

MODULE HANDBOOK

Master of Science

Master Software Engineering Management (FS-OI-EU-MASE-60)

60 CP

Distance Learning

Classification: Non-Consecutive

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1. Semester

Software Engineering: Software Processes

Module Code: DLMCSSESP

Module Type see curriculum	Admission Requirements None	Study Level MA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Prof. Dr. Damir Ismailovic (Software Engineering: Software Process)

Contributing Courses to Module

- Software Engineering: Software Process (DLMCSSESP01)

Module Exam Type

Module Exam

Study Format: Distance Learning
Oral Assignment
Study Format: myStudies
Oral Assignment

Split Exam

Weight of Module

see curriculum

Module Contents

- Software process modeling
- Basic software life cycles
- Agile and lean processes
- The Software Product Life Cycle
- Governance and management of software processes

Learning Outcomes**Software Engineering: Software Process**

On successful completion, students will be able to

- describe the role of software processes and lifecycle models in software engineering from initialization to the withdrawal of a software system.
- describe the notations used for software processes and discuss their relative advantages.
- discuss the differences and commonalities of plan-driven and agile approaches.
- select an appropriate process model for specific application cases and discuss their advantages and disadvantages.
- adapt (tailor-) selected process models to an individual situation.

Links to other Modules within the Study Program

This module is similar to other modules in the field of Computer Science & Software Development.

Links to other Study Programs of the University

All Master Programmes in the IT & Technology field.

Software Engineering: Software Process

Course Code: DLMCSSESP01

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	none

Course Description

Software processes and life cycle models provide a structure for different software engineering tasks. The aim of this module is to provide an understanding of this structure and how to apply it across the entire plan-build-run life cycle. An important foundation for working with software processes is modeling using suitable notation. The different types of life cycles are discussed, including the plan-driven and the agile approaches as well as mixed forms (hybrid models). A special focus is put on the different environments for which these approaches are best suited. Beyond software development, this course also addresses the entire software life cycle, including the operations phase and the cooperation between the two phases, e.g., based on DevOps. Software processes are not just a topic on the level of the individual development group or project but a task for the entire organization; therefore, they should be integrated into overall IT governance and management efforts.

Course Outcomes

On successful completion, students will be able to

- describe the role of software processes and lifecycle models in software engineering from initialization to the withdrawal of a software system.
- describe the notations used for software processes and discuss their relative advantages.
- discuss the differences and commonalities of plan-driven and agile approaches.
- select an appropriate process model for specific application cases and discuss their advantages and disadvantages.
- adapt (tailor-) selected process models to an individual situation.

Contents

1. Foundations of Software Processes
 - 1.1 The Role of Software Processes and Life Cycle Models
 - 1.2 Historical Overview
2. Software Process Definition and Modelling
 - 2.1 Modelling Notations and Meta-Models
 - 2.2 Notations for Modelling the Interaction Between Processes
 - 2.3 Detailed-Level Notations

3. Basic Software Product Life Cycle Models
 - 3.1 Waterfall Models
 - 3.2 The V-Model
 - 3.3 Component or Matrix-Based Models
 - 3.4 Iterative, Incremental and Evolutionary Development
4. Agile and Lean Development Processes
 - 4.1 The Agile Manifesto
 - 4.2 Scrum
 - 4.3 Common Agile Practices
 - 4.4 Kanban and Lean Development
 - 4.5 Scaling Agile Development
 - 4.6 Hybrid Processes
5. The Software Product Life Cycle
 - 5.1 Detailed-Level Process Models: Unified Process and V-Modell XT
 - 5.2 IT Service Management and Operations
 - 5.3 DevOps
 - 5.4 Safety, Security and Privacy
6. Governance and Management of Software Processes
 - 6.1 Process Governance
 - 6.2 Process Design and Deployment
 - 6.3 Process Tailoring
 - 6.4 Process Assessment, Improvement and Measurement
 - 6.5 Tool Support

Literature**Compulsory Reading****Further Reading**

- Boehm, B. (2006). A view of 20th and 21st century software engineering. ICSE '06: Proceedings of the 28th international conference on software engineering (pp. 12–29). Association for Computing Machinery.
- Boehm, B., & Turner, R. (2004). Balancing agility and discipline: A guide for the perplexed. Addison-Wesley Professional.
- Kneuper, R. (2018). Software processes and life cycle models: An introduction to modelling, using and manage Agile, plan-driven and hybrid processes. Springer.
- Meyer, B. (2014). Agile! The good, the hype and the ugly. Springer.
- Schwaber, K., & Sutherland, J. (2020). The scrum guide: The definitive guide to scrum: The rules of the game. Ken Schwaber and Jeff Sutherland.

Study Format Distance Learning

Study Format Distance Learning	Course Type Online Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: yes
Type of Exam	Oral Assignment

Student Workload					
Self Study 110 h	Contact Hours 0 h	Tutorial/Tutorial Support 20 h	Self Test 20 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods		
Tutorial Support <input checked="" type="checkbox"/> Course Feed	Learning Material <input checked="" type="checkbox"/> Course Book <input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Audio <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Online Tests <input checked="" type="checkbox"/> Guideline

Study Format myStudies

Study Format myStudies	Course Type Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: yes
Type of Exam	Oral Assignment

Student Workload					
Self Study 110 h	Contact Hours 0 h	Tutorial/Tutorial Support 20 h	Self Test 20 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods		
Tutorial Support <input checked="" type="checkbox"/> Course Feed	Learning Material <input checked="" type="checkbox"/> Course Book <input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Audio <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Online Tests <input checked="" type="checkbox"/> Guideline

IT Project and Change Management

Module Code: DLMIPC1_E

Module Type see curriculum	Admission Requirements None	Study Level MA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimaldauer: 1 Semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Prof. Dr. Alexander Leberling (IT Project and Change Management)

Contributing Courses to Module

- IT Project and Change Management (DLMIPC01_E)

Module Exam Type

Module Exam

Study Format: Distance Learning
Exam

Split Exam

Weight of Module

see curriculum

Module Contents

- Change Management
- Success Factors in Change Management
- Communication Management
- Change Management in the Context of IT
- IT Projects Designed for Change
- Selected IT Management Techniques

Learning Outcomes**IT Project and Change Management**

On successful completion, students will be able to

- explain the term change management and how change management and IT projects are related to each other.
- explain success factors in change management and demonstrate how targeted communication management can be done.
- explain the term change management in the context of IT service management and explain how change management can be organized in a structured manner there.
- assess how IT projects and IT architectures can be prepared for continuous change and with which concrete management techniques the ability to change is made possible.

Links to other Modules within the Study Program

This module is similar to other modules in the fields of Business Administration & Management.

Links to other Study Programs of the University

All Master Programs in the Business & Management fields.

IT Project and Change Management

Course Code: DLMIPC01_E

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	None

Course Description

In this course, students learn about the term change management and its connection with IT projects. They will also learn about success factors and how communication management can be used to support change processes in a targeted manner. Furthermore, they will learn what change management means in the context of IT service management and how IT projects and IT architectures can be specifically designed regarding continuous adaptation.

Course Outcomes

On successful completion, students will be able to

- explain the term change management and how change management and IT projects are related to each other.
- explain success factors in change management and demonstrate how targeted communication management can be done.
- explain the term change management in the context of IT service management and explain how change management can be organized in a structured manner there.
- assess how IT projects and IT architectures can be prepared for continuous change and with which concrete management techniques the ability to change is made possible.

Contents

1. Change Management
 - 1.1 Introduction and Examples
 - 1.2 Definition: Change Management
 - 1.3 Relationships between Change and IT Project Management
 - 1.4 Areas of Influence of IT Projects on Companies
2. Supporting Methods for Change Management
 - 2.1 Introduction
 - 2.2 Rapid Prototyping
 - 2.3 Agility and Change
 - 2.4 Complexity and Change
 - 2.5 The Process Logic of the Tetralemma and Change
 - 2.6 Knowledge Management and Change

2.7	Typology in the Company
2.8	Systemic Structural Constellations and Change
3.	Success Factors for Change Management
3.1	Introduction
3.2	Governance
3.3	Holism
3.4	Participation
3.5	Respect and Appreciation
3.6	Visions
3.7	Amplification and Storytelling
4.	Communication Management
4.1	Introduction and Basics about Communication
4.2	Communication Design
4.3	New Forms of Communication: BarCamps and World Cafés
5.	Procedure for Change Management
5.1	Introduction
5.2	3-Phase Model by Kurt Lewin
5.3	Structuring According to ITIL
5.4	Enterprise Architecture and Change Management: TOGAF and Canvas

Literature
Compulsory Reading
Further Reading
<ul style="list-style-type: none">▪ Bridges, W./Bridges, S. (2009): Managing Transitions. Making the Most of Change. 3. Auflage, Da Capo, Cambridge (MA).▪ Hiatt, J./Creasey, T. (2012): Change Management. The People Side of Change. 2. Auflage, Prosci, Fort Collins (CO).▪ Project Management Institute (Hrsg.) (2013): A Guide to the Project Management Body of Knowledge (PMBOK Guide). 5. Auflage, Project Management Institute, Newtown (PA).

Study Format Distance Learning

Study Format Distance Learning	Course Type Online Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: yes
Type of Exam	Exam

Student Workload					
Self Study 90 h	Contact Hours 0 h	Tutorial/Tutorial Support 30 h	Self Test 30 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods		
Tutorial Support <input checked="" type="checkbox"/> Course Feed	Learning Material <input checked="" type="checkbox"/> Course Book <input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Audio <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Practice Exam <input checked="" type="checkbox"/> Online Tests

Management of IT Services and Architecture

Module Code: MWIT2-01_E

Module Type see curriculum	Admission Requirements none	Study Level MA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Prof. Dr. Andrew Adjah Sai (Management of IT Services and Architecture)

Contributing Courses to Module

- Management of IT Services and Architecture (MWIT02-01_E)

Module Exam Type

Module Exam

Study Format: Distance Learning
Exam, 90 Minutes

Split Exam

Weight of Module

see curriculum

Module Contents

- Basics of IT Service Management and Terminology
- IT Infrastructure Library (ITIL)
- IT Outsourcing
- IT Architecture Management
- IT Application Portfolio Management
- Structural Organization of IT and Architecture Governance

Learning Outcomes**Management of IT Services and Architecture**

On successful completion, students will be able to

- name, explain and distinguish the basic principles of IT strategy, IT governance and IT architecture management.
- explain and differentiate between the typical activities of IT architecture management, their interrelationships and their dependencies.
- explain the fundamentals and challenges of IT service management.
- describe the motivation and structure of the IT Infrastructure Library (ITIL), explain the main elements and locate specific activities in the service lifecycle.

Links to other Modules within the Study Program

This module is similar to other modules in the field of Computer Science & Software Development

Links to other Study Programs of the University

All Master Programs in the IT & Technology field

Management of IT Services and Architecture

Course Code: MWIT02-01_E

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	none

Course Description

IT service management is an approach to align and understand a company's IT as a service provider and supporter of operational and business processes. Here, the focus is on quality management and handling of daily operations. In addition to specific IT projects, e.g., the development of an IT system or the introduction of standard software, strategic management must be used for the organization-wide IT infrastructure. The task of IT architecture management is the strategic alignment of the IT infrastructure with the organization's business and IT strategy. This course provides concepts, methods, procedures and models for the tasks within the scope of IT architecture management.

Course Outcomes

On successful completion, students will be able to

- name, explain and distinguish the basic principles of IT strategy, IT governance and IT architecture management.
- explain and differentiate between the typical activities of IT architecture management, their interrelationships and their dependencies.
- explain the fundamentals and challenges of IT service management.
- describe the motivation and structure of the IT Infrastructure Library (ITIL), explain the main elements and locate specific activities in the service lifecycle.

Contents

1. IT Service Management Basics and Terms
 - 1.1 IT Services
 - 1.2 IT Service Management
 - 1.3 ITSM Frameworks
2. ITIL 4 - Basics and Four Dimensions
 - 2.1 Stakeholders, Services and Service Management
 - 2.2 Value Contribution of IT
 - 2.3 Four Dimensions Model
3. ITIL 4 - Service Value System
 - 3.1 Basics and Overview

- 3.2 Inputs, Outcome and Governance
- 3.3 The Service Value Chain
- 3.4 Continual Improvement
- 4. ITIL 4 - Principles
 - 4.1 Overview
 - 4.2 Value Orientation
 - 4.3 Iterative Procedure and Feedback
 - 4.4 Establish Collaboration and Visibility
 - 4.5 Optimize and Automate
- 5. ITIL 4 - Practices
 - 5.1 Overview
 - 5.2 General Management Practices
 - 5.3 Service Management Practices
 - 5.4 Technical Practices
- 6. IT Architecture Management Basics and Terms
 - 6.1 IT Enterprise Architecture
 - 6.2 Goals of Enterprise Architecture Management
 - 6.3 Processes in the Management of IT Enterprise Architectures
- 7. IT Application Portfolio Management
 - 7.1 Overview of IT Application Portfolio Management
 - 7.2 Application Manual
 - 7.3 Portfolio Analysis
 - 7.4 Development Planning
- 8. Architecture Governance
 - 8.1 Organizational Structure
 - 8.2 Policy Development and Enforcement
 - 8.3 Project Support

Literature**Compulsory Reading****Further Reading**

- Agutter, C. (2019). ITIL® foundation essentials ITIL 4 edition: The ultimate revision guide. ITGovernance Publishing.
- Axelos Limited. (2019). ITIL 4 foundation: ITIL 4 edition. The Stationery Office.

Study Format Distance Learning

Study Format Distance Learning	Course Type Online Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: yes
Type of Exam	Exam, 90 Minutes

Student Workload					
Self Study 90 h	Contact Hours 0 h	Tutorial/Tutorial Support 30 h	Self Test 30 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods		
Tutorial Support <input checked="" type="checkbox"/> Course Feed	Learning Material <input checked="" type="checkbox"/> Course Book <input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Audio <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Practice Exam <input checked="" type="checkbox"/> Online Tests

IT Governance and Compliance

Module Code: DLMBITGSM2

Module Type see curriculum	Admission Requirements none	Study Level MA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Dr. Radiah Rivu (IT Governance and Compliance)

Contributing Courses to Module

- IT Governance and Compliance (DLMBITGSM02)

Module Exam Type

Module Exam

Study Format: myStudies
Exam, 90 Minutes

Study Format: Distance Learning
Exam, 90 Minutes

Split Exam

Weight of Module

see curriculum

Module Contents

- Establishing IT governance and compliance
- COBIT framework
- IT governance frameworks
- Data protection and data security

Learning Outcomes**IT Governance and Compliance**

On successful completion, students will be able to

- explain IT governance and compliance both as tools to achieve organizational goals and to satisfy regulatory requirements.
- know the different IT governance frameworks given, in particular the industry standard model COBIT.
- set out the processes and policies for administering and managing IT systems for ensuring compliance with local and international regulatory requirements.
- understand that ensuring compliance with the IT governance framework can be a daunting task that requires constant collection, organization, monitoring, analysis and reporting on event logs to detect and manage control-related activity.
- recognize the IT governance and compliance monitoring tools for ensuring that controls for information systems are effectively implemented, monitored, and maintained.

Links to other Modules within the Study Program

This module is similar to other modules in the field of Computer Science & Software Development.

Links to other Study Programs of the University

All Master Programmes in the IT & Technology field.

IT Governance and Compliance

Course Code: DLMBITGSM02

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	none

Course Description

IT governance and compliance are key elements within corporate governance, since most modern businesses rely heavily on IT infrastructure for their success. These elements detail the required leadership and organizational structures for maintaining and extending information technology in order to meet business strategies and objectives.

Course Outcomes

On successful completion, students will be able to

- explain IT governance and compliance both as tools to achieve organizational goals and to satisfy regulatory requirements.
- know the different IT governance frameworks given, in particular the industry standard model COBIT.
- set out the processes and policies for administering and managing IT systems for ensuring compliance with local and international regulatory requirements.
- understand that ensuring compliance with the IT governance framework can be a daunting task that requires constant collection, organization, monitoring, analysis and reporting on event logs to detect and manage control-related activity.
- recognize the IT governance and compliance monitoring tools for ensuring that controls for information systems are effectively implemented, monitored, and maintained.

Contents

1. About IT Governance
 - 1.1 Concept and Definitions
 - 1.2 The Value of IT in the Organization
 - 1.3 Current State and Perceptions
 - 1.4 Governance, Compliance and Risk Management in IT
2. Establishing IT Governance and Compliance
 - 2.1 Assessment
 - 2.2 IT Strategy
 - 2.3 Tactics
 - 2.4 Operations

- 2.5 Compliance
- 2.6 Performance
3. The COBIT Framework
 - 3.1 Overview of COBIT
 - 3.2 The COBIT Goals Cascade
 - 3.3 The COBIT Process Reference Model
 - 3.4 Deploying and Implementing COBIT
4. IT Governance Frameworks
 - 4.1 Quality Management as a Foundation
 - 4.2 ISO 9000 Family
 - 4.3 Maturity Models
 - 4.4 Relationship to Service and Architecture Frameworks (ITIL, TOGAF)
 - 4.5 Relationship to IT Security Frameworks (ISO 27000 family)
5. Data Protection and IT Security
 - 5.1 Data Protection
 - 5.2 IT Security Management
 - 5.3 IT Security Threats and Attack Scenarios
 - 5.4 Countermeasures
 - 5.5 Cryptography

Literature**Compulsory Reading****Further Reading**

- Calder, A., & Watkins, S. G. (2020). IT governance [electronic resource]: an international guide to data security and ISO 27001/ISO 27002 (Seventh Edition). KoganPage.

Study Format myStudies

Study Format myStudies	Course Type Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: yes
Type of Exam	Exam, 90 Minutes

Student Workload					
Self Study 90 h	Contact Hours 0 h	Tutorial/Tutorial Support 30 h	Self Test 30 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Course Book	Exam Preparation <input checked="" type="checkbox"/> Online Tests

Study Format Distance Learning

Study Format Distance Learning	Course Type Online Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: yes
Type of Exam	Exam, 90 Minutes

Student Workload					
Self Study 90 h	Contact Hours 0 h	Tutorial/Tutorial Support 30 h	Self Test 30 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Course Book <input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Audio <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Practice Exam <input checked="" type="checkbox"/> Online Tests

International IT Law

Module Code: DLMIMWITR1_E

Module Type see curriculum	Admission Requirements none	Study Level MA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Dr. Andreas Schmidt (International IT Law)

Contributing Courses to Module

- International IT Law (DLMIMWITR01_E)

Module Exam Type

Module Exam

Study Format: Distance Learning
Exam, 90 Minutes

Split Exam

Weight of Module

see curriculum

Module Contents

- Introduction
- E-Business and E-Commerce
- Intellectual Property
- Privacy and Data Protection
- Information Security and Computer Crime
- Online Media and Telecommunication

Learning Outcomes**International IT Law**

On successful completion, students will be able to

- identify and explain the differences between national, transnational and international legal systems.
- identify interfaces between general legal concepts and IT-relevant law.
- identify legal requirements for IT contracting and assess their impact on the (electronic) commercialization of IT products or services.
- assess the impact of the European Data Protection Regulation on business processes and make recommendations for implementation.
- identify the legal views of selected transnational institutions and to assess their impact on international IT law.

Links to other Modules within the Study Program

This module is similar to other modules in the field of Law

Links to other Study Programs of the University

All Master Programs in the Business & Management fields

International IT Law

Course Code: DLMIMWITR01_E

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	none

Course Description

This course presents in depth national and international legal framework conditions of information processing for companies. After an examination of the differences between international legal systems, an introduction is given to those legal constructs which serve as a basis for the development of IT-relevant legislation. Subsequently, areas of law are discussed from the perspective of concrete application-oriented business scenarios, such as contract law, licensing and patenting. An introduction to the EU legal system is followed by a detailed discussion of the European General Data Protection Regulation (GDPR), which gains increasingly international interest. This leads into a consideration of transnational legal systems and concludes with recommendations from supranational organizations.

Course Outcomes

On successful completion, students will be able to

- identify and explain the differences between national, transnational and international legal systems.
- identify interfaces between general legal concepts and IT-relevant law.
- identify legal requirements for IT contracting and assess their impact on the (electronic) commercialization of IT products or services.
- assess the impact of the European Data Protection Regulation on business processes and make recommendations for implementation.
- identify the legal views of selected transnational institutions and to assess their impact on international IT law.

Contents

1. Introduction
 - 1.1 General Concepts of Law
 - 1.2 Areas of Law
 - 1.3 International, Transnational and EU Law
 - 1.4 Definition and Scope of IT Law
 - 1.5 International, Transnational and European IT Law
 - 1.6 Law in Cross-Border Systems

2. E-Business and E-Commerce
 - 2.1 General Terms and Conditions of Business
 - 2.2 Electronic Commerce
 - 2.3 IT Contracts
 - 2.4 Intermediaries and Platforms
 - 2.5 Antitrust Law and IT
3. Intellectual Property
 - 3.1 Basic Concepts of Intellectual Property
 - 3.2 Copyright
 - 3.3 Software Copyright and Software Licensing
 - 3.4 Free and Open Licensing
 - 3.5 Patenting of Software
4. Privacy and Data Protection
 - 4.1 Basic Concepts of Privacy and Data Protection
 - 4.2 European General Data Protection Regulation (GDPR)
 - 4.3 Implementation Approaches of the GDPR
 - 4.4 International Data Transfer
5. Information Security and Computer Crime
 - 5.1 Information Security Law
 - 5.2 Electronic Signatures and Digital Identities
 - 5.3 Cybercrime
6. Online Media and Telecommunication
 - 6.1 Basics of Online Media Law
 - 6.2 Social Media and Freedom of Expression
 - 6.3 Fundamentals of Telecommunications Law
 - 6.4 Internet and Domain Law

Literature**Compulsory Reading****Further Reading**

- Lloyd, I. (2020): Information Technology Law. Oxford University Press, Oxford.
- Lutzi, T. (2020): Private International Law Online: Internet Regulation and Civil Liability in the EU. Oxford University Press, Oxford.
- Nirmal, B. C. & Singh, R. K. (ed.) (2018): Contemporary Issues in International Law. Environment, International Trade, Information Technology and Legal Education. Springer, Berlin.
- Savin, A. (2017): EU Internet Law. Edward Elgar Publishing.
- Siems, M. (2018): Comparative law. Cambridge University Press, Cambridge.
- Thirlway, H. (2019): The sources of international law. Oxford University Press, Oxford.

Study Format Distance Learning

Study Format Distance Learning	Course Type Online Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: yes
Type of Exam	Exam, 90 Minutes

Student Workload					
Self Study 90 h	Contact Hours 0 h	Tutorial/Tutorial Support 30 h	Self Test 30 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Course Book <input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Audio <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Practice Exam <input checked="" type="checkbox"/> Online Tests

Project: Software Process Management

Module Code: DLMSEPPM

Module Type see curriculum	Admission Requirements DLMCSSESP01	Study Level MA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Prof. Dr. Damir Ismailovic (Project: Software Process Management)

Contributing Courses to Module

- Project: Software Process Management (DLMSEPPM01)

Module Exam Type

Module Exam

Study Format: Distance Learning
Written Assessment: Project Report

Split Exam

Weight of Module

see curriculum

Module Contents

In this module, students learn to understand context parameters for software processes, and how to design and tailor software process elements accordingly. They will acquire profound knowledge about how to make and justify design decisions based on these parameters, create clear and effective documentation, and apply dynamic software process management through all stages, adapting as project requirements and parameters change.

Learning Outcomes**Project: Software Process Management**

On successful completion, students will be able to

- understand and delimit context parameters for software processes.
- know elements and degrees of freedom for the design of a SW process.
- analyze dependencies between context parameters and SE process elements (which process model/role/activity/artifact etc. for which context?).
- justify which design decision was made with reference to the context parameters.
- document software process in a comprehensible way.
- apply software process management from process design via process introduction to process adaptation, process assessment and process improvement and process evaluation.

Links to other Modules within the Study Program

This module is similar to other modules in the fields of Computer Science & Software Development.

Links to other Study Programs of the University

All Master Programs in the IT & Technology fields.

Project: Software Process Management

Course Code: DLMSEPPM01

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	DLMCSSESP01

Course Description

In this project, students should be provided the opportunity to design their own software process for a (fictitious or real) specific company context of their own choosing. For this purpose, a few scenarios with specific context parameters will be given, to which the students can then tailor an appropriate software engineering process. Possible characteristics are, amongst others: agile vs. waterfall, customizing of standard software vs. individual programming, make-or-buy, internal vs. external development, internal vs. external operation, embedded software vs. frontend application, cloud native vs. everything on premise, critical infrastructure vs. consumer apps, software house vs. IT department.

Course Outcomes

On successful completion, students will be able to

- understand and delimit context parameters for software processes.
- know elements and degrees of freedom for the design of a SW process.
- analyze dependencies between context parameters and SE process elements (which process model/role/activity/artifact etc. for which context?).
- justify which design decision was made with reference to the context parameters.
- document software process in a comprehensible way.
- apply software process management from process design via process introduction to process adaptation, process assessment and process improvement and process evaluation.

Contents

- During this course, students delve into the comprehension and delimitation of context parameters for designing software processes. This provides them with the necessary context to understand how different organizational settings, project scopes, and technical requirements can impact the process. They explore the elements that make up a software process and the degrees of freedom for process design. Students learn how to navigate between different approaches, roles, activities, and artifacts to consider during process design and how to tailor these elements based on the contextual needs. Design decisions within the software process are discussed, focusing on how these decisions are influenced and justified by the context parameters. This enables students to make informed decisions and justify these in the light of the constraints and conditions imposed by the parameters. The course instructs students on how to comprehensibly document the software process. It also covers how to apply software process management from introduction through

adaptation, assessment, improvement, and evaluation. This holistic approach encourages students to conceptualize the software process not as a static framework but as a dynamic construct that evolves based on the progress of the project and changing parameters.

Literature

Compulsory Reading

Further Reading

- Gruhn, V., & Striemer, R. (Eds.). (2018). The essence of software engineering. Cham: Springer Open.
- Jacobson, I., Lawson, H., Ng, P., McMahon, P., & Goedicke, M. (2019). The Essentials of Modern Software Engineering : Free the Practices From the Method Prisons! ACM Books.
- Kneuper, R. (2018). Software processes and lifecycle models. Cham: Springer Nature Switzerland.
- Sommerville, I. (2019). Engineering Software products. Pearson.
- Sommerville, I. (2015). Software Engineering. (10th Edition). Addison- Wesley.

Study Format Distance Learning

Study Format Distance Learning	Course Type Project
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Information about the examination	
Examination Admission Requirements	Online Tests: no
Type of Exam	Written Assessment: Project Report

Student Workload					
Self Study 120 h	Contact Hours 0 h	Tutorial/Tutorial Support 30 h	Self Test 0 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods	
Tutorial Support <input checked="" type="checkbox"/> Course Feed <input checked="" type="checkbox"/> Intensive Live Sessions/Learning Sprint	Exam Preparation <input checked="" type="checkbox"/> Guideline

2. Semester

Applied Research

Module Code: DLMAF_E

Module Type see curriculum	Admission Requirements None	Study Level MA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Prof. Dr. Evangelos Zois (Applied Research)

Contributing Courses to Module

- Applied Research (DLMAF01_E)

Module Exam Type

Module Exam

Study Format: Distance Learning
Written Assessment: Written Assignment

Split Exam

Weight of Module

see curriculum

Module Contents

- Fundamentals of Empirical Research
- The Empirical Research Process
- Qualitative Survey Research
- Standardized Survey Research
- Experimental Research
- Specifics of Research with Secondary and Observational Data

Learning Outcomes**Applied Research**

On successful completion, students will be able to

- evaluate the type and quality of empirical research and of concrete empirical research results based on relevant criteria.
- identify appropriate data and research methods to empirically address a specific problem or research question.
- name and critically compare the process steps as well as the potentials, aims and limitations of different quantitative and qualitative research methods.
- recognize and consider basic ethical and legal aspects while conducting empirical research.
- design an empirical and theory-based study on their own to adequately address a specific applied research problem.

Links to other Modules within the Study Program

This module is similar to other modules in the field of Methods

Links to other Study Programs of the University

All Master Programs in the field of Business & Management

Applied Research

Course Code: DLMAF01_E

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	None

Course Description

The course teaches central concepts and methods of applied empirical research. The students acquire profound knowledge to evaluate the quality as well as the limitations of different empirical research approaches. First, students learn the central theoretical foundations of empirical research and the central process steps of empirical research projects. In doing so, students are also sensitised to the ethical and legal challenges. The course deals in depth with the application of central qualitative and quantitative research methods, for each of which the central goals and decision areas, their strengths, and weaknesses, as well as practical recommendations for application are discussed. The course enables students to develop an empirical study for an applied problem in their field or professional environment and to critically evaluate the quality of empirical findings as well as their validity.

Course Outcomes

On successful completion, students will be able to

- evaluate the type and quality of empirical research and of concrete empirical research results based on relevant criteria.
- identify appropriate data and research methods to empirically address a specific problem or research question.
- name and critically compare the process steps as well as the potentials, aims and limitations of different quantitative and qualitative research methods.
- recognize and consider basic ethical and legal aspects while conducting empirical research.
- design an empirical and theory-based study on their own to adequately address a specific applied research problem.

Contents

1. Fundamentals of Empirical Research
 - 1.1 Aims and Basic Approaches of Empirical Research
 - 1.2 Objectivity, Reliability, and Validity of Empirical Research
 - 1.3 Causality
2. The Empirical Research Process
 - 2.1 Determination of the Research Objective
 - 2.2 Choice of Research Design

- 2.3 Data Collection and Data Analysis
- 2.4 Interpretation and Presentation of Results
- 2.5 Ethical and Legal Aspects of Empirical Research
3. Qualitative Survey Research
 - 3.1 Fundamentals, Goals and Process Steps
 - 3.2 Central Forms of Data Collection
 - 3.3 Methods to Analyse Qualitative Data
 - 3.4 Quality Assessment
4. Standardized Survey Research
 - 4.1 Fundamentals, Goals and Process Steps
 - 4.2 Central Forms of Data Collection
 - 4.3 Questionnaire Design, Measurement and Operationalization
 - 4.4 Sampling and Sample Evaluation
 - 4.5 Quality Assessment
5. Experimental Research
 - 5.1 Fundamentals, Goals and Process Steps
 - 5.2 Types of Experiments and Experimental Designs
 - 5.3 Measurement and Manipulation of Variables
 - 5.4 Key Implementation Challenges
 - 5.5 Quality Assessment
6. Specifics of Research with Secondary and Observational Data
 - 6.1 Fundamentals, Goals and Specifics
 - 6.2 Selected Approaches to Analyse Secondary Data
 - 6.3 Selected Approaches to Analyse Observational Data

Literature**Compulsory Reading****Further Reading**

- Flick, U. (2018). *An Introduction to Qualitative Research* (6th edition). Sage.
- Gravetter, F. J., & Forzano, L. A. B. (2018). *Research Methods for the Behavioral Sciences* (6th edition). Cengage Learning.
- Quinlan, C., Babin, B., Carr, J. Griffin, M., & Zikmund, W. G. (2019). *Business Research Methods* (2nd edition). Cengage Learning.
- Vomberg, A., & Klarmann, M. (2021). *Crafting Survey Research: A Systematic Process for Conducting Survey Research*. In C. Homburg, M. Klarmann, & A. E. (Eds.), *Handbook of market research* (pp. 1-53). Springer.

Study Format Distance Learning

Study Format Distance Learning	Course Type Online Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: no
Type of Exam	Written Assessment: Written Assignment

Student Workload					
Self Study 110 h	Contact Hours 0 h	Tutorial/Tutorial Support 20 h	Self Test 20 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods		
Tutorial Support <input checked="" type="checkbox"/> Course Feed <input checked="" type="checkbox"/> Creative Lab	Learning Material <input checked="" type="checkbox"/> Reader	Exam Preparation <input checked="" type="checkbox"/> Guideline

DevOps

Module Code: DLMDCCDO

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	BA	5	150 h

Semester / Term	Duration	Regularly offered in	Language of Instruction and Examination
see curriculum	Minimum 1 semester	WiSe/SoSe	English

Module Coordinator

Prof. Dr. Tianxiang Lu (DevOps)

Contributing Courses to Module

- DevOps (DLMDCCDO01)

Module Exam Type

Module Exam

Study Format: Distance Learning
Written Assessment: Case Study

Split Exam

Weight of Module

see curriculum

Module Contents

- Building and Testing
- Releases and Deployment
- Security and Maintenance
- Monitoring and Logging

Learning Outcomes**DevOps**

On successful completion, students will be able to

- define DevOps and related disciplines.
- plan the building and testing process for software.
- perform software releases and deployments.
- implement the security of applications.
- understand the need for monitoring and logging.

Links to other Modules within the Study Program

This module is similar to other modules in the field of Computer Science & Software Development

Links to other Study Programs of the University

All Master Programs in the IT & Technology field(s)

DevOps

Course Code: DLMDCCDO01

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
BA	English		5	none

Course Description

Software development and software maintenance used to be two different disciplines. Due to the growing complexity, interfaces, and interactions between the components, these have been combined in DevOps. DevOps engineers have a profound knowledge of software development and know how to operate the software. This course reflects the full spectrum of software DevOps starting from requirements, detailing build processes and collaboration, taking a deeper look into testing and deployment, focusing on software security until eventually finishing with monitoring and logging to ensure solid operations

Course Outcomes

On successful completion, students will be able to

- define DevOps and related disciplines.
- plan the building and testing process for software.
- perform software releases and deployments.
- implement the security of applications.
- understand the need for monitoring and logging.

Contents

1. Introduction to DevOps
 - 1.1 Term Definition
 - 1.2 Historical Development
 - 1.3 Software Getting More Complex
 - 1.4 Challenges in Deployment and Operations
 - 1.5 Security
2. Building Software
 - 2.1 Requirements
 - 2.2 Co-Development in Teams
 - 2.3 Configuration management with Git
 - 2.4 Solving Conflicts
 - 2.5 Continuous Builds

3. Testing Software
 - 3.1 Module Tests
 - 3.2 Integration Tests
 - 3.3 Measuring Coverage
 - 3.4 Test Automation
 - 3.5 Integrating Tests in Continuous Build
 - 3.6 User Acceptance Testing
4. Software Releases and Deployments
 - 4.1 Working With the Trunk
 - 4.2 Working With Branches
 - 4.3 Planning a Release
 - 4.4 Manual Deployment
 - 4.5 Automatic Deployment
5. Software Security
 - 5.1 Importance of Security
 - 5.2 Types of Security
 - 5.3 Security Testing
 - 5.4 Detecting Security Incidents
 - 5.5 Reacting to Security incidents
6. Monitoring and Logging
 - 6.1 Definition Monitoring
 - 6.2 Definition Logging
 - 6.3 Aggregating information
 - 6.4 Extracting KPIs
 - 6.5 Management Systems (Like Nagios)

Literature**Compulsory Reading****Further Reading**

- Farcic, V. (2016). The DevOps 2.0 Toolkit. Packt Publishing.
- Forsgren, N., Kim, G., & Humble, J. (2018). Accelerate: the Science behind DevOps: building and scaling high performing technology organizations (First edition). IT Revolution Press.
- Gift, N., Behrman, K., Deza, A., & Gheorghiu, G. (2019). Python for DevOps: learn ruthlessly effective automation (First edition). O'Reilly.
- Kim, G., Willis, J., Debois, P., Allspaw, J., & Humble, J. (2016). The DevOps handbook: how to create world-class agility, reliability, and security in technology organizations (First edition). IT Revolution Press.

Study Format Distance Learning

Study Format Distance Learning	Course Type Online Lecture
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Information about the examination	
Examination Admission Requirements	Online Tests: yes
Type of Exam	Written Assessment: Case Study

Student Workload					
Self Study 110 h	Contact Hours 0 h	Tutorial/Tutorial Support 20 h	Self Test 20 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods	
Learning Material	Exam Preparation
<input checked="" type="checkbox"/> Course Book <input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Slides	<input checked="" type="checkbox"/> Online Tests <input checked="" type="checkbox"/> Guideline

Seminar: Computer Science and Society

Module Code: DLMCSSCSAS

Module Type see curriculum	Admission Requirements None	Study Level MA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Johannes Kent Walter (Seminar: Computer Science and Society)

Contributing Courses to Module

- Seminar: Computer Science and Society (DLMCSSCSAS01)

Module Exam Type

Module Exam

Study Format: Distance Learning
Written Assessment: Research Essay

Study Format: myStudies
Written Assessment: Research Essay

Split Exam

Weight of Module

see curriculum

Module Contents

- The seminar covers the relationship between computer science and society, including topics such as the social responsibility of computer scientists and the effects of digitization on society. Based on a list of topics updated regularly, students select or are assigned a specific topic on which to write a scientific report.

Learning Outcomes**Seminar: Computer Science and Society**

On successful completion, students will be able to

- name the main questions regarding the relationship between computer science and society.
- discuss selected topics regarding the relationship between computer science and society.
- analyze one aspect of the relationship between computer science and society in detail.
- take selected topics and case studies and link them with well-known concepts, as well as critically question and discuss them.
- transfer theoretically acquired knowledge to a specific context.
- edit scientifically a select topic.

Links to other Modules within the Study Program

This module is similar to other modules in the field of Computer Science & Software Development.

Links to other Study Programs of the University

All Master Programmes in the IT & Technology field.

Seminar: Computer Science and Society

Course Code: DLMCSSCSAS01

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	None

Course Description

The seminar covers the relationship between computer science and society. Over the past several decades, computer science has greatly changed society, and it is important that prospective computer scientists think about the effects of computer science on society and take these influences into account in their work. Typical topics to be addressed include, for example, the effects of ethics and professionalism in computing, the responsibility of computer scientists, the effects of data science and social networks on society, surveillance, and dual use of IT.

Course Outcomes

On successful completion, students will be able to

- name the main questions regarding the relationship between computer science and society.
- discuss selected topics regarding the relationship between computer science and society.
- analyze one aspect of the relationship between computer science and society in detail.
- take selected topics and case studies and link them with well-known concepts, as well as critically question and discuss them.
- transfer theoretically acquired knowledge to a specific context.
- edit scientifically a select topic.

Contents

- The seminar covers different topics regarding the relationship between computer science and society. Each participant must create a seminar paper on a topic assigned to him/her and present the contents of the written paper.

Literature

Compulsory Reading

Further Reading

- Turabian, K. L. (2013). A manual for writers of research papers, theses, and dissertations. Chicago: University of Chicago Press.
- Swales, J. M., & Feak, C. R. (2012). Academic writing for graduate students, essential tasks and skills. Michigan: University of Michigan Press.
- Bailey, S. (2011). Academic writing for international students of business. New York, NY: Routledge

Study Format Distance Learning

Study Format Distance Learning	Course Type Seminar
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Information about the examination	
Examination Admission Requirements	Online Tests: no
Type of Exam	Written Assessment: Research Essay

Student Workload					
Self Study 120 h	Contact Hours 0 h	Tutorial/Tutorial Support 30 h	Self Test 0 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Guideline

Study Format myStudies

Study Format myStudies	Course Type Seminar
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Information about the examination	
Examination Admission Requirements	Online Tests: no
Type of Exam	Written Assessment: Research Essay

Student Workload					
Self Study 120 h	Contact Hours 0 h	Tutorial/Tutorial Support 30 h	Self Test 0 h	Independent Study 0 h	Hours Total 150 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Guideline

Master Thesis

Module Code: DLMMTHES

Module Type see curriculum	Admission Requirements See current study and exam regulations (SPO)	Study Level MA	CP 15	Student Workload 450 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Prof. Dr. Tianxiang Lu (Master Thesis) / Prof. Dr. Tianxiang Lu (Colloquium)

Contributing Courses to Module

- Master Thesis (DLMMTHES01)
- Colloquium (DLMMTHES02)

Module Exam Type

Module Exam	<p>Split Exam</p> <p><u>Master Thesis</u></p> <ul style="list-style-type: none"> • Study Format "Distance Learning": Master Thesis (90) • Study Format "myStudies": Master Thesis (90) <p><u>Colloquium</u></p> <ul style="list-style-type: none"> • Study Format "myStudies": Colloquium (10) • Study Format "Distance Learning": Colloquium (10)
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Weight of Module

see curriculum

Module Contents**Master Thesis**

- Written Master Thesis

Colloquium

- Thesis Defense

Learning Outcomes**Master Thesis**

On successful completion, students will be able to

- work on a problem from their major field of study by applying the specialist and methodological skills they have acquired during their studies.
- analyse selected tasks with scientific methods, critically evaluate them and develop appropriate solutions under the guidance of an academic supervisor.
- record and analyse existing (research) literature appropriate to the topic of the Master's thesis.
- prepare a detailed written elaboration in compliance with scientific methods.

Colloquium

On successful completion, students will be able to

- present a problem from their field of study under consideration of academic presentation and communication techniques.
- reflect on the scientific and methodological approach chosen in the Master's thesis.
- actively answer subject-related questions from subject experts (experts of the Master's thesis).

Links to other Modules within the Study Program

All modules in the master program

Links to other Study Programs of the University

All Master Programmes

Master Thesis

Course Code: DLMMTHES01

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		13.5	See current study and exam regulations (SPO)

Course Description

The aim and purpose of the Master's thesis is to successfully apply the subject-specific and methodological competencies acquired during the course of study in the form of an academic dissertation with a thematic reference to the major field of study. The content of the Master's thesis can be a practical-empirical or theoretical-scientific problem. Students should prove that they can independently analyse a selected problem with scientific methods, critically evaluate it and work out proposed solutions under the subject-methodological guidance of an academic supervisor. The topic to be chosen by the student from the respective field of study should not only prove the acquired scientific competences, but should also deepen and round off the academic knowledge of the student in order to optimally align his professional abilities and skills with the needs of the future field of activity.

Course Outcomes

On successful completion, students will be able to

- work on a problem from their major field of study by applying the specialist and methodological skills they have acquired during their studies.
- analyse selected tasks with scientific methods, critically evaluate them and develop appropriate solutions under the guidance of an academic supervisor.
- record and analyse existing (research) literature appropriate to the topic of the Master's thesis.
- prepare a detailed written elaboration in compliance with scientific methods.

Contents

- Within the framework of the Master's thesis, the problem as well as the scientific research goal must be clearly emphasized. The work must reflect the current state of knowledge of the topic to be examined by means of an appropriate literature analysis. The student must prove his ability to use the acquired knowledge theoretically and/or empirically in the form of an independent and problem-solution-oriented application.

Literature**Compulsory Reading****Further Reading**

- Bui, Y. N. (2013). *How to Write a Master's Thesis* (2nd ed.). SAGE Publications, Incorporated.
- Turabian, K. L. (2013). *A Manual for Writers of Research Papers, theses, and dissertations* (8th ed.). University of Chicago Press.
- Further subject specific literature

Study Format Distance Learning

Study Format Distance Learning	Course Type Thesis
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Information about the examination	
Examination Admission Requirements	Online Tests: no
Type of Exam	Master Thesis

Student Workload					
Self Study 405 h	Contact Hours 0 h	Tutorial/Tutorial Support 0 h	Self Test 0 h	Independent Study 0 h	Hours Total 405 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Guideline

Study Format myStudies

Study Format myStudies	Course Type Thesis
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Information about the examination	
Examination Admission Requirements	Online Tests: no
Type of Exam	Master Thesis

Student Workload					
Self Study 405 h	Contact Hours 0 h	Tutorial/Tutorial Support 0 h	Self Test 0 h	Independent Study 0 h	Hours Total 405 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Guideline

Colloquium

Course Code: DLMMTHES02

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		1.5	See current study and exam regulations (SPO)

Course Description

The colloquium will take place after submission of the Master's thesis. This is done at the invitation of the experts. During the colloquium, the students must prove that they have fully independently produced the content and results of the written work. The content of the colloquium is a presentation of the most important work contents and research results by the student, and the answering of questions by the experts.

Course Outcomes

On successful completion, students will be able to

- present a problem from their field of study under consideration of academic presentation and communication techniques.
- reflect on the scientific and methodological approach chosen in the Master's thesis.
- actively answer subject-related questions from subject experts (experts of the Master's thesis).

Contents

- The colloquium includes a presentation of the most important results of the Master's thesis, followed by the student answering the reviewers' technical questions.

Literature

Compulsory Reading

Further Reading

- Renz, K.-C. (2016): The 1 x 1 of the presentation. For school, study and work. 2nd edition, Springer Gabler, Wiesbaden.

Study Format myStudies

Study Format myStudies	Course Type Thesis Defense
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Information about the examination	
Examination Admission Requirements	Online Tests: no
Type of Exam	Colloquium

Student Workload					
Self Study 45 h	Contact Hours 0 h	Tutorial/Tutorial Support 0 h	Self Test 0 h	Independent Study 0 h	Hours Total 45 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Guideline

Study Format Distance Learning

Study Format Distance Learning	Course Type Thesis Defense
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Information about the examination	
Examination Admission Requirements	Online Tests: no
Type of Exam	Colloquium

Student Workload					
Self Study 45 h	Contact Hours 0 h	Tutorial/Tutorial Support 0 h	Self Test 0 h	Independent Study 0 h	Hours Total 45 h

Instructional Methods	
Learning Material <input checked="" type="checkbox"/> Slides	Exam Preparation <input checked="" type="checkbox"/> Guideline