Strategic Information Management

MODULE HANDBOOK

Valid from 1.9.2022

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FIRST SEMESTER

Strategic Management

Overall grade weighting	6%	**Semester**	in the first semester
Frequency	Winter term	**Language of instruction**	English
Type of course	Compulsory	**Duration**	1 semester
ECTS-Points	5	**Hours per semester week**	3
Number of participants	Min 10 students, max 30 students		
Mode of delivery	Face-to-face and blended learning		
Responsible for the module	Prof. Dr. Johannes Schmitz		
Teaching methods	Lecture, team work, excercises		
Work parameter	Self-study: 90 hours		
	Contact time: 60 hours		
	Total: 150 hours		
Use for other studies	Joint module with Digital Innovation Management (DIM) and Artificial Intelligence and Data Analytics (AIDA)		
Required competencies			
Admission requirements			
Semester, in which the student must mandatorily registered for the first attempt of examination			

Learning outcome	1) Knowledge Students will have demonstrated knowledge and understanding in the following areas of the field of strategic management: - Baisc terminology and concepts of management accounting and corporate finance as basis - Basic knowledge of underlying theories of performance management - Tools and frameworks for performance measurement and management - Concepts and taxonomies of strategy (e.g. planned strategy, emergent strategy) - Key frameworks and tools for the development and analysis of strategies - Key concepts and frameworks for decision making under uncertainty - Key concepts for strategy implementation in traditional organisations and in agile organisations / start-ups 2) Skills Students will be able to apply their knowledge and understanding of strategic analysis, strategic management as weil as performance measurement and management to different managerial and organizational contexts in particular in the discussion of case studies. They will be able to explain and apply key concepts, frameworks and tools and discuss their value for decision making and organisational development and their limitations. 3) Responsibility and autonomy Students exercise self-management in developing own understanding of the subject by working independently with literature and adapt own behavior to circumstances in solving problems in less defined contexts (e.g. autonomous work on complex case studies).
Learning content	Strategy - lntroduction to Strategic Management - Strategy concepts and strategy schools - Tools and Framworks for strategy development and strategic analysis - lntroduction to Corporate Strategy and M&A - Strategy implementation - Challenges and opportunities through digitalization - Agile organisations and agile methods Performance measurement - Basic concepts of management accounting and corporate finance - Financial planning & control and responsibility centers - Financial and non-financial performance measurement - Performance measurement and management frameworks and tools - Diagnostic and interactive management control systems - Theoretical foundations of performance measurement, strengths and limitations
Assessment method(s)	Written exam

Recommended or required reading and other learning resources/tools	Anthony, Robert N & Govindarajan, Vijay (2014) "Management Control Systems: European Edition", Mcgraw-Hill Education Simons, Robert (2013) "Performance Measurement and Control Systems for Implementing Strategy - Text and Gases", Pearson Education Limited, New International Edition Mintzberg, Henry/ Lampel, Joseph/ Quinn, James B. (2013) "The Strategy Process", Prentice Hall International, 5th Edition Ries, Eric (2011) "The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses, Penguin Doerr, John (2018) "Measure What Matters: OKRs: The Simple Idea that Drives 1 0x Growth", Portfolio Penguin
Additional (module) information	

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FIRST SEMESTER

Digital Process Management

Overall grade weighting	6%		**Semester**	in the first semester
Frequency	Winter term		**Language of instruction**	English
Type of course	Compulsory		**Duration**	1 semester
ECTS-Points	5		**Hours per semester week**	3
Number of participants	Min 10 students, max 30 students			
Mode of delivery	Face-to-face and blended learning			
Responsible for the module	Prof. Dr. Joerg-Oliver Vogt			
Teaching methods	Lecture, excercises, case studies, group presentations			
Work parameter	Self-study:	90	hours	
	Contact time:	60	hours	
	Total:	150	hours	
Use for other studies	Usable for students of information systems and business administration programs			
Required competencies	Basic knowledge on the subject of process management, fundamentional knowlege on the subject of business administration and management.			
Admission requirements				
Semester, in which the student must mandatorily registered for the first attempt of examination				

Learning outcome

Considering the program's objective to qualify students for enabling enterprises to exploit potentials of existing information system and realize new ways of using information and information technology strategically, this module provides the fundamental knowledge to understand why active process management ist necessary and digitalization is a lever to improve business processes. It ist shown how processes can be digitialized and managed digitally. As to that, the course also provides methods of process management like process modelling techniques and performance analysis. The focus, hovwever, is on conveying insights into theories and state-of-the art methods related to streamline and digitalize business processes and manage them across the lifecycle using state-of-the art tools.

1) Knowledge outcomes

Students will have a broad and deep understanding of the scientific foundations, methodologies and fields of application of different approaches to digital process management. Students will gain knowledge on how to model and analyze complex process structures using established modelling and analysis techniques, will learn about their strengths and weaknesses as well as how process models can be translated into IT architectures.

Technical-methodical competences

- understand the challenges of digitalisation for companies and the related effects on the design of business processes.

- explain the influences of digitalisation on business processes in general and the concrete effects on functional areas such as marketing, human resources, logistics and production and on different industries.

- Understand business process management as a central management task.

- identify, record, describe and represent or model business processes.

- Analyse business processes with suitable methods and make suggestions for improvement.

- Assess business processes and recognise which activities are necessary for the digitalisation of the process.

- to explain advantages and disadvantages of different methods of business process modelling.

- to apply selected methods and approaches of business process management (especially EPK and BPMN) and information modelling to concrete case studies from practice.

- recognise the appropriate method for problem solving and decision making in the field of business process management and select suitable tools.

2) Skills

Students will be able to explain, apply and examine the basics, success factors, principles and methods of effective digital process management in different contexts and industries, particularly enhanced business process modelling (BPMN), analysis (BPMN, process mining) and optimization supported by digital technologies (process execution management, robotic process automation, workflow management systems) and monitoring/controlling (process mining)

Students can model, analyse and question business processes in different contexts and levels (operational, strategic) using the methods, instruments and information systems they have learned. They can evalute opportunities and challenges of digitalization for process performance using the tools and methods listed above.

3) Responsibility and autonomy

Students can discuss interpersonal issues to be dealt with in smaller project groups, especially in the exercise units. The students recognize the

	challenges and interdependencies of business process management and can reflect on their responsibilities related to making decisions in uncertain and ambiguous contexts with incomplete or limited information. They have developed the ability to evaluate new information, to question existing assumptions, to integrate new knowledge into their models of thinking and to develop independent contributions to practical and theoretical discourse and related solutions.
Learning content	Theories, methodologies and fields of application of different approaches to digital process management as well as related information systems, particularly - Process identification - Enhanced process modelling (BPMN) - Process discovery and analysis (qualitative approaches, process mining) - Process redesign and digitalization (workflow systems, RPA, workflow management systems) - Translating process models into IT architectures - Process monitoring (execution management systems) - Process lifecycle management - Challenges related to digital process management Theoretical knowledge is beeing applied in case studies and other (hands-on) exercises
Assessment method(s)	Portfolio exam
Recommended or required reading and other learning resources/tools	Main Source: Marlon Dumas, Marcello La Rosa, Jan Mendling, Hajo A. Reijers: Fundamentals of Business Process Management, Springer 2018 Recommended: Wil van der Aalst, Process Mining - Data Science in Action Second Edition, Springer 2016 Other papers and cases will be provided in the couse sessions
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FIRST SEMESTER

Technology & Application Management

Overall grade weighting	6%	**Semester**	in the first semester
Frequency	Winter term	**Language of instruction**	English
Type of course	Compulsory	**Duration**	1 semester
ECTS-Points	5	**Hours per semester week**	3
Number of participants	Min 10 students, max 30 students		
Mode of delivery	Face-to-face and blended learning		
Responsible for the module	Prof. Dr. Andy Weeger		
Teaching methods	Lecture Coaching (project work) Presentations		
Work parameter	Self-study: 120 hours		
	Contact time: 30 hours		
	Total: 150 hours		
Use for other studies	Elective for the master programs Artificial Intelligence and Data Analytics (AIDA) and Digital Transformation and Entrepreneurship (DTE) as well as other master programs.		
Required competencies	Solid understanding of IT management theories (e.g., business-IT alignment), concepts (e.g., IT governance) and tools (e.g., COBIT)		
Admission requirements			
Semester, in which the student must mandatorily registered for the first attempt of examination			

Learning outcome

IT management today is challenged by fast technological change, new digital opportunities, growing cost pressure, and increasing need to comply with business and regulatory requirements. State-of-the-art IT management needs to ensure that organizations are capable of managing technologies and applications more agile, flexible and efficient than ever before.

Being able to achieve this requires not onnly a good understanding of the opportunities the digital age and new technologies offer, but also a good understanding of the core business of the company and sound IT cost management capabilities.

In line with the overal qualification goals of the program, this module provides solid know-how and skills regarding theories, methods and tools to ensure strategic technology decision-making (e.g., business IT-alignment, technology investments), technology-enabled enterprise architectures (e.g., enterprise architecture management and data governance), efficient technology and application delivery (e.g., lean IT processes, cybersecurity risk management, scaled agility), and effective IT-business value realization (e.g., IT controlling, organization and workforce management)

1) Knowledge

The students have understood the significance of technology and application management in the digital age. They have demonstrated understanding and knowledge of the disciplines of IT value creation within the modern enterprise and the related challenges of technology and application management as well as the main frameworks for managing technology and applications in organizations.

2) Skills

The students are able to identify key IT management challenges in an organization and to design and document end-to-end management approaches that tackle these challenges by selecting and adapting available approaches, methods and tools. The students can convincingly present and defend their approach at different management levels and thus lay the foundation for its implementation.

3) Responsibility and autonomy

Students are able to meet the challenge of making responsible decisions in the field of IT management with incomplete or limited information. They show that they are able to evaluate new information, challenge existing assumptions, and integrate new knowledge into their thinking models. They also demonstrate the ability to work in a team that uses agile working methods to develop and improve independent solutions based on practical and theoretical discourse.

Learning content	Challenges for technology and application management in the digital age Theories, frameworks and specific methods for - selecting the right technologies and applications (e.g., business-IT alignment, technology foresight and evaluation, program management) - creating and managing efficient sociotechnical solutions (e.g., enterprise architecture management) - delivering technologies and applications efficiently (e.g., scaled agility, demand and service management, cybersecurity risk management) - ensuring IT-busienss value realization (e.g., cost accounting, data governance management) Overview of relevant IT management frameworks and their areas of application Agile management methods (for working on the assignment)
Assessment method(s)	Seminar paper (individual and teamwork components)
Recommended or required reading and other learning resources/tools	Urbach, N., & Ahlemann, F. (2018). IT Management in the Digital Age: A Roadmap for the IT Department of the Future. Springer. Madhukar, Irvathraya, et al. Application Management: Challenges - Service Creation - Strategies. Deutschland, Gabler Verlag, 2011. The Road to a Modern IT Factory: Industrialization – Automation – Optimization. Deutschland, Springer Berlin Heidelberg, 2014. Various papers such as Dibbern, J., Chin, W. W., & Heinzl, A. (2012). Systemic determinants of the information systems outsourcing decision: A comparative study of German and United States firms. Melville, N., Kraemer, K., & Gurbaxani, V. (2004). Information technology and organizational performance: An integrative model of IT business value. MIS quarterly, 283-322.
Additional (module) information	

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FIRST SEMESTER

Enterprise Application Engineering

Overall grade weighting	6%	**Semester**	in the first semester
Frequency	Winter term	**Language of instruction**	English
Type of course	Compulsory	**Duration**	1 semester
ECTS-Points	5	**Hours per semester week**	3
Number of participants	Min 10 students, max 30 students		
Mode of delivery	Face-to-face and blended learning		
Responsible for the module	Prof. Dr. Philipp Brune		
Teaching methods	Seminar Project work (self learning, coaching)		
Work parameter	Self-study: 120 hours		
	Contact time: 30 hours		
	Total: 150 hours		
Use for other studies	Joint module with Digital Innovation Management (DIM) and Artificial Intelligence and Data Analytics (AIDA)		
Required competencies	Ability to develop (simple) applications based on object-oriented programming paradigms in Java Ability to conceptualize and model data-structures and implement these in relational database systems (e.g., MySQL)		
Admission requirements			
Semester, in which the student must mandatorily registered for the first attempt of examination			

Learning outcome	In accordance with the overarching qualification objectives of the degree program, students are familiarized with the planning, design and development of information systems as well as the concepts, methods and tools required for this. 1) Knowledge Students have understood relevant application architectures, software components and technologies as well as the quality-determining factors of these systems and current quality standards. Students will also be familiar with important software development metrics. In addition, students know design principles that ensure efficient human-machine interaction for enterprise applications. 2) Skills Students will be able to select and apply contemporary application architectures and perform quality management within a software project by evaluating and ensuring software engineering quality standards and applying the testing process. Students will master techniques of test case specification, test execution, and techniques of test-driven development (TDD). Students will be able to select and apply appropriate metrics. 3) Responsibility and autonomy Students will be able to establish, participate in, and reflect on their role in projects to develop an enterprise application in a heterogeneous project team.
Learning content	Realistic software development project including UX design and testing of the user interface with a project partner as project work, project teams with different procedure models (sub sequential, agile) with comparison of experiences. Contents: - Technical design of enterprise applications - Quality of software technology - Metrics of software engineering - Quality standards - Roles and principles of a quality manager - Design principles for enterprise applications - Human computer interaction and user experience
Assessment method(s)	Portfolio exam (softwar artefact, documentation, presentation)
Recommended or required reading and other learning resources/tools	Ian Sommerville: Software Engineering (9th edition), Addison-Wesley (2010) Axel van Lamsweerde: Requirements Engineering: From System Goals to UML Models to Software Specifications, Wiley (2011) Travis Lowdermilk: User-Centered Design: A Developer's Guide to Building User Friendly Applications, O'Reilly (2013) Len Bass, Paul Clements, Rick Kazman: Software Architecture in Practice, Addison-Wesley (2012) Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides: Design Patterns, Addison-Wesley (1994)

Additional (module) information

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FIRST SEMESTER

Consulting

Overall grade weighting	6%		**Semester**	in the first semester
Frequency	Winter term		**Language of instruction**	English
Type of course	Compulsory		**Duration**	1 semester
ECTS-Points	5		**Hours per semester week**	2
Number of participants	Min 10 students, max 30 students			
Mode of delivery	Face-to-face, blended learning			
Responsible for the module	Prof. Dr. Heiko Gewald			
Teaching methods	Lecture, excercises, workshop, group presentation, practice project, case study			
Work parameter	Self-study:	120	hours	
	Contact time:	30	hours	
	Total:	150	hours	
Use for other studies	Joint module with Digital Innovation Management (DIM) and Artificial Intelligence and Data Analytics (AIDA)			
Required competencies				
Admission requirements				
Semester, in which the student must mandatorily registered for the first attempt of examination				

Learning outcome

Consultants play a big role in todays knowledge economy. Whether the students of this course chose to start a career as consultant or chose a career in a traditional corporate environment, chance that they will have interactions with business and IT consultants are rather high.

To prepare students for interactions with consultants or for a career I consultancy, this course provides profund insights into the business of consulting. As project management is at the core of the consulting services, will recap knowledge from previous lectures and discuss the most important concepts. Furthermore, presentation skills (how to structure a presentation and how to present the most important topics) will be discussed. To put this know-how into action, a case study with a consulting firm will be conducted.

1) Knowledge

Consulting:

- Types of consultancies and the structure of the consulting market
- Roles, processes, and hierarchies within a consulting firm

Project Management:

- Recap of the most important concepts and tasks of project management
- How to structure a project

Soft Skills:

- How to structure a meaningful presentation
- How to present with impact

2) Skills

- Distinguish different types of firms operating in the management consulting market
- Plan a project and define the corresponding roles and tasks
- Present findings to a large group

3) Responsibility and autonomy

Students apply the knowledge and skills gathered in this course to solve a real-world consulting problem as part of a case study and multi-day workshop with an external Management Consulting firm.

Learning content

This module provides the concepts and tools necessary to deliver a consulting project This includes project organization, problem finding and solution framing, communicating with stakeholders, and presenting the solution in form of a well-crafted presentation.

Course Content:

- Recap of basic and advanced project management techniques
- The market of management consulting firms
- Principles of the business of consulting
- The process of consulting
- Soft skills / presentation techniques
- A case study in cooperation with an external consulting firm

Assessment method(s)

Seminar paper and presentation

Recommended or required reading and other learning resources/tools	Contemporary reading material will be updated and distributed each term Recommended: Robert D. Austin: "The Adventures of an IT Leader", Mcgraw-Hill Professional (2009), ISBN 978-1422146606 Recommended: Tom DeMarco: "The Deadline", Computer Bookshops(1997), ISBN 978-0932633392
Additional (module) information	

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FIRST SEMESTER

Interpersonal Skills

Overall grade weighting	6%	**Semester**	in the first semester
Frequency	Winter term	**Language of instruction**	English
Type of course	Compulsory	**Duration**	1 semester
ECTS-Points	5	**Hours per semester week**	4
Number of participants	Min 10 students, max 30 students		
Mode of delivery	Face-to-face and blended learning		
Responsible for the module	Prof. Dr. Andy Weeger		
Teaching methods	Lecture Exercises (individually and team-based) Presentations		
Work parameter	Self-study: 90 hours		
	Contact time: 60 hours		
	Total: 150 hours		
Use for other studies	Joint module with Digital Innovation Management (DIM) and Artificial Intelligence and Data Analytics (AIDA)		
Required competencies			
Admission requirements			
Semester, in which the student must mandatorily registered for the first attempt of examination			

Learning outcome	To be prepared for their future roles in cross-functional functions and (leadership) positions in national and international organizations, the students learn to lead themselves and understand and efficiently shape interpersonal interactions and conflicts in organizations. 1) Knowledge Students will have knowledge and understanding of theories explaining interpersonal interaction in business contexts, conflict in organizations and the strategies to resolve it, and self-leadership and teamwork. Students have a deeper understanding of the ethical dimensions of interpersonal communication, the types, rules and styles of business communication, emotional intelligence and self-leadership, resilience (for leaders) and the challenges of (virtual) collaboration within and between disciplines. 2) Skills The students show that they can efficiently lead themselves, that they are able to recognize the characteristics of competent communication, demonstrate the ability to assess the appropriateness and effectiveness of interpersonal strategies and responses based on situational contexts, goals, and human needs, demonstrate effective interpersonal conflict management principles, and that they are able to explain own and others' behavior in various settings. 3) Responsibility and autonomy Students will be able to recognize the ethical dimensions of interpersonal communication, reflect on their interpersonal interactions, conduct themselves with high professional integrity in a variety of contexts, and develop their interpersonal skills largely on their own.
Learning content	Topics in focus - Mindset (a psychology of success) - Culture (sensitivity for cultural differences and methods to get along) - Career (designing career paths, getting so good you will not be ignored) - Productivity (building good habits, time management, focus) - Change (storytelling, (inter-)personal change management) - Reselience (coping with failure) - Communication (feedback, effective use of communication types, handling conflict) - Collaboration (methods, tools, measures) - Online collaboration - Happiness Theoretical foundations, such as - Self-concept theory - Emotional intelligence - Self empathy - Mindset
Assessment method(s)	Presentation

Recommended or required reading and other learning resources/tools	A detailed list of relevant literature can be found in the teaching materials per unit, including, but not limited to: Dweck, Carol S.. Mindset: The New Psychology of Success. USA, Random House Publishing Group, 2006. Scott, Kim. Radical Candor: Fully Revised & Updated Edition: Be a Kick-Ass Boss Without Losing Your Humanity. USA, St. Martin's Publishing Group, 2019. Eyal, Nir, and Li-Eyal, Julie. Indistractable: How to Control Your Attention and Choose Your Life. USA, BenBella Books, 2019. Doerr, John. Measure What Matters: How Google, Bono, and the Gates Foundation Rock the World with OKRs. USA, Penguin Publishing Group, 2018.
Additional (module) information	

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SECOND SEMESTER

Digital Leadership

Overall grade weighting	6%	**Semester**	in the second semester
Frequency	Summer term	**Language of instruction**	English
Type of course	Compulsory	**Duration**	1 semester
ECTS-Points	5	**Hours per semester week**	3
Number of participants	Min 10 students, max 30 students		
Mode of delivery	Face-to-face and blended learning		
Responsible for the module	Prof. Dr. Andy Weeger		
Teaching methods	Lecture Exercises (individually and team-based) Presentations		
Work parameter	Self-study: 90 hours		
	Contact time: 60 hours		
	Total: 150 hours		
Use for other studies			
Required competencies			
Admission requirements			
Semester, in which the student must mandatorily registered for the first attempt of examination			

Learning outcome	This module builds on and extends the knowledge and skills acquired in the previous modules, particularly "Interpersonal Skills" related to the challenges of digital transformation for leadership. It deepns the students' understanding of the requirements of leadership in the digital age — from leading oneself, to leading employees and leading systems. Students will be able to identify and reflect on challenges and opportunities in their own leadership role so that they can consciously use, reflect on and further develop leadership competencies in their everyday work. 1) Knowledge Students understand the leadership requirements in the context of digital transformation and can identify, reflect on challenges and opportunities in their own leadership role and understand how sustainable organizational systems can be designed. 2) Skills The students show that they can use digital leadership tools to lead employees and design efficient organizational systems for the digital age. 3) Responsibility and autonomy Students can can consciously use, reflect on and further develop leadership competencies in their everyday work, understand the facets of different personality types and the effects on leadership tasks and are able to use digital tools for leadership.
Learning content	1. Challenges of leadership in the digital age 2. Personality and leadership styles 3. Acting emotional intelligent 4. Setting and achieving goals 5. Dealing with challenges of digitally working groups 6. Shaping conversations emotionally intelligent 7. Undertadning and shaping identity and purpose of groups 8. Leading efficient meetings 9. Understanding and shaping culture 10. Enabling innovation 11. Leading agile (at scale) 12. Leading executives
Assessment method(s)	Presentation

Recommended or required reading and other learning resources/tools	A detailed list of relevant literature can be found in the teaching materials per unit, including, but not limited to: Pullan, Penny. Virtual Leadership: Practical Strategies for Getting the Best Out of Virtual Work and Virtual Teams. Vereinigtes Königreich, Kogan Page, 2016. Pullan, Penny. Virtual Leadership: Practical Strategies for Getting the Best Out of Virtual Work and Virtual Teams. Vereinigtes Königreich, Kogan Page, 2016. Coyle, Daniel. The Culture Code: The Secrets of Highly Successful Groups. Vereinigtes Königreich, Random House, 2018. Edmondson, Amy C.. The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth. Vereinigtes Königreich, Wiley, 2018.
Additional (module) information	

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SECOND SEMESTER

Business Value Creation by IT

Overall grade weighting	6%		**Semester**	in the second semester
Frequency	Summer term		**Language of instruction**	English
Type of course	Compulsory		**Duration**	1 semester
ECTS-Points	5		**Hours per semester week**	2
Number of participants	Min 10 students, max 30 students			
Mode of delivery	Face-to-face and blended learning			
Responsible for the module	Prof. Dr. Andy Weeger			
Teaching methods	Lectures, practice project, presentations, coaching			
Work parameter	Self-study:	120	hours	
	Contact time:	30	hours	
	Total:	150	hours	
Use for other studies				
Required competencies				
Admission requirements				
Semester, in which the student must mandatorily registered for the first attempt of examination				

Learning outcome	In this module, the theoretical knowledge and competencies in information and IT management acquired and deepened in the first semester are applied and further extended by means of executing a real-world project focusing on developing a technological artefact that creates value for a specific company (e.g., prototype for a new product, process improvements, decision-making support). As the project is intended to involve numerous stakeholders, students apply their competencies in structuring problems at strategic and operational level, communicating with diverse stakeholders, and orchestrating activities to come to an acceptable project result. 1) Knowledge The students will have enhanced knowledge of the mechanisms of how IT creates business value and how such solutions can be conceptualized, designed and implemented in a practical context. The students will understand the challenges of specific practical settings and how to transfer and adapt insights they learned in various modules. In addition, students will deepen their methodological knowledge regarding project procedures. 2) Skills Students can apply and contextualize their knowledge and understanding of disruptive technologies within a specific organizational setting and demonstrate problem-solving skills to analyze specificities and complexities of different project contexts. Students will be able to communicate their conclusions and the underlying knowledge and reasoning clearly and unambiguously to project sponsors. 3) Responsibility and autonomy Students can reflect on their social and ethical responsibilities and make responsible decisions with incomplete or limited information in project contexts with typically unstructured tasks, multiple stakeholders, and diverging interests. They will be able to autonomously acquire new knowledge and skills, and independently perform application-oriented innovation projects.

Learning content	In accordance with the program's qualification goals regarding designing, implementing, managing and communicating innovative IT that creates business value, this module offers students the possibility to put into practice, what they learned in the courses of the first semester and supports understanding as well as transfer of topics teached in the second semester. As to that, core concepts and related methods such as - (customer) need identification (e.g., design thinking) - generating and developing ides - sources and characteristics of business value - key aspects of (digital) innovations - challenges in implementing digital innovations (change, adoption & use) - capturing and measuring value from IT/digital innovations are being teached. Furthermore, enhanced methods that build on the contents of the first semester concerning development of IT solutions and project organization, problem finding and solution, communicating with stakeholders, and presenting the solution in form of a pitch as well as documenting results in a structured way are touched during coaching sessions. The project topic(s) will be announced at the beginning of the semester.
Assessment method(s)	Seminar paper and presentation
Recommended or required reading and other learning resources/tools	Tidd, J., & Bessant, J. R. (2020). Managing innovation: integrating technological, market and organizational change. John Wiley & Sons. Newell, Sue; Morton, Josh; Marabelli, Marco, and Galliers, Robert: Managing Digital Innovation: A Knowledge Perspective - Red Globe Press, 2020. Nambisan, Satish; Lyytinen, Kalle, and Yoo, Youngjin: Handbook of Digital Innovation, Edward Elgar Publishing, 2020. Required project-related reading will be updated and distributed each term
Additional (module) information	

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SECOND SEMESTER

Disruptive Technologies

Overall grade weighting	6%		**Semester**	in the second semester
Frequency	Summer term		**Language of instruction**	English
Type of course	Compulsory		**Duration**	1 semester
ECTS-Points	5		**Hours per semester week**	4
Number of participants	Min 15 students, max 35 students			
Mode of delivery	Seminar classes, face-to-face teaching, e-learning			
Responsible for the module	Prof. Dr. Klaus Lang			
Teaching methods	Lecture, case studies, practical projects, group work, group presentation			
Work parameter	Self-study:	120	hours	
	Contact time:	30	hours	
	Total:	150	hours	
Use for other studies	Stems from the master program Digital Transformation and Entrepreneurship (DTE)			
Required competencies	Basic business understanding, basic technology understanding Methodical: analysis ability, conceptual skills, organizability, use of knowledge and information, problem solving ability Social: communication skills, critical ability, team ability, readiness to cooperate Personal: adaptability, endurance, individual responsibility, decision-making skills, creativity, goal orientation			
Admission requirements				
Semester, in which the student must mandatorily registered for the first attempt of examination				

Learning outcome	1) The students: - know what disruptive technologies are about - can identify / develop disruptive technologies - can use evaluation methods for disruptive technologies - have an overview of existing disruptive technologies - get to know examples of disruptive technologies in different industries - can evaluate disruptive technologies with regard to different use cases in varoius industries 2) The students: - are able to manage disrutpive technologies - are able to organize themselves and to work in teams - can motivate themselves and others - can reflect on and improve their working methods and their results.
Learning content	Content: - classification of the term disruptive technologies - identification / development of disruptive technologies - evaluation methods for disruptive technologies - overview of existing disruptive technologies - possible uses of disruptive technologies in production planning (including REST APIs, process mining and robotic automation process) - evaluation of disruptive technologies for different use cases(e.g. with regard to inefficient processes) - success factors for manageing dis. techn.
Assessment method(s)	The examination is a portfolio examination (PF) and is communicated at the beginning of the semester (please also see add. information).
Recommended or required reading and other learning resources/tools	Christensen, C. (2016) The lnnovator's Dilemma. Harvard Business Review Press. ISBN: 0875845851 O'Reilly, C.; Tushman, M. (2016) Lead and Disrupt: How to Salve the lnnovator's Dilemma. Stanford University Press. ISBN 978-0804798655
Additional (module) information	Usually the following proof of performance is available for the event: 1. Final presentation (team and individual): 15-20 minutes; 40% 2. Project report (team): 30-40 pages: 40% 3. Personal review on a weekly basis (individual): 3-5 pages; 20%

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SECOND SEMESTER

Strategic Information Management in Practice

Overall grade weighting	6%		**Semester**	in the second semester
Frequency	Summer term		**Language of instruction**	English
Type of course	Compulsory		**Duration**	1 semester
ECTS-Points	5		**Hours per semester week**	3
Number of participants	Min 10 students, max 30 students			
Mode of delivery	Face-to-face			
Responsible for the module	Prof. Dr. Heiko Gewald			
Teaching methods	Lectures and seminars Literature work Case studies and presentations (self-learning)			
Work parameter	Self-study:	110	hours	
	Contact time:	40	hours	
	Total:	150	hours	
Use for other studies	Elective for the master programs Digital Transformation and Entrepreneurship (DTE), Artificial Intelligence and Data Analytics (AIDA) and others			
Required competencies	Thorough understanding of IT management - theories (e.g., business-IT alignment), - concepts (e.g., IT governance), and - tools (e.g., COBIT)			
Admission requirements				
Semester, in which the student must mandatorily registered for the first attempt of examination				

Learning outcome

In this course, the theoretical knowledge and competencies in information and IT management which have been acquired in the first semester are applied and further extended.

Students will be working on practical challenges that real-world companies face and reflecting these with current findings from IS research.

In solving the challenges, students apply their competencies in structuring problems at strategic and operational level, analyzing the status-quo and developing effective and sustainable solutions.

1) Knowledge

The students will have enhanced knowledge of specific challenges in IT management and approaches in a practical context. The students will understand the challenges of specific practical settings and how to transfer and adapt insights they learned in various modules. In addition, students will deepen their methodological knowledge regarding managerial problem resolution.

2) Skills

Students can apply and contextualize their knowledge and understanding of IT management and demonstrate problem-solving skills to analyze specificities and complexities of different contexts (e.g., industries, organizations, technological depts). Students will be able to communicate their conclusions and the underlying knowledge and reasoning clearly and unambiguously to real-world managers.

3) Responsibility and autonomy

Students can reflect on their social and ethical responsibilities and make responsible decisions with incomplete or limited information in project contexts with typically unstructured tasks, multiple stakeholders, and diverging interests. They will be able to autonomously acquire new knowledge and skills, and independently solve IT-management challenges.

Learning content	Students will interact with CEOs and CIOs from companies in different industries and learn about their challenges. Students will evaluate the strategies and management tools used in a corporate environment and apply their knowledge from IT management theories to explain observed outcomes and develop suggestions for improving strategies and management approaches. The topics involve contemporary IT management challenges such as - Business-IT alignment and IT value creation - IT operating models that balance speed, agility and reliability - IT adoption and use (innovate-design-transform; user-focus) - IT controlling (value of investments and performance of IT) - IT governance - IT sourcing - Cyber risk management After an intensive examination of current research findings, the course will visit multiple different companies, analyze their status quo and develop new concepts.
Assessment method(s)	Portfolio exam (paper, presentation, teamwork performance)
Recommended or required reading and other learning resources/tools	Contemporary reading material will be updated and distributed each term The Road to a Modern IT Factory: Industrialization – Automation – Optimization. Deutschland, Springer Berlin Heidelberg, 2014. Urbach, N., & Ahlemann, F. (2018). IT Management in the Digital Age: A Roadmap for the IT Department of the Future. Springer. Various papers such as Dibbern, J., Chin, W. W., & Heinzl, A. (2012). Systemic determinants of the information systems outsourcing decision: A comparative study of German and United States firms. Melville, N., Kraemer, K., & Gurbaxani, V. (2004). Information technology and organizational performance: An integrative model of IT business value. MIS quarterly, 283-322.
Additional (module) information	

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THIRD SEMESTER

Academic Writing

Overall grade weighting	6%	**Semester**	in the third semester
Frequency	Winter term	**Language of instruction**	English
Type of course	Compulsory	**Duration**	1 semester
ECTS-Points	5	**Hours per semester week**	4
Number of participants	Min 10 students, max 30 students		
Mode of delivery	Face-to-face and blended learning		
Responsible for the module	Prof. Dr. Andy Weeger		
Teaching methods	Lecture Exercises (reading and discussions) Coaching		
Work parameter	Self-study: 90 hours		
	Contact time: 60 hours		
	Total: 150 hours		
Use for other studies	Joint module with Digital Innovation Management (DIM) and Artificial Intelligence and Data Analytics (AIDA)		
Required competencies			
Admission requirements			
Semester, in which the student must mandatorily registered for the first attempt of examination			

Learning outcome	Considering the program's objective to qualify students for coodinating and cross-functional functions and positions in national and international organizations, to use diverse sources of information which includes academic as well as practitioner literature, and to communicate with diverse stakeholders, this module focuses on competencies needed to argue stringently, develop academic texts, and communciate in English. 1) Knowledge The students have demonstrated understanding and knowledge of key techniques, guidelines, elements, structures, vocabulary and language, and formal requirements of academic written communication, particularly in the field of management and information system research. 2) Skills The students are able to draft, organize, and revise scientific texts that are coherent, clear, and concise with appropriate use of citations and can be printed in a journal or conference proceedings. Students can master all necessary writting communication in a peer-review process (as author or as reviewer). Students are able to effectively use tools to support the writing process (e.g., Citation Management Systems). 3) Responsibility and autonomy Students can master the challenge of building on work done by others and create something original from it, while maintaining academic integrity and uphold the standards of good academic work.
Learning content	In accordance with the program's qualification goals to enable students to use academic sources, and write own research papers, this module provides a deepening and practicing of what has been learned in IS research. Further, it provides English writing training. Writing process and strategy (e.g., research, planning, summarizing, organizing, plagiarism, referencing, proofreading). Elements of writing (e.g., argument and discussion, cause and effect, definitions, style) Writing vocabulary and language (e.g., precision, clarity, conciseness, scientific vocabulary) Structure of a academic paper (e.g., outline of the document, transition, implementation and presentation of data) Review process (e.g., writing a review, writing a response to the reviewer letter) Ongoing language coaching for own project
Assessment method(s)	Portfolio exam (multiple assignments)
Recommended or required reading and other learning resources/tools	A number of research papers to be distributed at beginning of the course Recker, Jan. Scientific research in information systems: a beginner's guide. Springer Science & Business Media, 2012. Macgilchrist, Felicitas. Academic writing. Verlag Ferdinand Schöningh, Paderborn, 2014.
Additional (module) information	

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THIRD SEMESTER

Information Systems Research

Overall grade weighting	6%	**Semester**	in the third semester
Frequency	Winter term	**Language of instruction**	English
Type of course	Compulsory	**Duration**	1 semester
ECTS-Points	5	**Hours per semester week**	2
Number of participants	Min 10 students, max 30 students		
Mode of delivery	Face-to-face and blended learning		
Responsible for the module	Prof. Dr. Andy Weeger		
Teaching methods	Lecture, excercises, group presentations		
Work parameter	Self-study: 120 hours		
	Contact time: 30 hours		
	Total: 150 hours		
Use for other studies	Joint module with Digital Innovation Management (DIM) and Artificial Intelligence and Data Analytics (AIDA)		
Required competencies			
Admission requirements			
Semester, in which the student must mandatorily registered for the first attempt of examination			

Learning outcome	Considering the program's objective to qualify students for an academic career, this module focuses on methodological competencies and writing skills needed to craft academic texts and perform research projects. 1) Knowledge Students can: - demonstrate knowledge of the concepts and different research methods - distinguish different approaches to theory building - elaborate on the advantages and disadvantages of different data acquisition methods - understand the structure of a scientific paper and the corresponding presentation 2) Skills The students are able, based on the knowledge acquired in this course to. - formulate a valid research question - choose the correct research method to answer the research question - apply the correct data gathering method - use the correct statistical method or corresponding qualitative method to analyze their findings - formulate implications for theory and practice 3) Responsibility and autonomy Students apply the knowledge and skills gathered in this course to write a scientific paper or fractions of it and present it to the class
Learning content	In accordance with the program's qualification goals to enable students to use academic sources, carry-out research projects, and analytically write own papers, this module provides methodological foundations as well as guidelines to structure a problem and craft a consistent paper that provides a logical thread. - Theory of science - Basic principles of research (in IS) - Research process - Theory - Research methods (quantitative, qualitative, design science) - Writing IS articles As well as deep dives into, e.g., - Structured equation modelling (SEM) - Structured literature review
Assessment method(s)	Seminar paper

Recommended or required reading and other learning resources/tools	Dwivedi, Y. K., Wade, M. R., Schneberger, S. L.: Information Systems Theory - Explaining and Predicting Our Digital Society (Vol. 1 + 2), Springer, 2011. Hevner A., Chatterjee, S.: Design Research in Information Systems: Theory and Practice, Springer, 2010. Recker, J: Scientific Research in Information Systems: A Beginner's Guide. Springer Science & Business Media, 2012. Yin, R. K.: Qualitative Research from Start to Finish, Guilford, 2010 Additional reading will be updated and distributed each term
Additional (module) information	

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THIRD SEMESTER

Master Seminar

Overall grade weighting	2%		**Semester**	in the third semester
Frequency	Winter term		**Language of instruction**	English
Type of course	Compulsory		**Duration**	1 semester
ECTS-Points	2		**Hours per semester week**	2
Number of participants	Min 10 students, max 30 students			
Mode of delivery	Face-to-face			
Responsible for the module	Prof. Dr. Andy Weeger			
Teaching methods	Lecture, coachings			
Work parameter	Self-study:	30	hours	
	Contact time:	30	hours	
	Total:	60	hours	
Use for other studies				
Required competencies				
Admission requirements	Passed modules of the study programme's first and second semester			
Semester, in which the student must mandatorily registered for the first attempt of examination				
Learning outcome	1) Knowledge Students will have demonstrated knowledge and understanding in the following areas: - Critical evaluation of work of others and own work in terms of quality - Creation of logically structured presentation 2) Skills Students will be able to provide constructive criticism and receive feedback from others. They will also be able to evaluate, and reflect on knowledge from diverse sources and build on it to create own onsiderations. 3) Responsibility and autonomy Students will be able to autonomously formulate theoretical considerations, pinpoint potential limitations, and put forth ideas for future research. They will also be able to consider social and ethical implications oftheir and others work.			

Learning content	During this module, the student gets individual coaching reagrding his research and defends his or her thesis with a presentation and following discussion.
Assessment method(s)	Presentation
Recommended or required reading and other learning resources/tools	Recker, J: Scientific Research in Information Systems: A Beginner's Guide. Springer Science & Business Media, 2012.
Additional (module) information	

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THIRD SEMESTER

Master Thesis

Overall grade weighting	20%	**Semester**	in the third semester
Frequency	Winter term	**Language of instruction**	English
Type of course	Compulsory	**Duration**	1 semester
ECTS-Points	18	**Hours per semester week**	0
Number of participants	Min 10 students, max 30 students		
Mode of delivery	Face-to-face		
Responsible for the module	Prof. Dr. Andy Weeger		
Teaching methods	Coaching during the seminars (see module Master Seminar)		
Work parameter	Self-study: 540 hours		
	Contact time: 0 hours		
	Total: 540 hours		
Use for other studies			
Required competencies			
Admission requirements	Passed modules of the study programme's first and second semester		
Semester, in which the student must mandatorily registered for the first attempt of examination			

Learning outcome	1) Knowledge Students will have demonstrated knowledge and understanding in the following areas: - Research strategies, research designs, methods and approaches, and quality criteria in research in information systems - Critical evaluation of work of others in terms of quality - Creation of logically structured own research paper 2) Skills Students will be able to independently create scientific work and to evaluate, and integrate knowledge from diverse sources and build on it to create own scientific output. 3) Responsibility and autonomy Students will be able to autonomously formulate and justify own research topics, acquire knowledge from extant research, and independently perform research-oriented projects. They will also be able to responsibly deal with empirical information acquired from various stakeholders and to consider social and ethical implications of their work.
Learning content	The Master Thesis shall exhibit the student's competencies and abilities to research, solve and critically discuss a current topic of the field information systems, particularly information and IT management. The students have to meet formal and content standards and have to organize their work load to finish in a specific time frame. Significant practical contributions are desireable.
Assessment method(s)	Master Thesis
Recommended or required reading and other learning resources/tools	Dwivedi, Y. K., Wade, M. R., Schneberger, S. L.: Information Systems Theory - Explaining and Predicting Our Digital Society (Vol. 1 + 2), Springer, 2011. Recker, J: Scientific Research in Information Systems: A Beginner's Guide. Springer Science & Business Media, 2012.
Additional (module) information	

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