura	% 60 % 40 % tion		

12	Module Prerequisites: none					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Business Administration, Master Information Systems					
15	Responsible Lecturer: Prof. DrIng. Bernd Hellingrath Department: School of Business and Economics					
16	Misc.:					

Logistics, Production and Retail: Production Planning and Control

٨	Module Title english:	Logistics, Production and Retail: Production Planning and Control			
C	ourse Program:	Master Information Systems PO 2010/2014			
1	Module No: LPR2	State: Elective	Language of Instruction: English		
2	Turn: each winter term	Duration: 1 term	Semester: 1 or 2	CP: 6	Workload (h): 180
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Module Structure:

3

No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
1	Lecture	Production Planning and Control	3	30 h (2 CH)	60
2	Exercise	Exercise on Production Planning and Control	3	30 h (2 CH)	60

Module Contents:

Background and relations to other courses:

The "Production Planning and Control" (PPC) lecture addresses the adaptation of process modeling concepts to the manufacturing sector. Taking an integrated process perspective data structures, information flows and business functions relevant to this domain are presented. The course encompasses processes like material management, capacity management, computer aided design, computer aided manufacturing, and computer aided quality assurance in an integrated manner.

Main topics and learning objectives:

The students learn to know the different approaches of PPC. Moreover, they learn to use the corresponding methods and instruments. In sum, the students shall gain insight into the theories behind Production Planning and Control and techniques proposed for tasks and be able to assess these tasks and the underlying theories critically.

4

Themes	Learning objectives
Demand Management	To be able to explain and apply the concepts as well as to be able to explain the rationale behind them.
Materials Management, Inventory Control, Scheduling and Capacity Management	To be able to explain and apply the concepts as well as to be able to explain the rationale behind them.
Data Models	To be able to understand the underlying data structures and information needs in PPC.
IT Systems	To get an overview of the main IT systems in PPC and get used to ERP usage in PPC.

	Cost Engineering To be able to explain and apply the conce well as to be able to explain the rationale them.										
	Smart Factory To be able to understand how innovative IT capabilities and services influence production processes.										
5	Learning outcomes: Academic: To understand and to be able to apply the addressed topics Soft skills: To manage and to organize group work regarding given task and presentations										
6	Description of possible electives within the The module can be taken as part of the track Within the electives a minimum of 2 seminar	Logistic	s, Production and	l Retail or as an elective.							
7	Examination: Final Module Exam										
8	Relevant Work: Number and Type; Connection to Course		Duration	Part of final mark in %							
	Final Written Exam		120 min.	100 %							
9	Study Work: Number and Type; Connection to Course none			Duration							
10	Prerequisites for Credit Points: The credit points will be granted after all rele completed.	vant wo	rk and study work	c have been successfully							
11	Weight of the module grade for the overall g 5% (6 of 120 CP)	rade:									
12	Module Prerequisites: none										
13	Presence: Presence is recommended.										
14	Use of the module for other course programs Master Business Administration, Master Info		Systems								
15	Responsible Lecturer: Prof. Dr. Dr. h.c. Dr. h.c. Jörg Becker		Department: School of Busin	ness and Economics							
16	Misc.:	_	_								

Logistics, Production and Retail: Retail

Mod	dule Ti	tle english:		Logistics, Production and Retail: Retail					
Cou	rse Pro	ogram:	Master Information Systems PO 2010/2014						
1	Modu	ıle No: LPR3		State: Elective	Language of Instr	uctio	on: Englis	sh	
2	Turn:	each summ	er	Duration: 1 term	Semester: 1 or 2		CP: 0 Work!		load (h): 0
	Modu	ıle Structure	:						
3	No Type Course				C		CP Presence (h CH)		Self-Study (h)
	1 Lecture Retail						3 30 h (2 CH)		60
	2	Course	Exer	cise on Retail		3	30 h (2 (CH)	60

Module Contents:

Background and relations to other courses:

The course is complementary to the courses Production Planning and Control and Supply Chain Management and Logistics.

Main topics and learning objectives:

The retail course as part of the production and retail module presents retail as an important sector for the economy. It uses reference models for retail as a framework to introduce retail business process and data structures. To highlight the integration of business processes and information technology, the ERP system selection and implementation process is elaborated. Process and data modeling techniques are applied throughout the lecture and accompanying exercises.

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Themes	Learning objectives
Business Processes in Retail	The students get to know reference models for retail. They understand core processes, coordination processes, support processes and their integration.
Process Modeling	The students are able to model business processes in retail, especially with the help of domain specific, semantic modeling languages.
Data Modeling	The students are able to model data structures and get to know selected data models in retail.
ERP-Systems for Retail	The students understand the importance of ERP-systems in retail and their selection and implementation process.

Learning outcomes:

Academic:

5

The students recognize information systems and the underlying business processes in retail as an important sector for the economy. They understand the cross-departmental integration of business processes and how retail companies are embedded in the value chain. They deepen their knowledge in process and data modeling and are able to apply methods and techniques in various application scenarios.

	Soft skills: The exercises comprise both individual work and team-based group work. The students apply and improve their capabilities in team work, presentation and discussion.								
6	Description of possible electives within the modules: The module can be taken as part of the track Logistics, Production and Retail or as an elective. Within the electives a minimum of 2 seminars has to be taken.								
7	Examination: Final Module Exam								
8	Relevant Work: Number and Type; Connection to Course	Duration	Part of final mark in %						
	Final Written Exam	120 min.	100 %						
9	Study Work: Number and Type; Connection to Course		Duration						
	none								
10	Prerequisites for Credit Points: The credit points will be granted after all relevant wo completed.	k and study work	have been successfully						
11	Weight of the module grade for the overall grade: 0% (0 of 120 CP)								
12	Module Prerequisites: none								
13	Presence: Presence is recommended.								
14	Use of the module for other course programs: Master Business Administration, Master Information Systems								
15	Responsible Lecturer: Prof. Dr. Dr. h.c. Dr. h.c. Jörg Becker Department: School of Business and Economics								
16	Misc.:								

Elective Module: Seminar I

Licetive Module: Semmai i										
Module Title english: Elective Module: Seminar I										
Cou	rse Pro	ogram:		Master Information	System	s PO 2010/20	14			
1	Modu EMSe	ı le No: em1		State: Elective	Language of Instruction: English					
2	Turn:	each term		Duration: 1 term	Semes	iter: 1 or 2 or 3	3	CP: 6 Workload (h		load (h): 180
	Modu	ıle Structure	:							
3	No	Туре	Co	ourse			СР	Presen CH)	nce (h + Self-Study (h)	
	1	Seminar	Ele	ective Modules			6	60 h (4	CH)	120
4	Module Contents: Background and relations to other courses: Usually, the topics deepen the contents of one (or more) of the tracks IM, PM, BN, BI, ISD and LPR. Therefore, knowledge of the contents of pertaining track(s) is strongly recommended. Main topics and learning objectives: The elective seminars deal with topics that arise from recent research. They are usually organized in small groups of students. Each student gives a seminar talk and, to this end, writes a seminar elaboration. Main seminar-topics may change from term to term. To follow recent developments, the topics and, accordingly, the learning objectives are changing from term to term. Examples of earlier topics have been: • Structural Model Analysis • Model Visualisation - Layout and Perception • Network Evolution • Beautiful Data • ERP systems in industry, retail and supply chains • Information Retrieval • Coordination in Supply Chain Management • Theoretical Computer Science									
5	Acade The s Soft s Stude	skills: ents improve	oen the	their knowledge in s eir skills in acquiring oic, group working ab	profoun	d scientific kı		edge an	d prese	ntation.
6				ole electives within the minimum of 2 semi						
7	Exam	ination: Exa	mir	nations for every part	of the r	nodule				
8	Relevant Work: Number and Type; Connection to Course Seminar elaboration and talk Ca 20 pages, ca 60 100 %							inal mark in %		
	Study	y Work:				minutes				
9	1		e; C	connection to Course				Dura	tion	

	none								
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.								
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)								
12	Module Prerequisites:								
13	Presence: Presence is required during presentations. Authorized presentations is possible.	d absence in less than 20% of all							
14	Use of the module for other course programs: Master Information Systems								
15	Responsible Lecturer: Prof. Dr. Heike Trautmann Department: School of Business and Economics								
16	Misc.:								

Elective Module: Seminar II

Liective Modute. Seminar ii										
Module Title english: Elective Module: Seminar II										
Cou	rse Pro	ogram:		Master Information	System	s PO 2010/20	014			
1	Modu EMSe	ı le No: em2		State: Elective	re Language of Instruction: English					
2	Turn:	each term		Duration: 1 term	Semes	ster: 1 or 2 or 3	3	CP: 6 Workload (h)		load (h): 180
	Modu	ıle Structure	:							
3	No	Туре	Co	ourse			СР	Presen CH)	ce (h +	Self-Study (h)
	1	Seminar	Ele	ective Modules			6	60 h (4	.CH)	120
4	Backs Usua There Main The e in sm elabo the to earlie Perce chain	lly, the topic efore, knowle topics and letective seminall groups of pration. Main opics and, act topics have	related section of the section of th	tions to other course eepen the contents of peof the contents of pining objectives: sideal with topics that udents. Each student minar-topics may chardingly, the learning of een: • Structural Modes Evolution • Beautifur Retrieval • Coordinates	f one (o ertainin at arise f gives a ange fro objective lel Analy al Data	g track(s) is some recent reseminar talk materm to termes are changings on Model VERP systems	sear and n. To ng fr /isua in ir	gly records. They, to this of follow om termalisation ndustry,	mmende v are usu end, wri recent d to term - Layou retail ar	ed. ually organized tes a seminar evelopments, . Examples of t and nd supply
5	Acade The s Soft s Stude	tudents dee _l skills: ents improve	pen the	their knowledge in s eir skills in acquiring oic, group working ab	profoun	d scientific kr		ledge an	d prese	ntation.
6				ole electives within the minimum of 2 semi						
7	Exam	ination: Exa	ımir	nations for every part	of the r	nodule			_	
8	Relevant Work: Number and Type; Connection to Course Duration Part of final mark in %								inal mark in %	
	Sem	inar elabora	tion	and talk		Ca 20 pages minutes	, ca	60 1	.00 %	
9	_	y Work: ber and Type	e; C	onnection to Course				Dura	tion	

	none										
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.										
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)										
12	Module Prerequisites:										
13	Presence: Presence is required during presentations. Authorized presentations is possible.	l absence in less than 20% of all									
14	Use of the module for other course programs: Master Information Systems										
15	Responsible Lecturer: Prof. Dr. Heike Trautmann Department: School of Business and Economics										
16	Misc.:										

Elective Module: Seminar III

Eteetive modute: Semmar in										
Module Title english: Elective Module: Seminar III										
Cou	Course Program: Master Information Systems PO 2010/2014									
1	Mod u EMSe	ı le No: em3		State: Elective	Language of Instruction: English					
2	Turn:	each term		Duration: 1 term	Semes	ster: 1 or 2 or 3	3	CP: 6	Workload (h): 186	
	Modu	ıle Structure	:							
3	No	Туре	Co	ourse			СР	Presen	ce (h +	Self-Study (h)
	1	Seminar	Ele	ective Modules			6	60 h (4	CH)	120
4	Back, Usua There Main The e in sm elabo the to earlie Perce chain	Ily, the topic fore, knowle topics and lective seminall groups of the price and, acception. Main acception.	rela s de dge ear nars stu ser cor e be	tions to other course eepen the contents of points of the contents of points of points of points. Each students and enterties may characteristics of the content of the con	f one (o ertainin at arise f gives a ange fro objective lel Analy al Data	g track(s) is s from recent re seminar talk m term to terr es are changin vsis • Model V • ERP systems	sear and, n. To ng fr /isua in ii	gly recor ch. They to this e of ollow rom term alisation ndustry,	are usuende end, wri ecent d to term - Layou retail ar	ed. ually organized tes a seminar evelopments, Examples of t and aupply
5	Acade The s Soft s Stude	tudents dee skills: ents improve	oen the	their knowledge in s eir skills in acquiring oic, group working ab	profoun	d scientific kı		edge an	d prese	ntation.
6				ole electives within the minimum of 2 semi						
7	Exam	ination: Exa	mir	nations for every part	of the r	nodule				
8	Relevant Work: Number and Type; Connection to Course Seminar elaboration and talk Duration Ca 20 pages, ca 60 100 %								nal mark in %	
9	Study Work: Number and Type; Connection to Course							Dura	tion	

	none								
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.								
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)								
12	Module Prerequisites:								
13	Presence: Presence is required during presentations. Authorized presentations is possible.	d absence in less than 20% of all							
14	Use of the module for other course programs: Master Information Systems								
15	Responsible Lecturer: Prof. Dr. Heike Trautmann Department: School of Business and Economics								
16	Misc.:								

Elective Module: Seminar IV

Liective Module. Seminar iv										
Mod	lule Tit	tle english:		Elective Module: Se	eminar I	V				
Cou	rse Pro	gram:		Master Information	System	s PO 2010/20	014			
1	Modu EMSe	ı le No: em4		State: Elective	Language of Instruction: English					
2	Turn:	each term		Duration: 1 term	Semes	ster: 1 or 2 or 3	3	CP: 6 Workload		load (h): 180
	Modu	ıle Structure	:				<u> </u>			
3	No	Туре	Co	ourse			СР	Presen CH)	ce (h +	Self-Study (h)
	1	Seminar	Ele	ective Modules			6	60 h (4	CH)	120
4	Backs Usua There Main The e in sm elabo the to earlie Perce chain	lly, the topic fore, knowle topics and le lective seminall groups of tration. Main opics and, act topics have point on Netwerton	related section of the section of th	tions to other course eepen the contents of posteriors of the contents of posteriors of posteriors and each student of the contents. Each student of the content of the con	f one (o ertainin at arise f gives a ange fro objective lel Analy ul Data	rom recent re seminar talk m term to terr es are changir rsis • Model V ERP systems	sear and n. To ng fr /isua in ir	gly recorder. They, to this of following term alisation and the street of the street o	r are usuend, wri recent d to term - Layou retail ar	ed. ually organized tes a seminar evelopments, Examples of t and
5	Acade The s Soft s Stude	tudents dee _l skills: ents improve	pen the	their knowledge in s eir skills in acquiring bic, group working ab	profoun	d scientific kr		ledge an	d prese	ntation.
6				ole electives within the minimum of 2 semi						
7	Exam	ination: Exa	mir	nations for every part	of the r	nodule				
8	Relevant Work: Number and Type; Connection to Course Duration Part of final mark in %								nal mark in %	
	Sem	inar elaborat	tion	and talk		Ca 20 pages minutes	, ca	60 1	00 %	
9	Study Work:							Dura	tion	

	none								
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.								
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)								
12	Module Prerequisites: none								
13	Presence: Presence is required during presentations. Authorized absence in less than 20% of all presentations is possible.								
14	Use of the module for other course programs: Master Information Systems								
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Department: School of Business and Economics							
16	Misc.:								

Elective Module: Seminar V

				Schillar V								
Mod	lule Tit	tle english:		Elective Module: Se	eminar V	/						
Cou	rse Pro	ogram:		Master Information	System	s PO 2010/20	014					
1	Mod u EMSe	u le No: em5		State: Elective	Language of Instruction: English							
2	Turn:	each term		Duration: 1 term	Semes	ster: 1 or 2 or 3	3	CP: 6	Workl	load (h): 180		
	Modu	ıle Structure	:									
3	No	Туре	Co				' I		Self-Study (h)			
	1	Seminar	Ele	ective Modules			6	60 h (4	CH)	120		
4	Backs Usua There Main The e in sm elabo the to earlie Perce chain	Module Contents: Background and relations to other courses: Usually, the topics deepen the contents of one (or more) of the tracks IM, PM, BN, BI, ISD and LPR. Therefore, knowledge of the contents of pertaining track(s) is strongly recommended. Main topics and learning objectives: The elective seminars deal with topics that arise from recent research. They are usually organized in small groups of students. Each student gives a seminar talk and, to this end, writes a seminar elaboration. Main seminar-topics may change from term to term. To follow recent developments, the topics and, accordingly, the learning objectives are changing from term to term. Examples of earlier topics have been: • Structural Model Analysis • Model Visualisation - Layout and Perception • Network Evolution • Beautiful Data • ERP systems in industry, retail and supply chains • Information Retrieval • Coordination in Supply Chain Management • Theoretical Computer Science										
5	Acade The s Soft s Stude	skills: ents improve	pen the	their knowledge in s eir skills in acquiring oic, group working ab	profoun	d scientific kı		edge an	d prese	ntation.		
6				ole electives within the minimum of 2 semi								
7	Exam	ination: Exa	miı	nations for every part	of the r	nodule						
8	Num			onnection to Course and talk						nal mark in %		
9	1	Seminar elaboration and talk Ca 20 pag minutes Study Work: Number and Type; Connection to Course							tion			

	none							
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.							
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)							
12	Module Prerequisites:							
13	Presence: Presence is required during presentations. Authorized presentations is possible.	d absence in less than 20% of all						
14	Use of the module for other course programs: Master Information Systems							
15	Responsible Lecturer: Prof. Dr. Heike Trautmann Department: School of Business and Economics							
16	Misc.:							

Elective Module: Seminar VI

		modut	<u> </u>								
Mod	lule Tit	tle english:		Elective Module: Seminar VI							
Cou	rse Pro	ogram:		Master Information	System	ıs PO 2010/20	014				
1	Modu EMSe	ı le No: em6		State: Elective	Language of Instruction: English						
2	Turn:	each term		Duration: 1 term	Semes	ster: 1 or 2 or	3	CP: 6 Workle		load (h): 180	
	Module Structure:										
3	No	Туре	Co	ourse	IIISE I (P)			Presence (h + CH)		Self-Study (h)	
	1	Seminar	Ele	ective Modules			6	60 h (4	CH)	120	
4	Backs Usua There Main The e in sm elabo the to earlie Perce chain	Module Contents: Background and relations to other courses: Usually, the topics deepen the contents of one (or more) of the tracks IM, PM, BN, BI, ISD and LPR. Therefore, knowledge of the contents of pertaining track(s) is strongly recommended. Main topics and learning objectives: The elective seminars deal with topics that arise from recent research. They are usually organized in small groups of students. Each student gives a seminar talk and, to this end, writes a seminar elaboration. Main seminar-topics may change from term to term. To follow recent developments, the topics and, accordingly, the learning objectives are changing from term to term. Examples of earlier topics have been: • Structural Model Analysis • Model Visualisation - Layout and Perception • Network Evolution • Beautiful Data • ERP systems in industry, retail and supply chains • Information Retrieval • Coordination in Supply Chain Management • Theoretical Computer Science									
5	Acade The s Soft s Stude	tudents dee _l skills: ents improve	pen the	their knowledge in s eir skills in acquiring oic, group working ab	profoun	d scientific kı		ledge an	d prese	ntation.	
6				ole electives within the minimum of 2 semin							
7	Exam	ination: Exa	ımir	nations for every part	of the r	nodule					
8	Num			onnection to Course	Duration				inal mark in %		
	Sem	inar elabora	tion	and talk	Ca 20 pages, ca minutes			60 1	.00 %		
9	_	y Work: ber and Type	e; C	onnection to Course				Dura	tion		

	none								
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.								
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)								
12	Module Prerequisites: none								
13	Presence: Presence is required during presentations. Authorized absence in less than 20% of all presentations is possible.								
14	Use of the module for other course programs: Master Information Systems								
15	Responsible Lecturer: Prof. Dr. Heike Trautmann Department: School of Business and Economic								
16	Misc.:								

Selected Chapters in Information Systems I

		tle english:		Selected Chapters in Information Systems I							
				Master Information Systems PO 2010/2014							
Cou	rse Pro	ogram:		master information systems (0 2010/2014							
1	Mod	ule No: SCIS	1	State: Elective	Language of Instruction: E				nglish		
2	Turn	: irregularly		Duration: 1 term	Semester	mester: 1 or 2 or 3			Work	load (h): 180	
	Mod	ule Structure	:								
3	No	Туре	Co	ourse			СР	Presei CH)	nce (h +	Self-Study (h)	
	1	Lecture	Le	cture "Selected Char	oters in IS"		3	30 h (2	2 CH)	60	
	2	Exercise	Ex	ercise "Selected Cha	pters in IS"	•	3	30 h (2	2 CH)	60	
4	Main topics and learning objectives: An actual or classical topic extending to the "Methods" or to the "Domains" of Information Systems or being located in the border areas of Information Systems and Computer Science/Mathematics/Business Administration. This Module integrates lectures which are offered only once or at irregular intervals, e.g., by guest lecturers or by other lecturers who are members of the institute only for a limited time. Contents of the lecture are announced in the (electronic) university calendar and are usually introduced during the seminar-presentation which takes place in the preceding term.										
5	Acad The s techr Soft	niques assoc skills:	de iate	epened insight into a ed with the topic to s work with specific s	pecific prob	lem settin		tion Sys	tems. Th	ney can apply	
6				ole electives within t a minimum of 2 semi							
7	Exam	nination: Fina	al N	Nodule Exam							
8	Num	vant Work: her and Type ten exam	e; C	onnection to Course		Duration up to 120	mir		art of fin	al mark in %	
9			e; C	onnection to Course				Dura	ation		

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.							
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)							
12	Module Prerequisites:							
13	Presence: Presence is recommended							
14	Use of the module for other course programs: Master Information Systems							
15	Responsible Lecturer: Prof. Dr. Dr. h.c. Dr. h.c. Jörg Becker, Prof. DrIng. Bernd Hellingrath, Prof. Dr. Stefan Klein, Prof. Dr. Herbert Kuchen, Prof. Dr. Heike Trautmann, Prof. Dr. Gottfried Vossen	Department: University of Münster School of Business and Economics						
16	Misc.:							

Selected Chapters in Information Systems II

		tle english:		Selected Chanters	Selected Chapters in Information Systems II							
				·								
Cou	rse Pro	ogram:		Master Information	Systems P	0 2010/20)14					
1	Mod	ule No: SCIS	2	State: Elective	Language	tion	: English	inglish				
2	Turn:	irregularly		Duration: 1 term	Semester: 1 or 2 or 3 CP			CP: 6 Workl		load (h): 180		
	Mod	ule Structure	:									
3	No	Туре	Co	ourse			СР	Presend CH)	ce (h +	Self-Study (h)		
	1	Lecture	Le	cture "Selected Char	oters in IS"		3	30 h (2	CH)	60		
	2	Exercise	Ex	ercise "Selected Cha	pters in IS'	•	3	30 h (2	CH)	60		
4	Main An ad Syste Scier offerd mem (electakes	Main topics and learning objectives: An actual or classical topic extending to the "Methods" or to the "Domains" of Information Systems or being located in the border areas of Information Systems and Computer Science/Mathematics/Business Administration. This Module integrates lectures which are offered only once or at irregular intervals, e.g., by guest lecturers or by other lecturers who are members of the institute only for a limited time. Contents of the lecture are announced in the (electronic) university calendar and are usually introduced during the seminar-presentation which takes place in the preceding term.										
5	Acad The s techr Soft	niques assoc skills:	de iate	epened insight into a ed with the topic to sp work with specific s	pecific prob	lem settin		ion Syst	ems. Th	ney can apply		
6				ole electives within the minimum of 2 semi								
7	Exam	nination: Fina	al N	Nodule Exam								
8	Num	vant Work: ber and Type ten exam	e; C	onnection to Course		Duration up to 120	min		rt of fina	al mark in %		
9			e; C	onnection to Course				Dura	tion			

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.							
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)							
12	Module Prerequisites:							
13	Presence: Presence is recommended							
14	Use of the module for other course programs: Master Information Systems							
15	Responsible Lecturer: Prof. Dr. Dr. h.c. Dr. h.c. Jörg Becker, Prof. DrIng. Bernd Hellingrath, Prof. Dr. Stefan Klein, Prof. Dr. Herbert Kuchen, Prof. Dr. Heike Trautmann, Prof. Dr. Gottfried Vossen Getter General Gener							
16	Misc.:							

Selected Chapters in Information Systems III

Мос	dule Ti	tle english:		Selected Chapters in Information Systems III							
Cou	rse Pro	ogram:		Master Information	Systems P	0 2010/20)14				
1	Mod	ule No: SCIS	3	State: Elective	Language	of Instruc	tion	: English	<u> </u>		
2	Turn	: irregularly		Duration: 1 term	Semester	emester: 1 or 2 or 3 CF			Work	load (h): 180	
	Modi	ule Structure	:								
3	No	Туре	Co	ourse			СР	Presen CH)	ce (h +	Self-Study (h)	
	1	Lecture	Le	cture "Selected Char	oters in IS"		3	30 h (2	CH)	60	
	2	Exercise	Ex	ercise "Selected Cha	pters in IS"		3	30 h (2	CH)	60	
4	Main topics and learning objectives: An actual or classical topic extending to the "Methods" or to the "Domains" of Information Systems or being located in the border areas of Information Systems and Computer Science/Mathematics/Business Administration. This Module integrates lectures which are offered only once or at irregular intervals, e.g., by guest lecturers or by other lecturers who are members of the institute only for a limited time. Contents of the lecture are announced in the (electronic) university calendar and are usually introduced during the seminar-presentation which takes place in the preceding term.										
5	Acad The s techr Soft	niques assoc skills:	de iate	epened insight into a ed with the topic to sp work with specific s	pecific prob	lem settin		ion Syst	ems. Th	ney can apply	
6				ole electives within the minimum of 2 semi							
7	Exam	nination: Fina	al M	Nodule Exam							
8	Num		e; C	onnection to Course		Duration up to 120	mir		rt of fin	al mark in %	
9	Study Work: Number and Type; Connection to Course none								tion		

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.							
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)							
12	Module Prerequisites: none							
13	Presence: Presence is recommended							
14	Use of the module for other course programs: Master Information Systems							
15	Responsible Lecturer: Prof. Dr. Dr. h.c. Dr. h.c. Jörg Becker, Prof. DrIng. Bernd Hellingrath, Prof. Dr. Stefan Klein, Prof. Dr. Herbert Kuchen, Prof. Dr. Heike Trautmann, Prof. Dr. Gottfried Vossen	Department: University of Münster School of Business and Economics						
16	Misc.:							

Selected Chapters in Information Systems IV

Мос	dule Ti	tle english:		Selected Chapters in Information Systems IV							
Cou	rse Pr	ogram:		Master Information	Systems P	0 2010/20)14				
1	Mod	ule No: SCIS	4	State: Elective	Language	of Instruc	tion	: English	1		
2	Turn	: irregularly		Duration: 1 term	Semester	er: 1 or 2 or 3 CP		CP: 6	Work	load (h): 180	
	Mod	ule Structure	:						1		
3	No	Туре	Co	ourse	irse			Presen CH)	ce (h +	Self-Study (h)	
	1	Lecture	Le	cture "Selected Char	oters in IS"		3	30 h (2	CH)	60	
	2	Exercise	Ex	ercise "Selected Cha	pters in IS"		3	30 h (2	CH)	60	
4	Main topics and learning objectives: An actual or classical topic extending to the "Methods" or to the "Domains" of Information Systems or being located in the border areas of Information Systems and Computer Science/Mathematics/Business Administration. This Module integrates lectures which are offered only once or at irregular intervals, e.g., by guest lecturers or by other lecturers who are members of the institute only for a limited time. Contents of the lecture are announced in the (electronic) university calendar and are usually introduced during the seminar-presentation which takes place in the preceding term.										
5	Acad The s techi Soft	niques assoc skills:	de iate	epened insight into a ed with the topic to sp work with specific so	pecific prob	lem settin		ion Syst	ems. Th	ney can apply	
6				ole electives within the minimum of 2 semi							
7	Exam	nination: Fina	al N	Nodule Exam							
8	Num	vant Work: nber and Type ten exam	e; C	onnection to Course		Duration up to 120	mir		rt of fin	al mark in %	
9	Study Work: Number and Type; Connection to Course none								tion		

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.			
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)			
12	Module Prerequisites:			
13	Presence: Presence is recommended			
14	Use of the module for other course programs: Master Information Systems			
15	Responsible Lecturer: Prof. Dr. Dr. h.c. Dr. h.c. Jörg Becker, Prof. DrIng. Bernd Hellingrath, Prof. Dr. Stefan Klein, Prof. Dr. Herbert Kuchen, Prof. Dr. Heike Trautmann, Prof. Dr. Gottfried Vossen	Department: University of Münster School of Business and Economics		
16	Misc.:			

Selected Chapters in Information Systems V

Module Title english:				Selected Chapters in Information Systems V							
Cou	rse Pr	ogram:		Master Information	Systems P	0 2010/20	014				
1		ule No: SCIS	5	State: Elective	State: Elective Language of Instruction: English						
2		: irregularly		Duration: 1 term					P: 6 Workload (h): 180		
				Daración. 1 tem	Scilicator	• 101201	<u> </u>		Work	1000 (11). 100	
	Moa	ule Structure	:			į	ı	ı		1	
3	No	Туре	Co	ourse			СР	Presence (h + CH)		Self-Study (h)	
	1	Lecture	Le	cture "Selected Chap	oters in IS"		3	30 h (2	CH)	60	
	2	Exercise	Ex	ercise "Selected Cha	pters in IS"	•	3	30 h (2	CH)	60	
4	Main topics and learning objectives: An actual or classical topic extending to the "Methods" or to the "Domains" of Information Systems or being located in the border areas of Information Systems and Computer Science/Mathematics/Business Administration. This Module integrates lectures which are offered only once or at irregular intervals, e.g., by guest lecturers or by other lecturers who are members of the institute only for a limited time. Contents of the lecture are announced in the (electronic) university calendar and are usually introduced during the seminar-presentation which takes place in the preceding term.										
5	Acad The s techi Soft	Learning outcomes: Academic: The students gain deepened insight into a special topic of Information Systems. They can apply techniques associated with the topic to specific problem settings. Soft skills: The students learn to work with specific scientific literature.									
6				ole electives within to a minimum of 2 semi							
7	Exam	nination: Fina	al N	Nodule Exam							
8	7						rt of fin	al mark in %			
9	Study Work: Number and Type; Connection to Course none						Dura	tion			

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.			
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)			
12	Module Prerequisites: none			
13	Presence: Presence is recommended			
14	Use of the module for other course programs: Master Information Systems			
15	Responsible Lecturer: Prof. Dr. Dr. h.c. Dr. h.c. Jörg Becker, Prof. DrIng. Bernd Hellingrath, Prof. Dr. Stefan Klein, Prof. Dr. Herbert Kuchen, Prof. Dr. Heike Trautmann, Prof. Dr. Gottfried Vossen	Department: University of Münster School of Business and Economics		
16	Misc.:			

Selected Chapters in Business Administration I

Module Title english:		Selected Chapters in Business Administration I				
Course Program:		Master Information Systems PO 2010/2014				
1	Module No: EM- SCBA 1	State: Elective	Language of Instruction: English			
2	Turn: each term	Duration: 1 term	Semester: 1 or 2 or 3 CP: 6 Workload (h): 180			

Module Structure:

3

No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
1	Lecture	Selected Chapters in Business Administration	3	30 h (2 CH)	60
2	Exercise	Exercise on Selected Chapters in Business Administration	3	30 h (2 CH)	60

Module Contents:

Background and relations to other courses:

To be found in the descriptions of the modules mentioned below.

Main topics and learning objectives:

Choosing a 6CP Lecture with Exercises in the "Minor" programs of the Master program of Business Administration offered by the department of Business Administration, namely: "Basis Accounting", "Basis Finance", "Basis Management" and "Basis Marketing". In particular, the following Modules can be studied:

ACMo1 Konzepte und Instrumente des Controlling

ACMo2 Financial Accounting

ACMo3 Internationale Unternehmensbesteuerung

ACMo4 Internationales Controlling

ACMo7 Unternehmensanalyse und -bewertung

ACMo8 Unternehmensbesteuerung I

ACMoo Ausgewählte Kapitel des Accounting

ACM10 Abschlussprüfung

4 ACM11 Spezialfragen der Rechnungslegung nach HGB und IFRS

ACM12 Ausgewählte Kapitel des Accounting II

ACM₁₃ Anwendungen des Controlling

ACM14 IFRS und Controlling

ACM16 Vertiefungsmodul Internationale Rechnungslegung

ACM₁₇ Unternehmensbesteuerung II

FCMo1 Introduction to Finance

FCMo2 Behavioral Finance

FCMo₃ Derivatives I

FCMo4 Finanzintermedation I

FCMo₅ Advanced Corporate Finance

FCMo6 Corporate Governance and Responsible Business Practices

FCMo7 Derivatives II

FCMo8 Finanzintermediation II

FCM₁₃ Ausgewählte Kapitel Finance I

CfM₁₃ Organisation

CfM14 Strategisches Management

	CfM15 Personal CfM16 Management MCM02 Industrial Marketing MCM03 Consumer Marketing MCM04 Media Marketing MCM08 Direct Marketing MCM09 Sales Management MCM10 Electronic Commerce MCM11 Advanced Media Marketing Main topics and learning objectives can be found in the modules. Preconditions defined for the selected modules				pove mentioned	
5	Learning outcomes: Academic: To be found in the descriptions of the above mentioned modules Soft skills: To be found in the descriptions of the above mentioned modules					
6	Description of possible electives within the modules: Within the electives a minimum of 2 seminars has to be taken.					
7	Examination: Examinations for every part of the module					
8	Relevant Work: Number and Type; Connection to Course		Duration		Part of final mark in %	
	See module descriptions within the Master program of department of Business Administration	f the				
9	Study Work: Number and Type; Connection to Course none			Duratio	on	
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work completed.	and st	udy work	k have b	een successfully	
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites: none					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Heike Trautmann		t ment: l of Busi	ness an	d Economics	

16	Misc.:

Selected Chapters in Business Administration II

Module Title english:		Selected Chapters in Business Administration II			
Cou	rse Program:	Master Information Systems PO 2010/2014			
1	Module No: EM- SCBA 2	State: Elective	Language of Instruction: English		
2	Turn: each term	Duration: 1 term	Semester: 1 or 2 or 3 CP: 6 Workload (h): 180		

Module Structure:

3	No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
	1	Lecture	Selected Chapters in Business Administration	3	30 h (2 CH)	60
	2	Exercise	Exercise on Selected Chapters in Business Administration	3	30 h (2 CH)	60

Module Contents:

Background and relations to other courses:

To be found in the descriptions of the modules mentioned below.

Main topics and learning objectives:

Choosing a 6CP Lecture with Exercises in the "Minor" programs of the Master program of Business Administration offered by the department of Business Administration, namely: "Basis Accounting", "Basis Finance", "Basis Management" and "Basis Marketing". In particular, the following Modules can be studied:

ACMo1 Konzepte und Instrumente des Controlling

ACMo2 Financial Accounting

ACMo3 Internationale Unternehmensbesteuerung

ACMo4 Internationales Controlling

ACMo7 Unternehmensanalyse und -bewertung

ACMo8 Unternehmensbesteuerung I

ACMoo Ausgewählte Kapitel des Accounting

ACM10 Abschlussprüfung

4 ACM11 Spezialfragen der Rechnungslegung nach HGB und IFRS

ACM12 Ausgewählte Kapitel des Accounting II

ACM13 Anwendungen des Controlling

ACM14 IFRS und Controlling

ACM16 Vertiefungsmodul Internationale Rechnungslegung

ACM₁₇ Unternehmensbesteuerung II

FCMo1 Introduction to Finance

FCMo2 Behavioral Finance

FCMo₃ Derivatives I

FCMo4 Finanzintermedation I

FCMo₅ Advanced Corporate Finance

FCMo6 Corporate Governance and Responsible Business Practices

FCMo7 Derivatives II

FCMo8 Finanzintermediation II

FCM₁₃ Ausgewählte Kapitel Finance I

CfM₁₃ Organisation

CfM14 Strategisches Management

	CfM15 Personal CfM16 Management MCM02 Industrial Marketing MCM03 Consumer Marketing MCM04 Media Marketing MCM08 Direct Marketing MCM09 Sales Management MCM10 Electronic Commerce MCM11 Advanced Media Marketing Main topics and learning objectives can be found in the modules. Preconditions defined for the selected modules				pove mentioned	
5	Learning outcomes: Academic: To be found in the descriptions of the above mentioned modules Soft skills: To be found in the descriptions of the above mentioned modules					
6	Description of possible electives within the modules: Within the electives a minimum of 2 seminars has to be taken.					
7	Examination: Examinations for every part of the module					
8	Relevant Work: Number and Type; Connection to Course		Duration		Part of final mark in %	
	See module descriptions within the Master program of department of Business Administration	of the				
9	Study Work: Number and Type; Connection to Course none			Duratio	on	
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work completed.	and st	udy work	k have b	een successfully	
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Heike Trautmann		tment: l of Busi	ness an	d Economics	

16	Misc.:

Selected Chapters in Business Administration III

Мос	dule Title english:	Selected Chapters in Business Administration III				
Cou	rse Program:	Master Information Systems PO 2010/2014				
1	Module No: EM- SCBA 3	State: Elective	Language of Instruction: English			
2	Turn: each term	Duration: 1 term	Semester: 1 or 2 or 3 CP: 6 Workload (h): 180			

Module Structure:

3

ł	No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
	1	Lecture	Selected Chapters in Business Administration	3	30 h (2 CH)	60
	2	Exercise	Exercise on Selected Chapters in Business Administration	3	30 h (2 CH)	60

Module Contents:

Background and relations to other courses:

To be found in the descriptions of the modules mentioned below.

Main topics and learning objectives:

Choosing a 6CP Lecture with Exercises in the "Minor" programs of the Master program of Business Administration offered by the department of Business Administration, namely: "Basis Accounting", "Basis Finance", "Basis Management" and "Basis Marketing". In particular, the following Modules can be studied:

ACMo1 Konzepte und Instrumente des Controlling

ACMo2 Financial Accounting

ACMo3 Internationale Unternehmensbesteuerung

ACMo4 Internationales Controlling

ACMo7 Unternehmensanalyse und -bewertung

ACMo8 Unternehmensbesteuerung I

ACMoo Ausgewählte Kapitel des Accounting

ACM10 Abschlussprüfung

4 ACM11 Spezialfragen der Rechnungslegung nach HGB und IFRS

ACM12 Ausgewählte Kapitel des Accounting II

ACM₁₃ Anwendungen des Controlling

ACM14 IFRS und Controlling

ACM16 Vertiefungsmodul Internationale Rechnungslegung

ACM₁₇ Unternehmensbesteuerung II

FCMo1 Introduction to Finance

FCMo2 Behavioral Finance

FCMo₃ Derivatives I

FCMo4 Finanzintermedation I

FCMo₅ Advanced Corporate Finance

FCMo6 Corporate Governance and Responsible Business Practices

FCMo7 Derivatives II

FCMo8 Finanzintermediation II

FCM₁₃ Ausgewählte Kapitel Finance I

CfM₁₃ Organisation

CfM14 Strategisches Management

	CfM16 Management MCM02 Industrial Marketing MCM03 Consumer Marketing MCM04 Media Marketing MCM08 Direct Marketing MCM09 Sales Management MCM10 Electronic Commerce MCM11 Advanced Media Marketing Main topics and learning objectives can be found in the descriptions of the above mentioned modules. Preconditions defined for the selected modules have to be obeyed.						
5	Learning outcomes: Academic: To be found in the descriptions of the above mentioned modules Soft skills: To be found in the descriptions of the above mentioned modules						
6	Description of possible electives within the modules: Within the electives a minimum of 2 seminars has to be taken.						
7	Examination: Examinations for every part of the module						
8	Relevant Work: Number and Type; Connection to Course		Duration		Part of final mark in %		
	See module descriptions within the Master program o department of Business Administration	f the					
9	Study Work: Number and Type; Connection to Course none			Duratio	on		
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work completed.	and st	udy work	k have b	een successfully		
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)						
12	Module Prerequisites:						
13	Presence: Presence is recommended.						
14	Use of the module for other course programs: Master Information Systems						
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Depar Schoo		ness an	d Economics		

16	Misc.:

Selected Chapters in Business Administration IV

Mod	dule Title english:	Selected Chapters in Business Administration IV				
Cou	rse Program:	Master Information Systems PO 2010/2014				
1	Module No: EM- SCBA 4	State: Elective	Language of Instruction: English			
2	Turn: each term	Duration: 1 term	Semester: 1 or 2 or 3 CP: 6 Workload (h): 1		Workload (h): 180	

Module Structure:

3	No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
	1	Lecture	Selected Chapters in Business Administration	3	30 h (2 CH)	60
	2	Exercise	Exercise on Selected Chapters in Business Administration	3	30 h (2 CH)	60

Module Contents:

Background and relations to other courses:

To be found in the descriptions of the modules mentioned below.

Main topics and learning objectives:

Choosing a 6CP Lecture with Exercises in the "Minor" programs of the Master program of Business Administration offered by the department of Business Administration, namely: "Basis Accounting", "Basis Finance", "Basis Management" and "Basis Marketing". In particular, the following Modules can be studied:

ACMo1 Konzepte und Instrumente des Controlling

ACMo2 Financial Accounting

ACMo3 Internationale Unternehmensbesteuerung

ACMo4 Internationales Controlling

ACMo7 Unternehmensanalyse und -bewertung

ACMo8 Unternehmensbesteuerung I

ACMoo Ausgewählte Kapitel des Accounting

ACM10 Abschlussprüfung

4 ACM11 Spezialfragen der Rechnungslegung nach HGB und IFRS

ACM12 Ausgewählte Kapitel des Accounting II

ACM13 Anwendungen des Controlling

ACM14 IFRS und Controlling

ACM16 Vertiefungsmodul Internationale Rechnungslegung

ACM₁₇ Unternehmensbesteuerung II

FCMo1 Introduction to Finance

FCMo2 Behavioral Finance

FCMo₃ Derivatives I

FCMo4 Finanzintermedation I

FCMo₅ Advanced Corporate Finance

FCMo6 Corporate Governance and Responsible Business Practices

FCMo7 Derivatives II

FCMo8 Finanzintermediation II

FCM₁₃ Ausgewählte Kapitel Finance I

CfM₁₃ Organisation

CfM14 Strategisches Management

	CfM15 Personal CfM16 Management MCM02 Industrial Marketing MCM03 Consumer Marketing MCM04 Media Marketing MCM08 Direct Marketing MCM09 Sales Management MCM10 Electronic Commerce MCM11 Advanced Media Marketing Main topics and learning objectives can be found in the modules. Preconditions defined for the selected modules				pove mentioned	
5	Learning outcomes: Academic: To be found in the descriptions of the above mentioned modules Soft skills: To be found in the descriptions of the above mentioned modules					
6	Description of possible electives within the modules: Within the electives a minimum of 2 seminars has to be taken.					
7	Examination: Examinations for every part of the module					
8	Relevant Work: Number and Type; Connection to Course		Duration		Part of final mark in %	
	See module descriptions within the Master program of department of Business Administration	of the				
9	Study Work: Number and Type; Connection to Course none			Duratio	on	
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work completed.	and st	udy work	k have b	een successfully	
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Heike Trautmann		tment: l of Busi	ness an	d Economics	

16	Misc.:

Selected Chapters in Business Administration V

Мо	dule Title english:	Selected Chapters in Business Administration V				
Cou	rse Program:	Master Information Systems PO 2010/2014				
1	Module No: EM- SCBA 5	State: Elective	Language of Instruction: English			
2	Turn: each term	Duration: 1 term	Semester: 1 or 2 or 3 CP: 6 Workload (h): 18			

Module Structure:

3	No	Туре	Course	СР	Presence (h + CH)	Self-Study (h)
	1	Lecture	Selected Chapters in Business Administration	3	30 h (2 CH)	60
	2	Exercise	Exercise on Selected Chapters in Business Administration	3	30 h (2 CH)	60

Module Contents:

Background and relations to other courses:

To be found in the descriptions of the modules mentioned below.

Main topics and learning objectives:

Choosing a 6CP Lecture with Exercises in the "Minor" programs of the Master program of Business Administration offered by the department of Business Administration, namely: "Basis Accounting", "Basis Finance", "Basis Management" and "Basis Marketing". In particular, the following Modules can be studied:

ACMo1 Konzepte und Instrumente des Controlling

ACMo2 Financial Accounting

ACMo3 Internationale Unternehmensbesteuerung

ACMo4 Internationales Controlling

ACMo7 Unternehmensanalyse und -bewertung

ACMo8 Unternehmensbesteuerung I

ACMoo Ausgewählte Kapitel des Accounting

ACM10 Abschlussprüfung

4 ACM11 Spezialfragen der Rechnungslegung nach HGB und IFRS

ACM12 Ausgewählte Kapitel des Accounting II

ACM₁₃ Anwendungen des Controlling

ACM14 IFRS und Controlling

ACM16 Vertiefungsmodul Internationale Rechnungslegung

ACM₁₇ Unternehmensbesteuerung II

FCMo1 Introduction to Finance

FCMo2 Behavioral Finance

FCMo₃ Derivatives I

FCMo4 Finanzintermedation I

FCMo₅ Advanced Corporate Finance

FCMo6 Corporate Governance and Responsible Business Practices

FCMo7 Derivatives II

FCMo8 Finanzintermediation II

FCM₁₃ Ausgewählte Kapitel Finance I

CfM₁₃ Organisation

CfM14 Strategisches Management

	CfM15 Personal CfM16 Management MCM02 Industrial Marketing MCM03 Consumer Marketing MCM04 Media Marketing MCM08 Direct Marketing MCM09 Sales Management MCM10 Electronic Commerce MCM11 Advanced Media Marketing Main topics and learning objectives can be found in the modules. Preconditions defined for the selected modules				pove mentioned			
5	Learning outcomes: Academic: To be found in the descriptions of the above mentione Soft skills: To be found in the descriptions of the above mentione							
6	Description of possible electives within the modules: Within the electives a minimum of 2 seminars has to be	e taker	1.					
7	Examination: Examinations for every part of the modu	le						
8	Relevant Work: Number and Type; Connection to Course Duration Part of final mark in %							
	See module descriptions within the Master program of department of Business Administration	of the						
9	Study Work: Number and Type; Connection to Course none			Duratio	on			
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work completed.	and st	udy work	k have b	een successfully			
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)							
12	Module Prerequisites: none							
13	Presence: Presence is recommended.							
14	Use of the module for other course programs: Master Information Systems							
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	•	tment: l of Busi	ness an	d Economics			

16	Misc.:

Selected Chapters in Computer Science I

Mod	dule Ti	tle english:	Selected Chapters	Selected Chapters in Computer Science I								
Cou	rse Pro	ogram:	Master Information	Systems PO	2010/2014	ļ						
1	Modu 1	ıle No: SCCS	State: Elective	Language o	of Instruction	on: E	English	nglish				
2	Turn:	each term	Duration: 1 term	Semester:	1 or 2 or 3	CI	P: 6	oad (h): 180				
	Modu	ule Structure	:									
3	No	Туре	Course			СР	Prese + CH)	nce (h	Self-Study (h)			
3	1	Lecture	Selected Chapters in (Computer Sci	ence	3	30 h (2 CH)	60			
	2	Exercise	Exercise on Selected (Science	Chapters in C	omputer	3	30 h (2 CH)	60			
4	Main Choo Comp abov	v. topics and lesing Lecture outer Science ementioned		n 6 CP from th	ne Master p	orogi	ram of	the depa	artment of			
5	to be	skills:	descriptions of the ab									
6			ssible electives within es a minimum of 2 sem									
7	Exam	ination: Fina	al Module Exam									
8	Relevant Work: Number and Type; Connection to Course Final Written Exam Duration Part of final mark in %								al mark in %			
9	Study Work: Number and Type; Connection to Course none											

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Department: School of Business and Economics				
16	Misc.:					

Selected Chapters in Computer Science II

		tle english:		Selected Chapters i						
		ogram:		Master Information	Systems PO	2010/201/	7 1			
1		ule No: SCCS		State: Elective	Language of Instruction: English					
2	Turn:	each term		Duration: 1 term	Semester:	1 or 2 or 3	CI	CP: 6 Workload (h): 180		
	Modu	ule Structure	:				<u> </u>			
3	No	No Type Course						Prese + CH)	nce (h	Self-Study (h)
	1	Lecture	S	elected Chapters in C	Computer Sc	ience	3	30 h (2 CH)	60
	2	Exercise		xercise on Selected C cience	Chapters in C	omputer	3	30 h (2 CH)	60
4	Main Choo Comp abov	v. topics and lesing Lecture outer Science e mentioned	ea i /Ex e. <i>N</i> m		6 CP from t	he Master p	orog	ram of	the depa	artment of
5	Learr Acad to be	ning outcome emic: found in the	es:		ove mention	ed modules	<u></u>			
		skills: found in the	de	escriptions of the abo	ove mention	ed module:	S			
6				ble electives within a minimum of 2 sem						
7	Exam	ination: Fin	al I	Module Exam						
8	, , , , , , , , , , , , , , , , , , ,							art of fin	al mark in %	
						120 min.		10		
		y Work: ther and Tyne	p. 4	Connection to Course	<u> </u>			Dura	ition	
9	none		د , (connection to course				Duit		
	none									

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Department: School of Business and Economics				
16	Misc.:					

Selected Chapters in Computer Science III

Module Title english:				Selected Chapters in Computer Science III								
Cou	rse Pro	ogram:		Master Information	Systems PO	2010/2012	4					
1	Modu 3	ule No: SCCS		State: Elective	Language of Instruction: En				nglish			
2	Turn:	each term		Duration: 1 term	Semester:	1 or 2 or 3	CF	P: 6	oad (h): 180			
	Modu	ule Structure	::									
3	No	Туре	Co	ourse			СР	Prese + CH)	nce (h	Self-Study (h)		
3	1	Lecture	Se	elected Chapters in C	Computer Sc	ience	3	30 h (2 CH)	60		
	2	Exercise		ercise on Selected C cience	Chapters in C	Computer	3	30 h (2 CH)	60		
4	Main Choo Comp abov	topics and lesing Lecture, outer Science e mentioned	l ear /Ex e. M	rning objectives can larning objectives: sercise-modules with Main topics and learr odules.	ı 6 CP from t	he Master p	orogi	ram of	the depa	artment of		
5	to be	skills:		escriptions of the abo								
6				ble electives within to a minimum of 2 sem								
7	Exam	nination: Fina	al N	Module Exam								
8	Relevant Work: Number and Type; Connection to Course Final Written Exam Duration Part of final mark in % 120 min. 100 %								al mark in %			
9	Study Work: Number and Type: Connection to Course											

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Department: School of Business and Economics				
16	Misc.:					

Selected Chapters in Computer Science IV

Module Title english: Selected Chapters in Computer Science IV										
				·						
Course Program: Master Information Systems PO 2010/2014					+					
1	Modu 4	ı le No: SCCS		State: Elective	Language	Language of Instruction: English				
2	Turn:	each term		Duration: 1 term	Semester:	1 or 2 or 3	CI	P: 6 Workload (h): 180		
	Modu	ıle Structure	:							
3	No	No Type Course				СР	Prese + CH)	nce (h	Self-Study (h)	
	1	Lecture	S	elected Chapters in C	Computer Sc	ience	3	30 h (2 CH)	60
	2	2 Exercise Exercise on Selected Chapters in Computer Science					3	30 h (2 CH)	60
4	Main Choo Comp	v. topics and l e sing Lecture,	ea /Ex	rning objectives can rning objectives: xercise-modules with Main topics and learr odules.	ı 6 CP from t	he Master p	rog	ram of t	the depa	artment of
5	to be	found in the	d	escriptions of the abo						
6				ible electives within a minimum of 2 sem						
7	Exam	ination: Fina	al	Module Exam						
8	Relevant Work: Number and Type; Connection to Course Final Written Exam Duration Part of final m 120 min. 100 %						al mark in %			
9	Study Work: Number and Type; Connection to Course none						Duration			

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Department: School of Business and Economics				
16	Misc.:					

Selected Chapters in Computer Science V

		tle english:		Selected Chapters in Computer Science V								
Cou	rse Pro	ogram:		Master Information	Systems PO	2010/2014	4					
1		ule No: SCCS		State: Elective	Language of Instruction: English							
2	Turn:	each term		Duration: 1 term	Semester:	1 or 2 or 3	CI	CP: 6 Workload (h): 180				
	Mod	ule Structure	:				<u> </u>					
3	No	Туре	Co	ourse			СР	Prese + CH)	nce (h	Self-Study (h)		
	1	Lecture	Se	elected Chapters in C	Computer Sc	ience	3	30 h (2 CH)	60		
	2	Exercise		kercise on Selected C cience	Chapters in C	omputer	3	30 h (2 CH)	60		
4	Main below Main Choo Comp abov	topics and low. topics and low sing Lecture, outer Science e mentioned	ear ear /Ex e. N		be found in t 1 6 CP from t	he Master p	orog	ram of	the depa	artment of		
5	Learr Acad	ning outcome	es:		ove mention	ed modules						
		skills: found in the	e de	escriptions of the abo	ove mention	ed modules	5					
6				ble electives within a minimum of 2 sem								
7	Exam	ination: Fina	al I	Module Exam								
8	Relevant Work: Number and Type; Connection to Course Final Written Exam 120 min. 100 %							al mark in %				
	1	y Work:						<u> </u>				
9			e; (Connection to Course	e			Dura	ition			
	none											

10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.					
11	Weight of the module grade for the overall grade: 5% (6 of 120 CP)					
12	Module Prerequisites:					
13	Presence: Presence is recommended.					
14	Use of the module for other course programs: Master Information Systems					
15	Responsible Lecturer: Prof. Dr. Heike Trautmann	Department: School of Business and Economics				
16	Misc.:					

Project Seminar (Master of Science Information Systems)

Module Title english:			Project Seminar (Master of Science Information Systems)						
Course Program:			Master Information Systems PO 2010/2014						
1	Mod	ule No: PS	State: Compulsory	Language of Instruction: English					
2	Turn: each term Duration: 1 term Semes			Semester: 3 or 4	CF	CP: 12 Workle		oad (h): 360	
	Module Structure:								
3	No	Туре	Course		СР	Presence (h + CH)		Self-Study (h)	
	1	Project Seminar	Project Seminar		12	120 h	(8 CH)	240	

Module Contents:

Background and relations to other courses:

The material and methods that were introduced in former Tracks IM, PM, BN, BI, ISD and/or LPR will be applied in a practice-oriented project to solve a realistic, complex problem. The project is often performed in collaboration with a partner from industry. The experience gained in the project seminar can be helpful for the Master thesis.

Main topics and learning objectives:

The material and methods learned in previous courses are applied in a practice-oriented project with topics varying from term to term. In particular teamwork, project planning and management, development of a business concept, design of a corresponding software architecture, implementation, and testing will be trained. Moreover, the intermediate and final results of the project will be presented using state-of-theart tools. The participants also have to read relevant literature and describe required concepts in papers. The students are supported in all these activities by tutors.

4

Themes	Learning objectives				
Writing scientific papers	Read and understand scientific literature. Describe the read material well-structured, understandably, and precisely in own words in a paper				
Presentation	Present the material described in the paper orally using state-of-the-art tools (such as e.g. Powerpoint) in a well-structured, understandable, and precise way.				
Project work	Solve a realistic task in a project team.				
Project management	Manage a project taking into account limited time and resources. Divide a complex task into activities and assign them to team members. Coordinate the activities in the project.				

Learning outcomes:

Academic:

The students learn to apply theoretical concepts in a practical environment given by a specific (e.g. industrial) project.

Soft skills:

	Students learn to realize a project in a team. They acquire several soft skills, e.g. in presentations, writing of scientific texts, and collaboration in teams as well as media competence.							
6	Description of possible electives within the modules: none							
7	Examination: Final Module Exam							
8	Relevant Work:							
	Number and Type; Connection to Course	Duratio	on		Part of final mark in %			
	Project documentation, 2 intermediate and 1 final presentation	Ca. 30 presen	pages + ca. 90 m tation	nin.	100 %			
	Study Work:							
9	Number and Type; Connection to Course			Duration				
	none							
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.							
11	Weight of the module grade for the overall grade: 10% (12 of 120 CP)							
12	Module Prerequisites: Concrete Project Seminars may require certain modules from IM, PM, BN, ISD, BI and/or LPR.							
13	Presence: Presence is recommended during project work and is required during presentations. As the required work can only be assessed, when all participants are present during presentations, an absence is not possible. If absent, the seminar has to be repeated.							
14	Use of the module for other course programs: Master Information Systems							
15	Responsible Lecturer: Prof. Dr. Heike Trautmann Department: School of Business and Economics				and Economics			
16	Misc.:							

Master's Thesis (Master of Science Information Systems)

		tle english:	Master's Thesis (Master of Science Information Systems)							
Course Program:		ogram:	Master Information Systems PO 2010/2014							
1	Modu	ıle No: MT	State: Compulsory	Langua	ge of Instr	truction: English				
2	Turn: each term		Duration: 1 term	Semest	er: 4	CP: 30		Workload (h): 900		
	Module Structure:									
	No	Туре	Course			СР	Presence (h + CH)		Self-Study (h)	
3	1		Writing the thesis			25	o h (o (CH)	750	
	2		Thesis defense			2	o h (o CH)		60	
	3	Exercise	Research methods			3	30 h (2	CH)	60	
4	Background and relations to other courses: The master thesis is written in the research context of one of the method tracks IM, PM, BN, BI and/or ISD. Main topics and learning objectives: Those are subject to the topic and area where the thesis is intended. The thesis defense covers the thesis' topic. With his/her master's thesis, a student is supposed to prove his/her ability to take part in the scientific process by doing a small piece of research and write an appropriate paper on it. The thesis should have a length of approximately 80 pages. The thesis defense contains a presentation of the thesis' contents as well as a discussion.							fense covers her ability to ppropriate		
5	Acad The s probl Soft s The s resea	Learning outcomes: Academic: The student can handle a research topic in a scientific way and apply the results to practical problems. He or she can present and defend approaches, underlying theory and results. Soft skills: The student can handle the formal requirements associated to a research paper: investigating the research context, collecting material from the scientific literature, performing and processing bibliographical inquiries, presenting own ideas in the scientific environment of the given topic.								
6		Description of possible electives within the modules: none								
7	Exam	Examination: Final Module Exam								
8	Relevant Work: Number and Type; Connection to Course Master´s thesis Duration Part of final mark					al mark in %				
9		Study Work: Number and Type; Connection to Course					Dura	Duration		

	Thesis defense (oral)	ma	x. 1h				
10	Prerequisites for Credit Points: The credit points will be granted after all relevant work and study work have been successfully completed.						
11	Weight of the module grade for the overall grade: 25% (30 of 120 CP)						
12	Module Prerequisites: 60 credit points.						
13	Presence: Presence is recommended.						
14	Use of the module for other course programs: Master Information Systems						
15	Responsible Lecturer: Prof. Dr. Heike Trautmann Department: School of Business and Economics						
16	Misc.:						