MODULE HANDBOOK

Master of Arts

Master Product Management (FS-OI-EU-MAPRO-120)

120 CP

Distance Learning

INTERNATIONAL
UNIVERSITY OF
APPLIED SCIENCES

Contents

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3. Semester

1. Semester

Leadership

Module Code: DLMBLSE-01

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	None	MBA	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. Maja Störmer (Leadership)

Contributing Courses to Module

- Leadership (DLMBLSE01-01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Exam, 90 Minutes Study Format: myStudies Exam, 90 Minutes	

Weight of Module

see curriculum

Module Contents

- Fundamentals and criteria of leadership success
- Leadership theories in changing times
- Stress, work-life balance and self-management
- Motivation, communication and assessment
- Teams and organization
- Current trends and debates
- Intercultural leadership

Learning Outcomes

Leadership

On successful completion, students will be able to

- Answer the question of what good leadership is by drawing on key leadership theories and their empirical validation.
- Conceptualize leadership as a balance of values between the requirements of organization, people and performance.
- Understand current key findings on how to keep this balance (performance: self-management and work/life balance of the manager; people: motivation, communication and assessment of employees and teams; organization: organizational culture and change management).
- Understand the challenges of leadership in an intercultural context.
- Put to practice their acquired understanding of leadership and its facets in the corporate world.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Business Administration & Management.	All Master Programmes in the Business & Management field.

Leadership

Course Code: DLMBLSE01-01

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

Course Description

A company's employees are some of its most important resources in today´s knowledge society. The professional and systematic leadership of employees is critical to an organization's competitive success. And one of the fundamental competencies of a manager is to develop and promote, through leadership, the knowledge and skills of individuals in the organization. With this in mind, the course addresses the necessary competencies of a leader in modern, knowledge-based work organizations. Central topics of modern leadership theory and practice are discussed. The focus is on the fundamentals and tools of professional leadership, key aspects of situational leadership, motivation, communication and interaction in the context of strategic leadership and in change processes, as well as on leadership in an intercultural context. By providing both the conceptual basics of leadership and empirical examples of leadership behavior, the course prepares participants for the challenges of leadership, especially when dealing with change, conflict, and team development.

Course Outcomes

On successful completion, students will be able to

- Answer the question of what good leadership is by drawing on key leadership theories and their empirical validation.
- Conceptualize leadership as a balance of values between the requirements of organization, people and performance.
- Understand current key findings on how to keep this balance (performance: self-management and work/life balance of the manager; people: motivation, communication and assessment of employees and teams; organization: organizational culture and change management).
- Understand the challenges of leadership in an intercultural context.
- Put to practice their acquired understanding of leadership and its facets in the corporate world.

Contents

1. Leadership Overview
   - 1.1 Significance of Good Leadership
   - 1.2 Leadership: Conceptual Definitions
   - 1.3 Criteria for Leadership Success

8.2 Culture

8.3 Intercultural Leadership

Literature

Compulsory Reading

Further Reading

- Ang, S., & van Dyne, L. (2015). Conceptualization of cultural intelligence – Definition,cistinctiveness and nomological network. In Ang, S., & van Dyne, L. (Eds.), Handbook of cultural intelligence (pp. 3 —15). Routledge.
- Schein, E. H. (2017). Organizational culture and leadership (5th ed.). Wiley.

Study Format Distance Learning

Study Format	**Course Type**
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed ☑ Intensive Live Sessions/Learning Sprint	☑ Course Book ☑ Video	☑ Online Tests

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
☑ Intensive Live Sessions/Learning Sprint	☑ Video	☑ Online Tests

Product Discovery and Validation

Module Code: DLMPROPDV

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

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

Module Coordinator

Prof. Dr. Carolin Egger (Product Discovery and Validation)

Contributing Courses to Module

- Product Discovery and Validation (DLMPROPDV01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Exam or Written Assessment: Case Study, 90 Minutes	

Weight of Module

see curriculum

Module Contents

- Importance and General Challenges in Product Innovation
- Creativity and Idea Generation
- Product Discovery
- The Lean Product Processes
- Product Validation
- Outlook on Product Discovery and Product Validation

Learning Outcomes

Product Discovery and Validation

On successful completion, students will be able to

- explain and distinguish general challenges to product innovation and evaluate product discovery's importance in product management.
- critically examine preconditions for creativity and idea generation.
- critically examine and develop core principles of product discovery.
- assess lean product processes with their theoretical backgrounds and derive appropriate measures for that.
- understand the importance of product validation and conduct interdisciplinary discussions about the topic.
- systematically reflect on the concepts of product discovery and product validation.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Business Administration & Management	All Master Programs in the Business & Management field(s)

Product Discovery and Validation

Course Code: DLMPROPDV01

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

Course Description

The course at hand aims at classifying product discovery and validation into the broader context of product management. It outlines general challenges to product innovation and highlights the organizational preconditions to make creativity flourish. Further, the course contains major concepts and tools about product discovery and the importance of identifying the right target customer to develop an appropriate value proposition. Students will learn how to evaluate lean product processes and how to specify the features of and test minimum viable products. Additionally, this course outlines theories of product validation including data driven approaches to continuous iteration. Finally, students will discuss current approaches in sciences and practice regarding product discovery and validation in this course. The overall purpose of this course is to make students confident about the tools used in product management to continuously generate and test new products and to prepare them for structured procedures to achieve in new product development.

Course Outcomes

On successful completion, students will be able to

- explain and distinguish general challenges to product innovation and evaluate product discovery's importance in product management.
- critically examine preconditions for creativity and idea generation.
- critically examine and develop core principles of product discovery.
- assess lean product processes with their theoretical backgrounds and derive appropriate measures for that.
- understand the importance of product validation and conduct interdisciplinary discussions about the topic.
- systematically reflect on the concepts of product discovery and product validation.

Contents

1. General Challenges in Product Innovation
   - 1.1 Definition of the Term and Different Kinds of Innovations
   - 1.2 Technology- Versus Market-Driven Innovations
   - 1.3 Uncertainty Reduction
   - 1.4 Time-to-Market Challenges

2. Creativity and Idea Generation
   - 2.1 When Creativity Flourishes (in Human Brains)
   - 2.2 Where Ideas Come from (Inside-Out and Outside-In Approaches of the Company)
   - 2.3 Involving Customers and Open Innovation
   - 2.4 Organizational Preconditions for Creativity

3. Product Discovery
   - 3.1 Definition of the Term and Relevance of the Approach
   - 3.2 Framework of Continuous Discovery
   - 3.3 Minimum Viable Products
   - 3.4 Tools in Product Discovery
   - 3.5 Limitations of the Approach

4. The Lean Product Processes
   - 4.1 Determination of Target Customers
   - 4.2 Identifying Underserved Customer Needs – Discovering Opportunities andSolutions
   - 4.3 Definition of the Value Proposition and Value Proposition Design
   - 4.4 Specification of MVP Features and Testing an MVP With Customers
   - 4.5 Build-Measure-Learn Loop

5. Product Validation
   - 5.1 Rapid Experimentation
   - 5.2 Measurement of Key Metrics and Usability Testing
   - 5.3 Data-Driven Product Optimization
   - 5.4 Starting Small and Iterating Continuously

6. Outlook on Product Discovery and Product Validation
   - 6.1 Current Research Areas
   - 6.2 Contemporary Practical Approaches in Business Management
   - 6.3 Limitations and Future Relevance for Product Management

Literature
Compulsory Reading
Further Reading ▪ Biazzo, S. & Filippini, R. (2021). Product Innovation Management: Intelligence, Discovery, Development (Management for Professionals). Springer. ▪ Olsen, D. (2015). The Lean Product Playbook: How to Innovate With Minimum Viable Products and Rapid Customer Feedback. Wiley. ▪ Osterwalder et al. (2014). Value Proposition Design. Wiley. ▪ Torres, T. (2021). Continuous Discovery Habits: Discover Products that Create Customer Value and Business Value. Product Talk LLC. ▪ Ries, E. (2011). The Lean Startup. Currency.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam or Written Assessment: Case Study, 90 Minutes

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
100 h	0 h	25 h	25 h	0 h	150 h

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

International Marketing

Module Code: DLMMARE

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	None	MA	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. Josephine Zhou-Brock (International Marketing)

Contributing Courses to Module

- International Marketing (DLMMARE01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Exam, 90 Minutes Study Format: myStudies Exam, 90 Minutes	

Weight of Module

see curriculum

Module Contents

- Introduction to international marketing
- The international context of corporations
- International marketing strategies
- Features of the marketing-mix specific to the international context
- Trends in international marketing

Learning Outcomes

International Marketing

On successful completion, students will be able to

- transfer well-known marketing management concepts to an international context, recognize limitations of their transferability, and continually develop these concepts.
- perform a structural analysis of the context surrounding specific internationalizing decisions, recognize the various contexts in these scenarios, and formulate alternative decisions.
- assess different strategic and political marketing alternatives in specific scenarios using relevant criteria and develop a decision template for developing marketing plans.
- combine actual issues from industry with the most recent scientific insights into successful marketing approaches in order to develop the skills and knowledge required to manage international marketing in a corporate setting.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Marketing & Sales.	All Master Programmes in the Marketing & Communication field.

International Marketing

Course Code: DLMMARE01

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

Course Description

The most important task of international marketing is recognizing which international markets and business-related dependencies should be targeted for the marketing of products and services. The course begins with defining key terms and concepts associated with the field of marketing management and then extrapolates these to the international context. The first section of the course equips students with an understanding of how to perform a structured analysis of international markets, using elements of the "PEST Analysis" (political, legal, economical, socio-cultural, and technological frameworks). Strategical aspects of marketing as well as instruments used to analyze the marketing mix are discussed as they relate to the international context. Inadequate consideration of marketing orientation as well as underestimating the impact of cultural differences both present serious threats to the success of any corporation. This course shall therefore analyze and discuss contemporary case studies involving multinational corporations to elucidate these potential threats. Industry-based case studies also offer students the opportunity to put into practice the knowledge and tools acquired in this course to address some of the specific challenges of international marketing.

Course Outcomes

On successful completion, students will be able to

- transfer well-known marketing management concepts to an international context, recognize limitations of their transferability, and continually develop these concepts.
- perform a structural analysis of the context surrounding specific internationalizing decisions, recognize the various contexts in these scenarios, and formulate alternative decisions.
- assess different strategic and political marketing alternatives in specific scenarios using relevant criteria and develop a decision template for developing marketing plans.
- combine actual issues from industry with the most recent scientific insights into successful marketing approaches in order to develop the skills and knowledge required to manage international marketing in a corporate setting.

Contents

1. Introduction to International Marketing
   - 1.1 Issues Related to International Marketing
   - 1.2 Environmental Factors in International Market Development
   - 1.3 Features of Buying Behavior in International Marketing

2. International Marketing Strategies
   - 2.1 Marketing Segmentation and Market Selection
   - 2.2 Market Entry Strategy
   - 2.3 Market Exit Strategy

3. International Market Research
   - 3.1 Qualitative and Quantitative Primary Research
   - 3.2 International Survey and Observations

4. International Marketing for Specific Sectors
   - 4.1 Industrial Goods Sector
   - 4.2 Consumer Goods Sector
   - 4.3 Wholesale and Retail Sector
   - 4.4 Service Sector

5. International Products
   - 5.1 Product Policy
   - 5.2 Product Mix and Degree of Standardization
   - 5.3 Brand Policy

6. International Pricing and Terms and Sales Policies
   - 6.1 Pricing on International Markets
   - 6.2 Types of Price Discrimination
   - 6.3 Credit and Discount Policy

7. International Promotion
   - 7.1 International Promotion
   - 7.2 International Promotion Mix
   - 7.3 Optimal Standardization

8. International Distribution
   - 8.1 Distribution Channels, Intermediaries, and Distribution Schemes
   - 8.2 Organizational Forms for International Market Development
   - 8.3 Potential for Standardization

9. International Marketing Mix
   - 9.1 Home Country Orientation
   - 9.2 Global Orientation
   - 9.3 Multinational Orientation

Literature
Compulsory Reading
Further Reading ▪ Cateora, P.R., Money, B., Gilly, M.C. & Graham, J.L. (2019) International Marketing, 18th Edition, McGraw-Hill.

Study Format Distance Learning

Study Format	**Course Type**
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Business Model Design

Module Code: DLMIEEBMD

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

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

Module Coordinator

Dr. Guido Schmidt (Business Model Design)

Contributing Courses to Module

- Business Model Design (DLMIEEBMD01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Written Assessment: Written Assignment Study Format: myStudies Written Assessment: Written Assignment	

Weight of Module

see curriculum

Module Contents

- Business Models and Business Modelling
- Selected Methods aiding Business Model Design
- Essential Elements of Business Models
- Specifics of Digital Business Models
- The Business Model Canvas by Osterwalder and Pigneur

Learning Outcomes

Business Model Design

On successful completion, students will be able to

- remember the definitions and processes dealing with business modelling.
- understand and apply methods that are used for business model design.
- understand the essential elements of business models.
- remember and evaluate the specifics of digital business models.
- understand the business model canvas by Osterwalder and Pigneur and to develop and describe their “own” business model canvas in the course of their written assignment.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Business Administration & Management	All Master Programs in the Business & Management field

Business Model Design

Course Code: DLMIEEBMD01

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

Course Description

The digital economy, encompassing topics like internet of things, business networks, digital platforms, platform-as-a-service offerings, etc. has led to the rise of new business models. Business models that were established in the past are often no longer suitable, as the way in which products are created, how customers are addressed, the sales model and cost structure and much more have changed in the course of digital transformation. This module therefore focusses on the elements of business models, and the methods how business models can be designed. The specifics of digital business models are outlined in a dedicated section as is the introduction of the business model canvas by Osterwalder and Pigneur.

Course Outcomes

On successful completion, students will be able to

- remember the definitions and processes dealing with business modelling.
- understand and apply methods that are used for business model design.
- understand the essential elements of business models.
- remember and evaluate the specifics of digital business models.
- understand the business model canvas by Osterwalder and Pigneur and to develop and describe their “own” business model canvas in the course of their written assignment.

Contents

1. Business Models and Business Modeling
   - 1.1 Introduction to Business Models
   - 1.2 Definitions: Business Model, Business Concept, and Business Case
   - 1.3 Availability Instead of Ownership
   - 1.4 Selling Results (Instead of Products)
   - 1.5 The Process of Business Model Development
2. Essential Elements of Business Models
   - 2.1 Customer Model
   - 2.2 Value Model
   - 2.3 Value Architecture
   - 2.4 Profit Model

3. The Business Model Canvas by Osterwalder and Pigneur
   - 3.1 The Business Model Canvas
   - 3.2 Similarities in Business Models
   - 3.3 Designing Business Models
   - 3.4 Strategic Areas of Business Models
   - 3.5 The Business Model Design Phase

4. Specifics of Digital Business Models
   - 4.1 Success Drivers of Digital Business Models
   - 4.2 Key Components of Digital Business Models
   - 4.3 Overcoming Previous Industry Boundaries
   - 4.4 Acting as a Network in the Market
   - 4.5 Digitization of Products and Services

5. Selected Methods Aiding Business Model Design
   - 5.1 Design Thinking
   - 5.2 Open Innovation
   - 5.3 Customer Journey and Customer Experience
   - 5.4 Prototyping
   - 5.5 Multidisciplinary Teams

Literature

Compulsory Reading

Further Reading

- Gassmann, O., Frankenberger, K., & Choudury, M. (2020). The business model navigator: The strategies behind the most successful companies. Pearson.
- Osterwalder, A., & Pigneur, Y. (2010). Business model generation: A handbook for visionaries, game changers, and challengers. Wiley.
- Wirtz, B. W. (2020). Business model management: Design – Process – Instruments. Springer.
- Wirtz, B. W. (2019). Digital business models: Concepts, models, and the alphabet case study. Springer.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Written Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Written Assignment

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Product Delivery and Development

Module Code: DLMPROPDD

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

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

Module Coordinator

Prof. Dr. Carolin Egger (Product Delivery and Development)

Contributing Courses to Module

- Product Delivery and Development (DLMPROPDD01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Exam or Written Assessment: Written Assignment, 90 Minutes	

Weight of Module

see curriculum

Module Contents

- Importance and General Challenges in Product Delivery and Development
- Product Vision & Strategy
- Product Description & Features
- User Interface & User Experience Design
- Continuous Product Improvement
- Team, Staffing, and Leadership for Product Delivery

Learning Outcomes

Product Delivery and Development

On successful completion, students will be able to

- explain and distinguish the steps and the process of product delivery in product management including the validation of products.
- critically examine and develop product features from a customer-centric perspective with appropriate product management tools.
- assess user interface and user experience designs and derive appropriate measures for successful product delivery from that.
- understand the relevance of rapid, agile development and continuous PDCA-cycles.
- critically align staffing, team buildings and leadership questions for product delivery.
- systematically reflect on the concepts and importance of product delivery and product development.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the field of Business Administration & Management	All Master Programs in the Business & Management field

Product Delivery and Development

Course Code: DLMPROPDD01

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

Course Description

This course aims at creating an understanding of product delivery and continuous validation for students. Taking general challenges in product delivery and development – such as coming from the "soft mode" of product innovation to a "results-driven" mode of product development – as a starting point, this course shows the relevance of the following steps. Students will be introduced to the important tools and techniques of creating a product vision and strategy and taking this as a fundament for product descriptions and features. This course essentially highlights the importance of user interface and user experience design. It outlines how a customer-centric approach to product development and delivery can be achieved. Further, it shows different methods for continuous product improvement. By taking a sidestep into staffing, team building and leadership it enables students to guide product development teams from a customer-centric point of view. Finally, the course puts product management into a broader perspective and makes students critically reflect on current issues, research areas, and practical implications of the topic.

Course Outcomes

On successful completion, students will be able to

- explain and distinguish the steps and the process of product delivery in product management including the validation of products.
- critically examine and develop product features from a customer-centric perspective with appropriate product management tools.
- assess user interface and user experience designs and derive appropriate measures for successful product delivery from that.
- understand the relevance of rapid, agile development and continuous PDCA-cycles.
- critically align staffing, team buildings and leadership questions for product delivery.
- systematically reflect on the concepts and importance of product delivery and product development.

Contents

1. General Challenges in Product Delivery and Development
   - 1.1 From Product Innovation to Product Delivery
   - 1.2 Product Lifecycle Management
   - 1.3 Product Roadmaps
   - 1.4 Product Relaunches

- 1.5 Product Variant Management

2. Product Vision & Strategy
   - 2.1 Creating a Product Vision
   - 2.2 Defining Product Principles and Ethics
   - 2.3 Defining a Product Strategy
   - 2.4 Clarifying Target Customers and Applications
   - 2.5 Identifying Customer Research Trends and Foresight Analysis

3. Product Description and Features
   - 3.1 Uncovering Current and Future Customer Needs
   - 3.2 Definition & Structuring of a Backlog
   - 3.3 House of Quality & Quality Function Deployment
   - 3.4 Agile Development & Product Validation
   - 3.5 Minimum Viable Products

4. User Interface & User Experience Design
   - 4.1 Customer Journey
   - 4.2 Metrics for User Experience
   - 4.3 Customer Centricity
   - 4.4 Design Sprints & Design Thinking
   - 4.5 User Stories & Usage Research

5. Continuous Product Improvement
   - 5.1 PDCA-Cycles
   - 5.2 Agile Lifecycle Methods
   - 5.3 Funnel Models
   - 5.4 UX Evaluation Techniques
   - 5.5 With Customers from Prototype to Series Production

6. Team, Staffing, and Leadership for Product Delivery
   - 6.1 Competencies & Characters
   - 6.2 Commitment & Empowerment
   - 6.3 Team Spirit, Collaboration, Objectives & Key Results (OKRs)
   - 6.4 Leadership Ethics for Product Management
   - 6.5 Contemporary Practical Approaches in Business Management

Literature
Compulsory Reading
Further Reading ▪ Cagan, M. & Jones, C. (2021). Empowered: Ordinary People, Extraordinary Products. Wiley. ▪ Hartson, H.R. (2019). The UX Book – Agile UX Design for a Quality User Experience. Cambridge ▪ Hillmann, C. (2021). UX for XR – User Experience Design and Strategies for Immersive Technologies. Springer ▪ Lombardo, C. T. (2018). Product Roadmaps Relaunched: How to Set Direction While Embracing Uncertainty. O'Reilly. ▪ Moore, G. (2014). Crossing the Chasm. Harper Collins. ▪ Patton, J. (2014). User Story Mapping. O'Reilly & Associates.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam or Written Assessment: Written Assignment, 90 Minutes

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
100 h	0 h	25 h	25 h	0 h	150 h

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	☑ Guideline
	☑ Slides	

Advanced Research Methods

Module Code: DLMARM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	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. Tamara Wehrstein (Advanced Research Methods)

Contributing Courses to Module

- Advanced Research Methods (DLMARM01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Written Assessment: Written Assignment Study Format: myStudies Written Assessment: Written Assignment	

Weight of Module

see curriculum

Module Contents

- Social Sience and Research Paradigms
- Case Study Research
- Specific Topics of Qualitative Research
- Advanced Issues of Qualitative Research Conceptualization and Data Analysis
- Underlying Assumptions of Quantitative Research: Concepts and Consequences
- Evaluation Research

Learning Outcomes

Advanced Research Methods

On successful completion, students will be able to

- understand and apply scientific methodologies in conducting empirical research.
- plan, design, and prepare research proposals.
- differentiate between different types of case studies, select and apply different data collection strategies.
- plan, conduct, and analyze case studies and surveys.
- scientifically analyze quantitative and qualitative data.
- conduct evaluation research to determine quality of research.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Methods	All Master Programmes in the Business & Management fields

Advanced Research Methods

Course Code: DLMARM01

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

Course Description

Advanced research methods, specifically business research, is scientific inquiry that attempts to uncover new information which helps a business improve performance, maximizing shareholder value while adhering to ethical and moral compliance standards.Managers seeking to conduct empirical research must maintain validity, reliability, and trustworthiness when utilizing scientific methodologies in order to produce meaningful and actionable results. Research proposals are typically written prior to conducting research, which have a certain structure, enabling the researcher to properly plan, conduct, and analyze case studies and surveys. Different data collection strategies are used to collect both qualitative and quantitative data, depending on the research proposal goals. Managers utilize their understanding of research methodologies to accurately assess the quality of research.

Course Outcomes

On successful completion, students will be able to

- understand and apply scientific methodologies in conducting empirical research.
- plan, design, and prepare research proposals.
- differentiate between different types of case studies, select and apply different data collection strategies.
- plan, conduct, and analyze case studies and surveys.
- scientifically analyze quantitative and qualitative data.
- conduct evaluation research to determine quality of research.

Contents

1. Theoretical Background: Social Science and Research Paradigms
   - 1.1 What is a Paradigm?
   - 1.2 Empiricism
   - 1.3 Critical Rationalism
   - 1.4 Epistemological Anarchism
   - 1.5 Structural Functionalism
   - 1.6 Symbolic Interactionism
   - 1.7 Ethnomethodology
2. Case Study Research

Literature

Compulsory Reading

Further Reading

- Babbie, E. R. (2021). The practice of social research (15th ed.). Cengage Learning. - 14th ed. (2016)
- Crossman, A. (2019) How to conduct an index for research. (URL: https://www.thoughtco.com/index-for-research-3026543 [last accessed on 15.03.2023]).
- Eurostat (n.d.) Beginners: Statistical concept - Index and base year (URL: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Beginners:Statistical_concept_-_Index_and_base_year [last accessed on 15.03.2023]).
- Giles, D. (2004). Advanced research methods in psychology (Reprint). Psychology Press.
- Rea, L.M. & Parker, R.A. (2014). Designing and conducting survey research: A comprehensive guide, (4th ed). Jossey-Bass.
- Saunders, M., Thornhill, A., & Lewis, P. (2019). Research methods for business students (8th ed). Pearson
- Takahashi, A. R. W., & Araujo, L. (2019). Case study research: Opening up research opportunities. RAUSP Management Journal, 55(1), 100–111.
- Widner, J., Woolcock, M., & Ortega Nieto, D. (Eds.). (2022). The case for case studies: Methods and applications in international development (strategies for social inquiry). Cambridge University Press.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Written Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Written Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

2. Semester

Managing Across Borders

Module Code: DLMINTMAB_E

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	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. Andreas Herrmann (Managing Across Borders)

Contributing Courses to Module

- Managing Across Borders (DLMINTMAB01_E)

Module Exam Type

Module Exam	Split Exam
Study Format: myStudies Exam, 90 Minutes Study Format: Distance Learning Exam, 90 Minutes	

Weight of Module

see curriculum

Module Contents

- International economic and business environment
- Globalization and international competitiveness
- International Trade
- International financial and capital markets
- International organizations and economic integration
- Current hot spots in the international economic and business environment

Learning Outcomes

Managing Across Borders

On successful completion, students will be able to

- identify the main developments and trends in the global economic environment and use them as a basis for business decisions.
- demonstrate the development of globalization and world trade in the last decades.
- explain the causes and effects of protectionism on a country's economic development.
- understand the interrelationships of international financial and capital markets and assess them with regard to the handling of exchange rate risks.
- explain the importance of international organizations such as the World Trade Organization (WTO) or the International Monetary Fund (IMF) for global cooperation.
- form their own opinion on current issues of international economic policy.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the fields of Business Administration & Management	All Master Programs in the Business & Management fields

Managing Across Borders

Course Code: DLMINTMAB01_E

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

Course Description

The interdependence of economies, markets and technologies has increased continuously over the past decades. In addition to the former three dominant economic areas of the USA, Europe and Japan, emerging markets have joined the group, which play an increasingly important role in world trade. Global networking creates both opportunities and risks for internationally active companies. In this course, students acquire a deeper understanding of global economic, political and technological interrelationships as a basis for strategic decisions of internationally operating companies. In addition to knowledge of international trade, international financial and capital markets, and international organizations, students will be able to form their own well-founded opinion on current developments and trends in the international economic and business environment by the end of this course.

Course Outcomes

On successful completion, students will be able to

- identify the main developments and trends in the global economic environment and use them as a basis for business decisions.
- demonstrate the development of globalization and world trade in the last decades.
- explain the causes and effects of protectionism on a country's economic development.
- understand the interrelationships of international financial and capital markets and assess them with regard to the handling of exchange rate risks.
- explain the importance of international organizations such as the World Trade Organization (WTO) or the International Monetary Fund (IMF) for global cooperation.
- form their own opinion on current issues of international economic policy.

Contents

1. International economic and business environment
   - 1.1 Economic environment
   - 1.2 Political environment
   - 1.3 Technological environment
2. Globalization and international competitiveness
   - 2.1 Definition and development of globalization
   - 2.2 Opportunities and threats of globalization

2.3 International competitiveness

3. International Trade
   - 3.1 Theories and models of international trade
   - 3.2 Importance of international trade for an economy
   - 3.3 Protectionism as a threat to international business

4. International financial and capital markets
   - 4.1 Importance of international financial and capital markets for globally active companies
   - 4.2 International exchange rate regimes
   - 4.3 Hedging of exchange rate risks

5. International organizations and economic integration
   - 5.1 International organizations as the basis of the world economy (WTO, World Bank, IMF)
   - 5.2 Regional economic integration as driver for international business (EU, USMCA)

6. Current hot spots in the international economic and business environment
   - 6.1 USA-China: Struggle for political and economic supremacy
   - 6.2 Emerging Markets: new players in the global economy
   - 6.3 Agenda 2030: Sustainable Development Goals (SDG)

Literature

Compulsory Reading

Further Reading

- Cavusgil, S. T., Knight, G. A., & Riesenberger, J. R. (2020). International business: The new realities (5th ed.). Pearson.
- Daniels, J. D., Radebaugh, L. H., & Sullivan, D. P. (2018). International business: Environments and operations (16th ed.). Pearson.

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Product Lifecycle Management

Module Code: DLMDTMPLCM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	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. Johann Smalla (Product Lifecycle Management)

Contributing Courses to Module

- Product Lifecycle Management (DLMDTMPLCM01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Oral Assignment	

Weight of Module

see curriculum

Module Contents

- Introduction to PLM
- Product Data and Business Processes
- Influence of Digitalization
- System Lifecycle Management

Learning Outcomes

Product Lifecycle Management

On successful completion, students will be able to

- understand and critically reflect on product lifecycle management as the basis for the digitalization strategy.
- understand and classify technological and organizational basics of PLM.
- understand and justify process orientation as a prerequisite for PLM.
- classify, understand, and apply PLM in production.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the field of Engineering	All Master Programs in the IT & Technology field

Product Lifecycle Management

Course Code: DLMDTMPLCM01

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

Course Description

Product Lifecycle Management (PLM) refers to managing a company's products as efficiently as possible throughout their entire lifecycle (from idea to disposal). PLM is a holistic approach which is especially relevant for product development to capture all the information that accumulates during the lifecycle of a product. The PLM system is the management system for the products and manages the entire range, from the individual part to the individual product to the entire product portfolio. The goal is to increase product sales, reduce product-related costs, maximize the value of the portfolio, as well as to accompany and support the creation process. In the first part, the course teaches the basics of a PLM system, in particular how products and business processes of product creation can be represented in PLM systems. In the second part, the challenges and opportunities of digitalization are discussed and an overview of the current developments of the PLM approach is given.

Course Outcomes

On successful completion, students will be able to

- understand and critically reflect on product lifecycle management as the basis for the digitalization strategy.
- understand and classify technological and organizational basics of PLM.
- understand and justify process orientation as a prerequisite for PLM.
- classify, understand, and apply PLM in production.

Contents

1. Introduction to Product Lifecycle Management
   - 1.1 Historical Perspective
   - 1.2 What Is PLM?
   - 1.3 Advantages and Disadvantages
   - 1.4 Trends
2. Products
   - 2.1 Parts, Components, Assemblies
   - 2.2 Product Classification
   - 2.3 Versions, Variants, Options
   - 2.4 Product Structure and Product Architecture

Literature
Compulsory Reading
Further Reading ▪ Canciglieri Junior, O., Noël, F., Rivest, L. & Bouras, A. (Hrsg.). (2022). Springer eBook Collection: Bd. 639. Product Lifecycle Management. Green and Blue Technologies to Support Smart and Sustainable Organizations (1. Ed.). Springer International Publishing; Imprint Springer. ▪ Donoghue, I. D., Hannola, L. T. & Papinniemi, J. J. (2018). Product lifecycle management framework for business transformation. Logforum, 14(3), 293–303. ▪ Fortin, C., Rivest, L., Bernard, A. & Bouras, A. (Hrsg.). (2019). Springer eBook Collection: Bd. 565. Product Lifecycle Management in the Digital Twin Era (1. Ed.). Springer International Publishing; Imprint Springer. ▪ Nyffenegger, F., Ríos, J., Rivest, L. & Bouras, A. (Hrsg.). (2020). Springer eBook Collection: Bd. 594. Product Lifecycle Management Enabling Smart X (1. Ed.). Springer International Publishing; Imprint Springer.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Oral Assignment

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests
☑ Video	☑ Guideline
☑ Audio	
☑ Slides	

Sales and Pricing

Module Code: DLMBSPBE2

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	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. Thomas Bolz (Sales and Pricing)

Contributing Courses to Module

- Sales and Pricing (DLMBSPBE02)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Exam, 90 Minutes Study Format: myStudies Exam, 90 Minutes	

Weight of Module

see curriculum

Module Contents

Establishing and maintaining a competitive customer interface is one of the major challenges for every company to assure successful revenue- and profit-management. The course will allow students to understanding the optimization levers of the customer interface. This includes advanced methods of market- and customer segmentation, channel management including the design, setup and optimization of a customer oriented sales organization (e.g. key account management), practices for sales-force-effectiveness, sales optimization levers, e.g. for customer penetration, and methods for price-differentiation and -realization. The course incorporates case-studies and practice related data and for each optimization lever, students are introduced to a comprehensive tool-box approach. The tool box for each lever contains the required theory, a set of basic analyses and the application of best-practice examples and metrics.

Learning Outcomes

Sales and Pricing

On successful completion, students will be able to

- identify the key-success factors for modern sales organizations.
- describe the relationship between segmentation and the design of an appropriate sales organization.
- execute respective analyses and apply improvement levers.
- demonstrate the use of the tool-boxes for the respective optimization levers.
- identify major characteristics of a high-performance sales organization.
- conduct decisive analyses to assess the strength and weaknesses of a sales organization and identify respective optimization levers.
- implement the required organizational and process-related improvement levers.
- measure the performance of a sales-organization using established methods, KPIs and metrics.
- apply fundamental concepts of international pricing.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field(s) of Marketing & Sales	All Master Programmes in the Marketing field(s)

Sales and Pricing

Course Code: DLMBSPBE02

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

Course Description

Establishing and maintaining a competitive customer interface is one of the major challenges for every company to assure successful revenue- and profit-management.The course will allow students to understanding the optimization levers of the customer interface. This includes advanced methods of market- and customer segmentation, channel management including the design, setup and optimization of a customer oriented sales organization (e.g. key account management), practices for sales-force-effectiveness, sales optimization levers, e.g. for customer penetration, and methods for price-differentiation and -realization.The course incorporates case-studies and practice related data and for each optimization lever, students are introduced to a comprehensive tool-box approach. The tool box for each lever contains the required theory, a set of basic analyses and the application of best-practice examples and metrics.

Course Outcomes

On successful completion, students will be able to

- identify the key-success factors for modern sales organizations.
- describe the relationship between segmentation and the design of an appropriate sales organization.
- execute respective analyses and apply improvement levers.
- demonstrate the use of the tool-boxes for the respective optimization levers.
- identify major characteristics of a high-performance sales organization.
- conduct decisive analyses to assess the strength and weaknesses of a sales organization and identify respective optimization levers.
- implement the required organizational and process-related improvement levers.
- measure the performance of a sales-organization using established methods, KPIs and metrics.
- apply fundamental concepts of international pricing.

Contents

1. Segmentation
   - 1.1 Customer Segmentation
   - 1.2 Selection of Market Segments for Market Entry
   - 1.3 Development of Market Segments
2. Channel Management

- 2.1 Distribution System as a Function of the Products Sold
- 2.2 Selection of Distribution Partners
- 2.3 Professionalization and Mobilization of Distribution Partners
- 2.4 Control of Distribution Partners

3. Sales Force Effectiveness
   - 3.1 Sales Strategy
   - 3.2 Sales Process
   - 3.3 Sales Organization
   - 3.4 Sales Information and Management Systems
   - 3.5 Sales Controlling

4. Sales Optimization Levers
   - 4.1 Key Account Management
   - 4.2 Proactive Sales
   - 4.3 Value-Based Selling
   - 4.4 Online Sales Tools

5. Fundamentals of International Pricing
   - 5.1 Pricing Strategies
   - 5.2 Pricing for Market Segments
   - 5.3 Transaction Pricing and Managing the Price Waterfall
   - 5.4 Price Differentiation and Standardization in an International Context

6. Special Topics in International Pricing
   - 6.1 Gray Markets
   - 6.2 Transfer Pricing
   - 6.3 Price Wars
   - 6.4 Innovative Pricing Methods
   - 6.5 Risks in International Business

Literature
Compulsory Reading
Further Reading ▪ Jobber, D., Lancaster, G., & Le Meunier-FitzHugh, K. (2019). Selling and sales management (Eleventh edition). Pearson. ▪ Kotler, P., Keller, K., Brady, M., Goodman, M., & Hansen, T. (2016). Marketing management (3rd ed.) (pp. 331–420). Harlow: Pearson Education. ▪ Leisch, F., Dolnicar, S., & Grün, B. (2018). Market Segmentation Analysis: Understanding It, Doing It, and Making It Useful. Springer. ▪ Nagle, T. T., Zale, J., & Hogan, J. (2016). The strategy and tactics of pricing (5th ed.). Abingdon: Routledge.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Advanced Growth Hacking

Module Code: DLMGHAGH

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

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

Module Coordinator

Francisco Tigre Moura (Advanced Growth Hacking)

Contributing Courses to Module

- Advanced Growth Hacking (DLMGHAGH01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Written Assessment: Case Study	

Weight of Module

see curriculum

Module Contents

- Introduction into Growth Hacking (Definition, Historical Background, Origin, and Requirements)
- Product-Market-Fit
- A/B Testing
- Customer Relationship Management
- Data Analysis
- Case Studies

Learning Outcomes

Advanced Growth Hacking

On successful completion, students will be able to

- develop an understanding of the idea behind and learn how to use and apply Growth Hacking.
- deepen their knowledge about the origin and history of Growth Hacking, also through case studies showing how Growth Hacking is applied in real life.
- get familiar with basic conditions like knowing when a product or service is ready for the market (product-market-fit).
- using and applying A/B testing to find out which version of a website or an application leads to the best possible success.
- increase sales turnover through customer relationship management.
- develop awareness of the importance of data analysis to constantly increase a firm's 'performance'.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Marketing & Sales.	All Master Programs in the Marketing & Communication field.

Advanced Growth Hacking

Course Code: DLMGHAGH01

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

Course Description

The course will give an introduction into Growth Hacking, define the term, point out historical background, its origin, and focus on the requirements, tools and methods in order to roll out a Growth Hack. The students will learn when a product or service is ready to be rolled out, the so-called product-market-fit, learn why A/B Testing can be useful as well as connecting with clients, not only through Customer Relationship Management. Equally important is the constant data analysis which will also be covered in detail. A case study serves as the written assignment for this course.

Course Outcomes

On successful completion, students will be able to

- develop an understanding of the idea behind and learn how to use and apply Growth Hacking.
- deepen their knowledge about the origin and history of Growth Hacking, also through case studies showing how Growth Hacking is applied in real life.
- get familiar with basic conditions like knowing when a product or service is ready for the market (product-market-fit).
- using and applying A/B testing to find out which version of a website or an application leads to the best possible success.
- increase sales turnover through customer relationship management.
- develop awareness of the importance of data analysis to constantly increase a firm's 'performance'.

Contents

1. Introduction into Growth Hacking
   - 1.1 Definition
   - 1.2 Historical Background and the Origin of Growth Hacking
   - 1.3 Framework and Conditions
2. Generating Growth
   - 2.1 Understanding the Customer
   - 2.2 Developing a Business Model
   - 2.3 Product-Market-Fit and Positioning

2.4 Sales Channels and Funnel Management
2.5 User Experience

3. Growth Hacking Strategies and Workflow
   3.1 Setting up the Right Team
   3.2 Processes
   3.3 Developing Ideas
   3.4 A/B Testing
   3.5 SEO and SEA

4. Customer-Relationship-Management and Acquisition
   4.1 Building a Relationship with your Clients and Customer Experience
   4.2 Content Marketing and Community Management
   4.3 Social Media Marketing
   4.4 E-Mail Marketing
   4.5 Retention and Referrals

5. Data Analysis
   5.1 Marketing Controlling
   5.2 Monitoring
   5.3 Key Performance Indicators (KPIs)

6. Activation and Revenue
   6.1 Usability and Psychology
   6.2 Digital Business Models
   6.3 Freemium and Cross Selling

Literature
Compulsory Reading
Further Reading ▪ Agrawal, P. & Chaubey, R. (2019). The Growth Hacking Book: Most Guarded Growth Marketing Secrets the Silicon Valley Giants Don't Want You To Know. Growth Media AI. ▪ Agrawal, P., Chaubey, R. & Goval, S. (2021). The Growth Hacking Book 2: 100 Proven Hacks for Business and Startup Success in the New Decade. Growth Media AI. ▪ Carnegie, D. (2010). How to Win Friends and Influence People. Pocket Books. ▪ Ellis, S. & Brown, M. (2017). Hacking Growth, How Today's Fastest-Growing Companies Drive Breakout Success. Crown Business, New York. ▪ Fitzpatrick, R. (2013). The Mom Test: How to talk to customers and learn if your business is a good idea when everyone is lying to you. CreateSpace Independent Publishing Platform. ▪ Holiday, R. (2014). Growth Hacker Marketing: A Primer on the Future of PR, Marketing, and Advertising. Penguin Group, New York. ▪ Olsen, D. (2015). The Lean Product Playbook. The product-market-fit pyramid. John Wiley & Son. ▪ Sabry, N. (2020). Ready Set Growth Hack – A Beginner's Guide to Growth Hacking Success. Printed by Sabry, N.

Study Format Distance Learning

Study Format	**Course Type**
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods

Learning Material
- ☑ Course Book
- ☑ Video
- ☑ Audio
- ☑ Slides

Exam Preparation
- ☑ Online Tests
- ☑ Guideline

Seminar: Current Issues in Product Management

Module Code: DLMPROSCPM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	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. Irina Tiemann (Seminar: Current Issues in Product Management)

Contributing Courses to Module

- Seminar: Current Issues in Product Management (DLMPROSCPM01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Written Assessment: Research Essay	

Weight of Module

see curriculum

Module Contents

This course enables the students to delve into relevant, up-to-date topics related to Product Management. These include current issues in Product Management which are discussed in research and practice. The range of topics goes from new data-based tools and approaches to launching digital and sustainable products in today's and future markets to the general influence of major trends and technologies in the context of digitalization and sustainability in Product Management.

Learning Outcomes

Seminar: Current Issues in Product Management

On successful completion, students will be able to

- understand and explain major trends and developments in the field of Product Management.
- examine and judge the influence of such trends as digitalization and/or sustainability on Product Management.
- assess and critically examine the use of new concepts and tools in Product Management in the context of digitalisation and/or sustainability.
- derive conclusions for the future development of Product Management as an interdisciplinary discipline in research and practice.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Business Administration & Management	All Master Programs in the Business & Management field

Seminar: Current Issues in Product Management

Course Code: DLMPROSCPM01

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

Course Description

Digitalization and sustainability are two of the most powerful market influences in business today. Both have led to a great amount of research on how they will change business and society more broadly and management practice more narrowly. In this course students evaluate how these trends are changing the market conditions in which companies operate and what demands are emerging for Product Management. The range of topics goes from new data-based tools and approaches to launching digital and sustainable products in today's and future markets to the more general influence of major trends and technologies in the context of digitalization and sustainability in Product Management.

Course Outcomes

On successful completion, students will be able to

- understand and explain major trends and developments in the field of Product Management.
- examine and judge the influence of such trends as digitalization and/or sustainability on Product Management.
- assess and critically examine the use of new concepts and tools in Product Management in the context of digitalisation and/or sustainability.
- derive conclusions for the future development of Product Management as an interdisciplinary discipline in research and practice.

Contents

- In this course students evaluate how major trends and developments such as digitalization and sustainability are changing the market conditions in which companies operate and what demands are emerging for Product Management. The course enables the students to delve into relevant, up-to-date topics related to Product Management. These include current issues in Product Management in context of digitization and sustainability which are discussed in research and practice. The range of topics goes from new data-based tools and approaches to launching digital and sustainable products in today's and future markets to the general influence of major trends and technologies in context of digitalization and sustainability in Product Management.

Literature
Compulsory Reading
Further Reading ▪ Borek, A. & Prill, N. (2020). Driving digital transformation through data and AI. A practical guide to delivering data science and machine learning products. London: KoganPage. ▪ Agrawal, A., Gans, J. & Goldfarb, A. (2020). how to win with machine learning. In: Harvard Business Review 98 (5). ▪ Rusch, M., Schöggl, J.-P. & Baumgartner, R. J. (2022). Application of digital technologies for sustainable product management in a circular economy: A review. Business Strategy and the Environment ▪ Ellis, S. & Brown, M. (2017). Hacking growth. How today's fastest-growing companies drive breakout success. London: Virgin Books.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Seminar

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Research Essay

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

Project: Customer Discovery and Product Delivery

Module Code: DLMPROPCDPD

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	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. Irina Tiemann (Project: Customer Discovery and Product Delivery)

Contributing Courses to Module

- Project: Customer Discovery and Product Delivery (DLMPROPCDPD01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Oral Project Report	

Weight of Module

see curriculum

Module Contents

To stay competitive in today's market, organizations need to adopt modern approaches to build products which deliver value for customers and businesses. Customer Discovery and Product Delivery as important parts of Product Management have become a critical role for modern organizations, from small technology start-ups to global corporate enterprises. The students will evaluate different methods and tools which have been proven in practice and discussed in the literature.

Learning Outcomes **Project: Customer Discovery and Product Delivery** On successful completion, students will be able to ▪ explain and distinguish general challenges to product development in general and to different phases (customer discovery to product delivery) in particular. ▪ critically examine methods and tools used in the selected project either from their own practice or from self-selected case studies. ▪ discuss and develop their own ideas for improved approaches based on best practice methods and tools discussed in literature.	
Links to other Modules within the Study Program This module is similar to other modules in the field of Business Administration & Management	**Links to other Study Programs of the University** All Master Programs in the Business & Management field

Project: Customer Discovery and Product Delivery

Course Code: DLMPROPCDPD01

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

Course Description

In this course students evaluate the relevance and the practical use of tools and methods in Product Management focusing on product development reaching from customer discovery to product delivery. Students will analyze a product development project either from their own practice or from self-selected case studies. They will describe and critically reflect the used approaches and tools/methods and make recommendations for future projects. The main goal of the course is to enable students to critically evaluate the approaches used in practice and develop their own ideas for improved approaches based on best practice strategies discussed in literature.

Course Outcomes

On successful completion, students will be able to

- explain and distinguish general challenges to product development in general and to different phases (customer discovery to product delivery) in particular.
- critically examine methods and tools used in the selected project either from their own practice or from self-selected case studies.
- discuss and develop their own ideas for improved approaches based on best practice methods and tools discussed in literature.

Contents

- To stay competitive in today's market, organizations need to adopt modern approaches to build products which deliver value for customers and businesses. Customer Discovery and Product Delivery as important parts of Product Management have become a critical role for modern organizations, from small technology start-ups to global corporate enterprises. In this course students evaluate the relevance and the practical use of tools and methods applied in product development reaching from customer discovery to product delivery. Students will analyze a product development project either from their own practice or from self-selected case studies. They will describe and critically reflect approaches and tools/methods used and make recommendations for future projects. The main goal of the course is to enable students to critically evaluate used approaches in the practice and develop their own ideas for improved approaches based on best practice strategies discussed in literature.

Literature
Compulsory Reading
Further Reading ▪ Barsoux, J.-L., Wade, M. & Bouquet, C. (2022). Identifying Unmet Needs in a Digital Age. In: Harvard Business Review 100 (4). ▪ Marty, C. (2018). Inspired. How the best companies create technology-powered products and services. (Second edition). Hoboken, New Jersey: Wiley. ▪ Torres, T. (2021). Continuous discovery habits. Discover products that create customer value and business value. (1. ed.). ▪ Olsen, D. (2015). The lean product playbook. How to innovate with minimum viable products and rapid customer feedback. (Hoboken, NJ: Wiley). ▪ Lombardo, C. T., McCarthy, B., Ryan, E. & Connors, M. K. (2017). Product roadmaps relaunched. How to set direction while embracing uncertainty. Beijing: O'Reilly Media.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Oral Project Report

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

3. Semester

Quality Management and Sustainability

Module Code: DLMEMQMS

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	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. Adrienne Steffen (Quality Management and Sustainability)

Contributing Courses to Module

- Quality Management and Sustainability (DLMEMQMS01)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Exam, 90 Minutes Study Format: myStudies Exam, 90 Minutes	

Weight of Module

see curriculum

Module Contents

- Introduction to quality management
- Processes and problem solving
- Quality techniques
- Standards, auditing, and certification
- Total Quality Management (TQM)
- Introduction to sustainability in engineering
- Sustainability in the business context
- Incorporating sustainability in project management

Learning Outcomes

Quality Management and Sustainability

On successful completion, students will be able to

- analyze the purpose and objectives of operational quality management (QM).
- demonstrate the core task of management and recognize the effectiveness and efficiency of QM systems in the execution of business processes.
- choose and apply the basic concepts of quality and process management.
- model the structure of the QM system and its components.
- appraise the structure of standardization series of standards including the process of requirements for auditing and certification of QM systems.
- relate sustainability to other success factors in engineering and justify its practice.
- distinguish the peculiarities of sustainability in engineering management by interpreting relevant positives and challenges.
- assess the triple bottom line and/or other frameworks for sustainability to design innovative business models.
- combine sustainability norms and practices into engineering project management generating added value for all stakeholders.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the field of Quality and Sustainability Management	All Master Programs in the Transport & Logistics field

Quality Management and Sustainability

Course Code: DLMEMQMS01

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

Course Description

The lecture starts with basic concepts of quality, quality management (QM), quality management system, and customer satisfaction. Afterwards the course deals with the most important operational processes and the quality characteristics of products and services. Quality techniques are the subject of the third section. Requirements for a QM system according to standardization procedures are explained and the procedure for certification and auditing is explained. Other QM models, e.g., the EFQ or TQM, are discussed.The second part of the lecture is dedicated to sustainability for primarily engineering companies followed by noteworthy examples from the domain. A further focus exists on the triple bottom line approach, its obligations, and opportunities. Finally, a detailed analysis of how to incorporate sustainability in engineering project management considering its impact and challenges while factoring in project management practices and standards.

Course Outcomes

On successful completion, students will be able to

- analyze the purpose and objectives of operational quality management (QM).
- demonstrate the core task of management and recognize the effectiveness and efficiency of QM systems in the execution of business processes.
- choose and apply the basic concepts of quality and process management.
- model the structure of the QM system and its components.
- appraise the structure of standardization series of standards including the process of requirements for auditing and certification of QM systems.
- relate sustainability to other success factors in engineering and justify its practice.
- distinguish the peculiarities of sustainability in engineering management by interpreting relevant positives and challenges.
- assess the triple bottom line and/or other frameworks for sustainability to design innovative business models.
- combine sustainability norms and practices into engineering project management generating added value for all stakeholders.

Contents

1. Introduction to quality management
   - 1.1 Classification and meaning
   - 1.2 Managing quality

1.3 Definition and characteristics of quality
1.4 Requirements
1.5 Customer satisfaction

2. Processes and problem solving
   2.1 Processes and process management
   2.2 Process measurement
   2.3 Problem-solving techniques

3. Quality techniques
   3.1 Elementary quality tools (error collection list, flow chart, histogram, Pareto chart, correlation analysis, cause-and-effect diagram, quality control chart)
   3.2 Management tools (affinity diagram, relations diagram, tree diagram, matrix diagram, portfolio diagram, problem decision plan)
   3.3 Other quality techniques (FMEA, QFD, and House of Quality, Design of Experiments, Poka Yoke)

4. Standards, auditing, and certification
   4.1 Standardized quality management systems
   4.2 Auditing and certification

5. Total Quality Management (TQM)
   5.1 TQM as a management approach
   5.2 Principles of TQM
   5.3 TQM in engineering

6. Introduction to sustainability in engineering
   6.1 Defining sustainability in engineering
   6.2 Examples of sustainability in engineering

7. Sustainability in the business context
   7.1 The triple bottom line
   7.2 Obligations and opportunities

8. Incorporating sustainability in project management
   8.1 The impact of sustainability in project management
   8.2 The challenges
   8.3 The practices and standards of project management

Literature
Compulsory Reading
Further Reading ▪ Brzozowska, A., Pabian, A., & Pabian, B. (2021). Sustainability in project management: A functionalapproach. CRC Press. ▪ Foster, S. T. (2017). Managing quality: Integrating the supply chain (Global ed.). Pearson EducationLimited. ▪ Luthra, S., Garg, D., Aggarwal, A., & Mangla, S. K. (2021). Total quality management (TQM): Principles,methods, and applications. CRC Press.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Digital Analytics and Strategies

Module Code: DLMMADAS_E

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

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

Module Coordinator

Rainer Lukas (Digital Analytics and Strategies)

Contributing Courses to Module

- Digital Analytics and Strategies (DLMMADAS01_E)

Module Exam Type

Module Exam	Split Exam
Study Format: Distance Learning Written Assessment: Case Study	

Weight of Module

see curriculum

Module Contents

- Basics of Digital Analytics
- Metrics of Digital Analytics
- Digital key performance indicators (KPIs) and their analysis
- digital strategy development
- further developments and perspectives of Digital Analytics

Learning Outcomes

Digital Analytics and Strategies

On successful completion, students will be able to

- understand the scope of digital analytics and define the field of web analytics including typical goals and application areas.
- understand, select and evaluate central data sources and metrics to analyze and interpret digital marketing data.
- independently plan and conduct web analyses, interpret the results, draw conclusions and discuss these.
- define key performance indicators (KPIs) of digital analytics and derive specific KPIs to answer potential questions.
- conceptually develop, evaluate and optimize a system to measure online performance indicators.
- analyze current or newly developed online strategies by looking at the customer journey and designing targeted measures to optimize the process especially at the contact points.
- evaluate, reflect and select new digital analysis approaches.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the fields of Business Administration & Management	All Master Programs in the Business & Management fields

Digital Analytics and Strategies

Course Code: DLMMADAS01_E

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

Course Description

Marketing has a wide range of online instruments and data at its disposal. However, due to the large number of information sources, it is a challenge to extract data, information and key figures based on their valuable contribution to online marketing strategies. Building on the theoretical foundations of suitable metrics to describe and analyze user behavior, key performance indicators (KPIs) are developed, discussed and reflected with regard to their relevance in online marketing. Subsequently, the acquired knowledge is transferred into online strategies, content marketing measures and online campaigns. The course concludes with the identification and discussion of further development possibilities and digital analytic trends in marketing.

Course Outcomes

On successful completion, students will be able to

- understand the scope of digital analytics and define the field of web analytics including typical goals and application areas.
- understand, select and evaluate central data sources and metrics to analyze and interpret digital marketing data.
- independently plan and conduct web analyses, interpret the results, draw conclusions and discuss these.
- define key performance indicators (KPIs) of digital analytics and derive specific KPIs to answer potential questions.
- conceptually develop, evaluate and optimize a system to measure online performance indicators.
- analyze current or newly developed online strategies by looking at the customer journey and designing targeted measures to optimize the process especially at the contact points.
- evaluate, reflect and select new digital analysis approaches.

Contents

1. Basics of Digital Analytics
   - 1.1 Introduction and Definition of Digital Analytics
   - 1.2 Goals of Digital Analytics
   - 1.3 Data and Information Sources
   - 1.4 Legal Framework

2. Metrics of Digital Analytics
   - 2.1 Fundamentals of Metrics
   - 2.2 Hits, Page Views, Visits and Visitors
   - 2.3 Other Metrics
   - 2.4 Limits of Metrics: Inaccuracies and Ambiguities

3. Digital Key Performance Indicators (KPIs) and Their Analysis
   - 3.1 Search Engine Marketing: Key Figures and Analytical Approaches
   - 3.2 Social Media: Monitoring and Analytical Approaches
   - 3.3 Website: Key Figures and Analytical Approaches
   - 3.4 Email: Key Figures and Analytical Approaches

4. Digital Strategy Development
   - 4.1 Fundamentals of the Customer Journey
   - 4.2 Derivation of Digital Marketing Goals Along the Customer Journey
   - 4.3 Application and Design Possibilities for Digital and Mobile Campaigns
   - 4.4 Application and Design Possibilities for Content Marketing
   - 4.5 Monitoring The Implementation of Strategies and Measures

5. Further Developments and Perspectives of Digital Analytics

Literature

Compulsory Reading

Further Reading

- Angel, G. (2016). Measuring the digital world: Using digital analytics to drive better experiences. Pearson.
- Phillips, J. (2016). Ecommence analytics: Analyze and improve the impact of your digital strategy. Pearson.
- Sponder, M., & Gohar, K. (2018). Digital analytics for marketing. Routledge.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Digital Transformation and Product Management

Module Code: DLMPROEDTPM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Carolin Egger (Fundamentals of Digital Product Management) / Prof. Dr. Margit Sarstedt (Hybrid Project Management in Digital Transformation)

Contributing Courses to Module

- Fundamentals of Digital Product Management (DLMPROFDPM01)
- Hybrid Project Management in Digital Transformation (DLMADTHPDT01_E)

Module Exam Type

Module Exam	Split Exam
	Fundamentals of Digital Product Management • Study Format "Distance Learning": Exam or Written Assessment: Written Assignment, 90 Minutes Hybrid Project Management in Digital Transformation • Study Format "Distance Learning": Oral Assignment

Weight of Module

see curriculum

Module Contents

Fundamentals of Digital Product Management

- General Opportunities and Challenges in Digital Product Management
- Characteristics of Digital Products and Business Models
- Methods for Digital Product Management
- Data-Driven Approaches for Product Management
- Marketing in Digital Product Management
- Contemporary Organizational Forms

Hybrid Project Management in Digital Transformation

- Project Management and Digitalization
- Norms, Standards and Project Management Certifications
- Traditional Project Management
- Agile Project Management
- Hybrid Project Management
- Lateral Leadership in Hybrid Project Management
- Application of Hybrid Project Management in Digital Transformation

Learning Outcomes

Fundamentals of Digital Product Management

On successful completion, students will be able to

- explain and distinguish the general challenges in digital product management and VUCA / BANI business environments.
- critically examine the value creation by using digital technologies and develop an appropriate digital marketing mix based on personalization and automation from that.
- align data-driven approaches in digital product management and derive appropriate measures from data analytics including the aspects of AR / VR / AI.
- critically reflect on contemporary organizational forms enhancing digital products and business models.
- systematically reflect on the concepts and importance of digital product management.

Hybrid Project Management in Digital Transformation

On successful completion, students will be able to

- answer the question of the relevance of new forms of project management in the context of digital transformation.
- assess the relevance of key norms, standards and certifications for hybrid project management.
- select the right principles and process models from the traditional and agile project management options for digital change projects.
- design organization-specific hybrid process models for project management.
- convey central principles of lateral leadership for hybrid project management.
- apply hybrid project management principles with a particular focus on digital transformation.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the fields of Business Administration & Management and Project Management	All Master Programs in the Business & Management field

Fundamentals of Digital Product Management

Course Code: DLMPROFDPM01

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

Course Description

This course aims at providing students with an overview of the particularities in digital product management. The course outlines how uncertainty constantly accompanies digital products and how digitally savvy customers must be addressed. Looking into the methods and tools of digital product management, the course also highlights how data-driven approaches are one of the main contributors to product development and improvement. Further, marketing aspects, such as crowd sourcing and funding, growth hacking, and individual pricings are considered. By discussing contemporary organizational models and considering new work aspects such as remote employees and diversity challenges, the course concludes with a broader perspective on product management. As a result, it helps students to develop an interdisciplinary understanding of product management and its opportunities and challenges in the digital transformation.

Course Outcomes

On successful completion, students will be able to

- explain and distinguish the general challenges in digital product management and VUCA / BANI business environments.
- critically examine the value creation by using digital technologies and develop an appropriate digital marketing mix based on personalization and automation from that.
- align data-driven approaches in digital product management and derive appropriate measures from data analytics including the aspects of AR / VR / AI.
- critically reflect on contemporary organizational forms enhancing digital products and business models.
- systematically reflect on the concepts and importance of digital product management.

Contents

1. General Challenges in Digital Product Management
   - 1.1 Relevance of Digital Trends in Product Management
   - 1.2 VUCA Versus BANI Business Environments
   - 1.3 Cynefin-Framework for Product Management
   - 1.4 Designing for Evolving Users
   - 1.5 Design for Change
2. Characteristics of Digital Products and Business Models

2.1 Digitally Savvy Customers
2.2 Value Creation Using Digital Technologies
2.3 Individuality & Customization
2.4 Personalization & Automation
2.5 Indestructibility, Transmutability & Reproducibility

3. Methods for Digital Product Management
3.1 Agile (Software) Development
3.2 Minimum Viable Products
3.3 Rapid Prototyping
3.4 Scrum
3.5 Kanban

4. Data-Driven Approaches for Product Management
4.1 Data as Central Perspective
4.2 Data Sources Along the Product Lifecycle
4.3 Data Analytics
4.4 Augmented & Virtual Reality Approaches
4.5 Artificial Intelligence in Product Management

5. Marketing in Digital Product Management
5.1 Customer Co-Creation & Crowd Sourcing
5.2 Crowd Funding
5.3 Growth Hacking
5.4 Individual Pricing

6. Contemporary Organizational Forms
6.1 Objectives & Key Results
6.2 Lateral Leadership
6.3 Remote Employees
6.4 Cross-Cultural Aspects and Diversity Considerations
6.5 Contemporary Practical Approaches in Business Management

Literature
Compulsory Reading
Further Reading ▪ Cagan, M. & Jones, C. (2021). Empowered: Ordinary People, Extraordinary Products. Wiley. ▪ LeMay, M. (2022). Product Management in Practice: A Practical, Tactical Guide for Your First Day and Every Day After. O'Reilly. ▪ Project Management Institute, (2021). A Guide to the Project Management Body of Knowledge (PMBOK ® Guide). Project Management Institute. ▪ Utesheva, A. (2020). Designing Products for Evolving Digital Users: Study UX Behaviour Patterns, Online Communities, and Future Digital Trends. Berkley. ▪ Borek, A. & Prill, N. (2020). Driving digital transformation through data and AI. A practical guide to delivering data science and machine learning products. Kogan Page.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam or Written Assessment: Written Assignment, 90 Minutes

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
100 h	0 h	25 h	25 h	0 h	150 h

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	☑ Guideline
	☑ Slides	

Hybrid Project Management in Digital Transformation

Course Code: DLMADTHPDT01_E

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

Course Description

Digitalization is accompanied by immense change processes in society, business and industry and it is increasingly influencing classic management approaches. Traditional project management can still be found in many industrial companies and is also affected by this digital transformation. Due to the high degree of standardization in traditional project management, there is an increasing need to integrate more flexibility and dynamics through agile approaches. However, especially in corporate practice, many project managers are unsure when to fall back on agile and when on classic project management principles. Especially in the context of digital change projects in classic industrial companies, a combination of agile and traditional tools and principles therefore proves to be advantageous, which can be summarized with the term "hybrid project management". Against this background, this course teaches important basics of traditional, agile and hybrid project management. In addition, important lateral management principles and application fields of hybrid project management will be highlighted.

Course Outcomes

On successful completion, students will be able to

- answer the question of the relevance of new forms of project management in the context of digital transformation.
- assess the relevance of key norms, standards and certifications for hybrid project management.
- select the right principles and process models from the traditional and agile project management options for digital change projects.
- design organization-specific hybrid process models for project management.
- convey central principles of lateral leadership for hybrid project management.
- apply hybrid project management principles with a particular focus on digital transformation.

Contents

1. Project Management and Digitalization
    - 1.1 Impact of the Digital Transformation on Project Management
    - 1.2 Terminology: Project and Project Management
    - 1.3 Project Portfolio, Multi-project and Program Management
    - 1.4 Project Management Philosophies: Classic, Agile and Hybrid

1.5 New Approaches to Project Management in Digital Change Projects

2. Norms, Standards and Certifications in Project Management
   - 2.1 ISO 21500
   - 2.2 International Project Management Association (IPMA)
   - 2.3 Project Management Institute (PMI)
   - 2.4 PRINCE2
   - 2.5 Agile standards

3. Traditional Project Management
   - 3.1 Classification of Traditional Project Management Methodologies
   - 3.2 Phases in Traditional Project Management
   - 3.3 Continuous Tasks in Traditional Project Management

4. Agile Project Management
   - 4.1 Agile Manifesto and Agile Values
   - 4.2 Agile Frameworks: Scrum and Kanban
   - 4.3 Lean Project Management

5. Hybrid Project Management
   - 5.1 Selection Criteria for Project Management Methodologies
   - 5.2 Configuration of Organization-specific Hybrid Project Management Methodologies
   - 5.3 Integrated Application of Agile and Traditional Project Management Principles
   - 5.4 Project Organization in the Hybrid Approach
   - 5.5 Software Tools in Hybrid Projects

6. Lateral Leadership in Hybrid Project Management
   - 6.1 Management without Disciplinary Authority to Issue Directives
   - 6.2 Leadership Concepts and Styles for Hybrid Project Management
   - 6.3 Team Composition and Development
   - 6.4 Interdisciplinarity of Hybrid Projects in Digitalization
   - 6.5 Team Dynamics and Conflict Management

7. Application of Hybrid Project Management in Digital Transformation
   - 7.1 Hybrid Project Management in Interdisciplinary Product Development
   - 7.2 Hybrid Project Management in Strategic Innovation Management
   - 7.3 Hybrid Project Management in Digital Change Projects
   - 7.4 Further Case Studies and Practical Examples

Literature
Compulsory Reading
Further Reading ▪ Cobb, C. G. (2015): The project manager's guide to mastering agile. Principles and practices for an adaptive approach, John Wiley & Sons. ▪ Martinelli, R. J./Milosevic, D. Z. (2016): Project Management ToolBox. Tools and Techniques for the Practicing Project Manager. 2. Aufl., Wiley, s.l. ▪ Measey, P. et al. (2015): Agile Foundations. Principles, practices and frameworks, BCS Learning & Development Limited, Swindon. ▪ Project Management Institute (2017): Agile Practice Guide, Project Management Institute, Inc. (PMI). ▪ Wysocki, R. K. (2019): Effective Project Management. Traditional, Agile, Extreme, Hybrid, Wiley, Indianapolis.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Oral Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	

Agile, Social and Creative Methods

Module Code: DLMPROECAM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Anne-Kristin Langner (Design, Lean and Game: Social and creative methods) / Prof. Dr. Thomas Winkle (Agile Project Management)

Contributing Courses to Module

- Design, Lean and Game: Social and creative methods (DLMOMDLG01_E)
- Agile Project Management (DLMIEEAPM01)

Module Exam Type

Module Exam	Split Exam
	Design, Lean and Game: Social and creative methods • Study Format "Distance Learning": Oral Assignment Agile Project Management • Study Format "Distance Learning": Written Assessment: Case Study

Weight of Module

see curriculum

Module Contents

Design, Lean and Game: Social and creative methods

- Agile Working Environments
- Business Model Innovation
- Design Thinking
- Lean Management
- Lean Startup
- Game Thinking
- Giving Impact to Customers (The Crowd)

Agile Project Management

- Fundamentals of Agile Methods in Project Management
- Traditional and Agile Approaches to Project Management
- Agile Project Management With Scrum
- Agile Project Management With Kanban
- Implementing Agile Within the Organization
- Expanding Agile Across the Organization

Learning Outcomes

Design, Lean and Game: Social and creative methods

On successful completion, students will be able to

- understand and analyze agile and innovative working environments.
- create agile and innovative working environments.
- evaluate and apply social and creative methods.
- evaluate and apply customer-oriented ways of thinking and working.
- build prototypes, work with toolkits and visualize processes.

Agile Project Management

On successful completion, students will be able to

- understand the significance of agile methods to efficiently and effectively manage projects within and across organizations.
- compare the major characteristics of traditional and agile approaches to project management.
- apply the Scrum methodology as a main framework of agile project management.
- apply the Kanban methodology as a main framework of agile project management.
- implement agile value-driven strategies and effective agile product roadmaps into the organization.
- judge the scaling of agile practices across the entire organization.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of Business & Management	All Master Programs in the Methods and Project Management fields

Design, Lean and Game: Social and creative methods

Course Code: DLMOMDLG01_E

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

Course Description

Design, Lean and Game. Three words that sound so different, but – when it comes to their application as methods – have commonalities. They all can be characterized as social, since they consist of team- and group-oriented ways of collaboration. Furthermore, they redefine companies' views on the customer as the customer becomes part of the process or even the core of the business model. All principles can be called creative, too. Either due to the fact that they imply a hands-on-mentality, like building a prototype or working with a toolkit, or because of the idea that processes and workflows should be visualized. When it comes to agile and innovative working environments, one of these principles is often implemented. That is why the course starts with an introduction to agility and business model innovation in general followed by specific sections on Design Thinking, Lean Management, Lean Startup and Game Thinking as one of the latest concepts. Moving from general to special and back to general, the course closes with a section on the impact of the crowd (and therefore the customers). Principles like Crowdfunding or Crowdsourcing give customers a huge impact on, for instance, funding or product design processes.

Course Outcomes

On successful completion, students will be able to

- understand and analyze agile and innovative working environments.
- create agile and innovative working environments.
- evaluate and apply social and creative methods.
- evaluate and apply customer-oriented ways of thinking and working.
- build prototypes, work with toolkits and visualize processes.

Contents

1. Agility
   - 1.1 Basics
   - 1.2 Dimensions
   - 1.3 Chances and Risks
2. Business Model Innovation
   - 2.1 Basics
   - 2.2 Value Innovation

Literature
Compulsory Reading
Further Reading ▪ Helmhold, M. (2020): Lean Management and Kaizen. Fundamentals From Cases and Examples in Operations and Supply Chain Management. Springer Nature, Cham. ▪ Kim, A. J. (2018): Game Thinking: Innovate smarter & drive deep engagement with design techniques from hit games. gamethinking.io, Burlingame. ▪ Ries, E. (2017): The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. Penguin, London.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Oral Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Agile Project Management

Course Code: DLMIEEAPM01

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

Course Description

Agile methods accelerate the development and delivery of a product or service by the division of tasks into short phases of work and frequent reassessment and adaptation of plans. While originally used for software programming, the agile methodology has become a widely used approach in many areas of business. When applied to project management situations, agile contributes to a more flexible planning, a faster determining of the requirements and a more effective executing of a project. The concept of agile is based on the Agile Manifesto which includes four key values and twelve main principles to guide an iterative and people-centric managing of projects. In this course, students are introduced to the agile project management framework with an emphasis on the product owner's role. They learn how to develop the product vision and the product roadmap, organize the project team, identify user roles, write user stories and establish an operant project risk management. This way, students shall also develop a mindset for the agile methodology. The course puts a special emphasis on the Scrum and Kanban framework as two main pillars to agilely manage projects within and across organizations.

Course Outcomes

On successful completion, students will be able to

- understand the significance of agile methods to efficiently and effectively manage projects within and across organizations.
- compare the major characteristics of traditional and agile approaches to project management.
- apply the Scrum methodology as a main framework of agile project management.
- apply the Kanban methodology as a main framework of agile project management.
- implement agile value-driven strategies and effective agile product roadmaps into the organization.
- judge the scaling of agile practices across the entire organization.

Contents

1. Fundamentals of Agile Methods in Project Management
   - 1.1 Definition and Significance of Agile Methods in Project Management
   - 1.2 The Agile Manifesto
   - 1.3 The Agile Values and Principles
2. Traditional and Agile Approaches to Project Management

2.1 Traditional Approaches to Project Management
2.2 Agile Approaches to Project Management
2.3 Comparison of Traditional versus Agile Project Management

3. Agile Project Management with Scrum
3.1 Scrum Values and Principles
3.2 Scrum Roles, Events and Artifacts
3.3 Application Areas of Scrum

4. Agile Project Management with Kanban
4.1 Kanban Values and Principles
4.2 Kanban Boards and Cards
4.3 Application Areas of Kanban

5. Implementing Agile within the Organization
5.1 Implementing Agile Value-driven Delivery Strategies
5.2 Creating an Effective Agile Product Roadmap
5.3 Coaching an Agile Team

6. Expanding Agile across the Organization
6.1 Agile at Scale Practices across the Organization
6.2 Agile Portfolio Management
6.3 Scaled Agile Framework (SAFe)

Literature

Compulsory Reading

Further Reading

- Schwaber, K., & Sutherland, J. (2020). The 2020 Scrum guide. ScrumGuides.
- Winkle, T. (2022). Product development within artificial intelligence, ethics, and legal risk: Exemplary for safe autonomous vehicles. Springer.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests
☑ Video	☑ Guideline
☑ Audio	
☑ Slides	

Entrepreneurship and Disruptive Innovation

Module Code: DLMPROEEI

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Esin Bozyazi (Entre- and Intrapreneurship) / Sabine Pur (Disruptive Innovation)

Contributing Courses to Module

- Entre- and Intrapreneurship (DLMIEEEIS01)
- Disruptive Innovation (DLMIEEEDT01)

Module Exam Type

Module Exam	Split Exam
	Entre- and Intrapreneurship • Study Format "Distance Learning": Exam, 90 Minutes (100) • Study Format "myStudies": Exam, 90 Minutes Disruptive Innovation • Study Format "Distance Learning": Exam, 90 Minutes

Weight of Module

see curriculum

Module Contents

Entre- and Intrapreneurship

- Fundamentals of Entrepreneurship
- Fundamentals of Intrapreneurship
- Entrepreneurs and Intrapreneurs
- Corporate Innovation Management
- Methods of Innovation Management
- Innovation Management in Practice

Disruptive Innovation

- Major Areas of Innovation
- Introduction to Disruptive Innovation
- The Process of Disruption
- Significance of Disruptive Innovation
- Management of Disruptive Innovation
- Examples of Disruptive Innovation

Learning Outcomes

Entre- and Intrapreneurship

On successful completion, students will be able to

- define the motives, goals and relevance of entrepreneurship as a driver for economic wealth and social prosperity.
- determine the motives, goals and relevance of intrapreneurship as a driver for creating a competitive advantage for an organization.
- analyze the preconditions and determinants that shape an entre- and intrapreneurial mindset.
- explain the types, drivers and success factors of corporate innovation as well as the management practices to foster innovation.
- apply main management methods to create, discover and realize business opportunities.
- derive best-practice learnings from the innovation management of existing companies for own business ventures and innovation activities.

Disruptive Innovation

On successful completion, students will be able to

- explain the definitions and basic theory dealing with disruptive innovation.
- distinguish disruptive innovation from other forms of innovation.
- assess major areas in which disruptive innovation may occur.
- understand the essential elements of the process of disruption.
- determine and evaluate the significance of disruptive innovation.
- comprehend and evaluate examples of disruptive innovation.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of Business & Management	All Master Programs in the Business Administration & Management fields

Entre- and Intrapreneurship

Course Code: DLMIEEEIS01

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

Course Description

Entre- and intrapreneurship are the engine for economic wealth and social progress and a core element of the innovation capacity of a company. Whereas entrepreneurship refers to entrepreneurs who design and build up an own business, intrapreneurship is related to individuals who work on developing new ideas and products within the confines of the business that they already work at. Intrapreneurs include any person within the company that applies entrepreneurial skills, vision, and forward thinking into the role that they have in the company. Both entrepreneurs and intrapreneurs have a drive to foster innovation whenever possible, which is why they share many traits between them, such as persistence, determination, goal orientation, opportunity seeking and hard working. A main difference lies in the risk involved in being an entrepreneur or intrapreneur. Entrepreneurs are required to take on all of the risk that comes along with developing a business, which means that the losses can be significant if failure occurs. However, the rewards can also be practically incalculable. As for intrapreneurs, the risks are minimal, which is also true of the rewards. This course introduces the students to these commonalities and differences of entre- and intrapreneurship. The course is designed to support the students in finding and determining their own motives and goals of becoming an entre- or intrapreneur. The main characteristics of entre- and intrapreneurship are discussed and related to the methods and practices of innovation management. An insight into the innovation management of well-known companies fosters the transfer of the theoretical concepts of entre- and intrapreneurship to a practical context.

Course Outcomes

On successful completion, students will be able to

- define the motives, goals and relevance of entrepreneurship as a driver for economic wealth and social prosperity.
- determine the motives, goals and relevance of intrapreneurship as a driver for creating a competitive advantage for an organization.
- analyze the preconditions and determinants that shape an entre- and intrapreneurial mindset.
- explain the types, drivers and success factors of corporate innovation as well as the management practices to foster innovation.
- apply main management methods to create, discover and realize business opportunities.
- derive best-practice learnings from the innovation management of existing companies for own business ventures and innovation activities.

Contents

Literature
Compulsory Reading
Further Reading ▪ Brown, T. (2019). Change by design, revised and updated: How design thinking transformsorganizations and inspires innovation. Harper Business. ▪ Kuratko, D. F. (2020). Entrepreneurship: Theory, process, and practice (11th ed.). Cengage Learning. ▪ Lewrick, M. (2022). Design thinking for business growth: How to design and scale business modelsand business ecosystems. Wiley.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Disruptive Innovation

Course Code: DLMIEEEDT01

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

Course Description

The term “Disruptive Innovation” was defined by the American scholar Clayton M. Christensen. A disruptive innovation is an innovative product, service, or business model that eventually overturns the existing dominant businesses in the market. It is therefore also about the failure of incumbent companies to stay on top of their industries when they encounter disruptive types of market and technological changes. Disruptive innovations tend to be produced by small teams, outsiders, or entrepreneurs in start-ups, rather than existing market-leading companies. This module focusses on the process of disruption and the significance of disruptive innovation. It highlights approaches for its management and concludes with examples of disruptive innovations from recent years.

Course Outcomes

On successful completion, students will be able to

- explain the definitions and basic theory dealing with disruptive innovation.
- distinguish disruptive innovation from other forms of innovation.
- assess major areas in which disruptive innovation may occur.
- understand the essential elements of the process of disruption.
- determine and evaluate the significance of disruptive innovation.
- comprehend and evaluate examples of disruptive innovation.

Contents

1. Major Areas of Innovation
   - 1.1 Invention Versus Innovation
   - 1.2 Product and Service Innovation
   - 1.3 Business Model Innovation
   - 1.4 Process and Technology Innovation
   - 1.5 Social and Environmental Innovation
2. Introduction to Disruptive Innovation
   - 2.1 Theory of Disruptive Innovation
   - 2.2 Definition and Classification of Disruptive Innovation
   - 2.3 Types of Disruptive Innovation

2.4 Characteristics of Disruptive Innovation

3. The Process of Disruption
   - 3.1 Modelling Theory of Disruptive Innovation
   - 3.2 Performance Oversupply
   - 3.3 Asymmetry of Motivation
   - 3.4 New-Market-, and Low-End Disruption Process
   - 3.5 Performance Trajectories

4. Significance of Disruptive Innovation
   - 4.1 Characteristics of Disruptor Companies
   - 4.2 Implication for Incumbent Companies
   - 4.3 Possible Responses to Disruptive Innovations

5. Management of Disruptive Innovation
   - 5.1 Triggers of Disruptive Innovation
   - 5.2 “Designing” Disruptive Innovation
   - 5.3 Implementing Disruptive Innovation

6. Examples of Disruptive Innovation
   - 6.1 Retail Versus Amazon
   - 6.2 Physical Media Versus Music/Video Streaming Services
   - 6.3 Hotels Versus Airbnb/Taxis Versus Uber
   - 6.4 In-Classroom Teaching Versus Distance Learning
   - 6.5 Traditional Manufacturing Versus 3D Printing

Literature
Compulsory Reading
Further Reading ▪ Christensen, C. M. (1997): The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail. Boston, MA: Harvard Business School Press. ▪ Gutsche, J., & Gladwell, M. (2020). Create the future: Tactics for disruptive thinking ; The innovation handbook. Fast Company Press. ▪ Silberzahn, P. (DL 2018). A manager's guide to disruptive innovation: Why great companies fail in the face of disruption and how to make sure your company doesn't ((B. Alger, Trans.)). Diateino. ▪ Tidd, J. (2020). Digital disruptive innovation. Series on technology management. World Scientific. ▪ Le Merle, M. C., & Davis, A (2017). Corporate innovation in the fifth era: Lessons from Alphabet/Google, Amazon, Apple, Facebook, and Microsoft.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Consumer Behavior and Brand Management

Module Code: DLMIEEECBBM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Caterina Fox (International Consumer Behavior) / Caterina Fox (Global Brand Management)

Contributing Courses to Module

- International Consumer Behavior (DLMBCBR01)
- Global Brand Management (DLMBSPBE01)

Module Exam Type

Module Exam	Split Exam
	<u>International Consumer Behavior</u> • Study Format "Distance Learning": Exam, 90 Minutes <u>Global Brand Management</u> • Study Format "Distance Learning": Exam, 90 Minutes • Study Format "myStudies": Exam, 90 Minutes

Weight of Module

see curriculum

Module Contents

International Consumer Behavior

- Consumer Behavior
- The Consumer Decision-Making Process
- Internal Influences on Consumer Behavior
- External Influences on Consumer Behavior
- International Consumer Behavior
- International Marketing Strategy and Consumer Behavior

Global Brand Management

For most companies, a major opportunity to grow their business involves looking for possibilities outside their native country. However, taking brands beyond national boundaries presents a new set of branding issues as the global marketplace is constantly changing. At the same time, various forms of regionalization are taking place, adding another layer of complexity to managing a brand portfolio. Arguably, products, pricing and distribution are increasingly becoming commodities and the new competitive arena is brand value, creating long-term, profitable brand relationships. Ultimately, strong brands will transcend industries and provide an organization with one of its most valuable assets. This course ultimately aims to introduce students to the differentiation of products and services in a world of alternatives and the benefits/disadvantages of providing customers with the power of choice.

Learning Outcomes

International Consumer Behavior

On successful completion, students will be able to

- outline the purchase decision-making process undertaken by the consumer.
- describe the internal and external influences on the consumer decision-making processes.
- identify the different research methods available to companies to collect relevant data regarding their consumers and their behavior
- develop a plan to generate required market research data regarding consumer behavior and decision-making.
- be able to generate, analyze, interpret and report relevant data regarding consumers.
- present the key concepts characterizing international consumer behavior and discuss their impact on global marketing strategies.

Global Brand Management

On successful completion, students will be able to

- analyze brands, brand components and brand management.
- examine how brands are positioned and re-positioned in regional, national and international markets and explore the concept of shared- and co-operative branding.
- promote the importance of brand valuation and measurement techniques within their company.
- form and apply tactics to address brand falsification and protection as well as to develop strategies to manage a brand crisis.
- analyze the main challenges facing international brands, and be able to measure their brand equity
- understand the factors that contribute to increasing or losing consumer-based brand equity.
- analyze a company's current brand strategy and propose viable alternatives as well as make informed decisions with greater probability of success.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Marketing & Sales	All Master Programs in the Marketing & Communication field

International Consumer Behavior

Course Code: DLMBCBR01

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

Course Description

In a global economy characterized by greater competition, companies operating internationally need comprehensive market-driven strategies to survive in the market place. The course provides students with the relevant concepts for understanding the international environment of the company with focus on the demand side/the consumer. Students learn how differences in culture, economic systems, and political environments impact consumers' behavior in terms of decision-making in the fields of acquisition, consumption, and disposal of products, services, experiences, and ideas.

Course Outcomes

On successful completion, students will be able to

- outline the purchase decision-making process undertaken by the consumer.
- describe the internal and external influences on the consumer decision-making processes.
- identify the different research methods available to companies to collect relevant data regarding their consumers and their behavior
- develop a plan to generate required market research data regarding consumer behavior and decision-making.
- be able to generate, analyze, interpret and report relevant data regarding consumers.
- present the key concepts characterizing international consumer behavior and discuss their impact on global marketing strategies.

Contents

1. Consumer Behavior
   - 1.1 Consumer Behavior and International Marketing
   - 1.2 Consumer Decision-Making in the Marketplace
2. The Consumer Decision-Making Process
   - 2.1 The Pre-Purchase Stage
   - 2.2 The Purchase Stage
   - 2.3 The Post-Purchase Stage
3. Internal Influences on Consumer Behavior
   - 3.1 Motives and Motivation

3.2 Perception
3.3 Attitude

4. External Influences on Consumer Behavior
   4.1 Culture
   4.2 Subculture
   4.3 Groups and Families

5. International Consumer Behavior
   5.1 Cultural Dimensions
   5.2 The Influence of Social Media on Consumer Decision-Making

6. International Marketing Strategy and Consumer Behavior
   6.1 International Market Segmentation and Product Positioning
   6.2 Consumer Behavior and Product Strategy
   6.3 Consumer Behavior and Communication Strategy
   6.4 Consumer Behavior and Pricing Strategy
   6.5 Consumer Behavior and Distribution Strategy

Literature

Compulsory Reading

Further Reading

- Schiffman, L. G., & Kanuk, L. L. (2014). Consumer behavior. Frenchs Forest.: Pearson Education Australia.
- Solomon, M. (2016). Consumer behavior: Buying, having, and being (12th ed.). New York City, NY: Pearson.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Global Brand Management

Course Code: DLMBSPBE01

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

Course Description

For most companies, a major opportunity to grow their business involves looking for possibilities outside their native country. However, taking brands beyond national boundaries presents a new set of branding issues as the global marketplace is constantly changing. At the same time, various forms of regionalization are taking place, adding another layer of complexity to managing a brand portfolio. Arguably, products, pricing and distribution are increasingly becoming commodities and the new competitive arena is brand value, creating long-term, profitable brand relationships. Ultimately, strong brands will transcend industries and provide an organization with one of its most valuable assets. This course ultimately aims to introduce students to the differentiation of products and services in a world of alternatives and the benefits/disadvantages of providing customers with the power of choice.

Course Outcomes

On successful completion, students will be able to

- analyze brands, brand components and brand management.
- examine how brands are positioned and re-positioned in regional, national and international markets and explore the concept of shared- and co-operative branding.
- promote the importance of brand valuation and measurement techniques within their company.
- form and apply tactics to address brand falsification and protection as well as to develop strategies to manage a brand crisis.
- analyze the main challenges facing international brands, and be able to measure their brand equity
- understand the factors that contribute to increasing or losing consumer-based brand equity.
- analyze a company's current brand strategy and propose viable alternatives as well as make informed decisions with greater probability of success.

Contents

1. Introduction to Global Brand Management
   - 1.1 Brand, Brand Equity, and Brand Value
   - 1.2 Brand Management and Brand Leadership
   - 1.3 Integrating Marketing Activities
2. Culture and Branding

Literature
Compulsory Reading
Further Reading ▪ Aaker, D. A. (1991). Managing brand equity. New York, NY: Free Press. ▪ Aaker, D. A. (2010). Building Strong Brands. Pocket Books. – 1995th ed. Available. ▪ Keller, K. L., & Swaminathan, V. (2020). Strategic brand management. Building, measuring, and managing brand equity (Fifth edition, global edition). Pearson.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Digitalized Production

Module Code: DLMPROEDP

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Eric Guiffo Kaigom (Platforms and Technologies as Enablers of Digital Transformation in Production) / Prof. Dr. Eric Guiffo Kaigom (Seminar: Intelligent Decision Support Systems for Digitalized Production)

Contributing Courses to Module

- Platforms and Technologies as Enablers of Digital Transformation in Production (DLMDTMPTETP01)
- Seminar: Intelligent Decision Support Systems for Digitalized Production (DLMDTMSIDSDP01)

Module Exam Type

Module Exam	Split Exam
	Platforms and Technologies as Enablers of Digital Transformation in Production • Study Format "Distance Learning": Exam or Written Assessment: Case Study, 90 Minutes Seminar: Intelligent Decision Support Systems for Digitalized Production • Study Format "Distance Learning": Written Assessment: Research Essay

Weight of Module

see curriculum

Module Contents

Platforms and Technologies as Enablers of Digital Transformation in Production

- Digital Engineering
- Smart Production Operations
- Intelligent Robotized Automation
- Privacy-Aware and Secure Production
- Integrated Infrastructures and Architectures
- Applications and Trends

Seminar: Intelligent Decision Support Systems for Digitalized Production

The course covers current topics in data-driven decision support systems. Participants demonstrate their capability to collect and scrutinize data as well as synthesize, structure, and present relevant information about a topic to a broad audience.

Learning Outcomes

Platforms and Technologies as Enablers of Digital Transformation in Production

On successful completion, students will be able to

- describe architectures of digital platforms and technologies for production purposes.
- integrate functionalities of digital tools to carry out digital transformations in production.
- explain how privacy-aware secure data management strenghtens platform functionalities.

Seminar: Intelligent Decision Support Systems for Digitalized Production

On successful completion, students will be able to

- understand recent developments in data-driven decision support systems.
- unfold and present non-nominal insights from data to make informed decisions.
- transfer theoretical knowledge and methods to new domains.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of IT & Technology	All Master Programs in the Engineering field

Platforms and Technologies as Enablers of Digital Transformation in Production

Course Code: DLMDTMPTETP01

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

Course Description

This course instills competencies in participants for the understanding and usage of platforms and technologies that help companies adapt their production capabilities and benefit from volatile demands and opportunities from markets. Knowledge is provided to participants to critically explore goals, architectures, and effectiveness logics of underlying technological levers as well as their integration to propel smart production. Participants develop and sharpen their skills in the evaluation and application of core data-driven and privacy-aware functionalities that help sustainably tap into new markets and offer an individualized and trustworthy experience to customers. The course familiarizes participants with an up-to-date panoramic view of trends and emerging concepts around platforms and technologies that drive digital transformations.

Course Outcomes

On successful completion, students will be able to

- describe architectures of digital platforms and technologies for production purposes.
- integrate functionalities of digital tools to carry out digital transformations in production.
- explain how privacy-aware secure data management strenghtens platform functionalities.

Contents

1. Digital Engineering
   - 1.1 Big Data Analytics
   - 1.2 Rapid Prototyping
   - 1.3 Digital Shadow and Twin
   - 1.4 Simulation-Driven Virtual Testbeds
   - 1.5 Cyber-Physical Production Systems
2. Smart Production Operations
   - 2.1 Communication Standards
   - 2.2 Industrial Monitoring
   - 2.3 Extended Reality
   - 2.4 Workforce Collaboration Interfaces

2.5 Customer Access Interfaces

3. Intelligent Robotized Automation
   - 3.1 Smart Integration
   - 3.2 Production Consistency
   - 3.3 Additive Manufacturing
   - 3.4 Robotized Reconfiguration
   - 3.5 Human-Robot-Collaboration

4. Privacy-Aware and Secure Production
   - 4.1 Privacy by Design
   - 4.2 Privacy by Default
   - 4.3 Blockchains
   - 4.4 Secure Connectors
   - 4.5 Trusted Multiparty Cloud Computing

5. Integrated Infrastructures and Architectures
   - 5.1 Industrial Internet of Things
   - 5.2 Internet of Production
   - 5.3 Distributed Ledgers

6. Applications and Trends
   - 6.1 Industry 4.0
   - 6.2 Made in China 2025
   - 6.3 Manufacturing USA
   - 6.4 Uganda's National 4IR Strategy
   - 6.5 I-Korea 4.0

Literature

Compulsory Reading

Further Reading

- Elangovan, U. (2020). Product Lifecycle Management (PLM): A Digital Journey Using Industrial Internet of Things (IIoT). CRC Press.
- Mudler, J. (2020). Multi-Cloud Architecture and Governance: Leverage Azure, AWS, GCP, and VMware vSphere to build effective multi-cloud solutions (1st edition). Packt Publishing.
- Tao, F., Zhang, M., & Nee, A. Y. C. (2019). Digital twin driven smart manufacturing. Academic Press.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam or Written Assessment: Case Study, 90 Minutes

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
100 h	0 h	25 h	25 h	0 h	150 h

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	☑ Guideline
☑ Slides	

Seminar: Intelligent Decision Support Systems for Digitalized Production

Course Code: DLMDTMSIDSDP01

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

Course Description

In this course, participants develop and demonstrate their capability to selectively embrace a specific topic on intelligent decision support systems, consistently merge information that address identified topic objectives, and share results with e.g. an academic and/or industrial audience. The course is evolutive as it focuses on up-to-date achievements in intelligent decision support systems that deliver value to organizations and customers as well. Hence, participants will be equipped with techniques that foster how to retrieve and distill their insights into targeted business units upon completion of this course.

Course Outcomes

On successful completion, students will be able to

- understand recent developments in data-driven decision support systems.
- unfold and present non-nominal insights from data to make informed decisions.
- transfer theoretical knowledge and methods to new domains.

Contents

- Participants will be exposed to and address recent developments in the field of data-driven decision support systems. Potential topics include (but are not limited to) challenges and opportunities around privacy-aware data management in production, simulation-driven what-if-analysis and -optimization in cyber-physical production systems to propel manufacturing, ontology-based knowledge management for individualized customer management and context-aware intelligent production, value creation based upon digital twins for disruptive product services, hybrid artificial intelligence-/machine learning-supported recommendations to cope with production uncertainties.

Literature
Compulsory Reading
Further Reading ▪ Manesh, M. F., Pellegrini, M. M., Marzi, G., & Dabic, M. (2020). Knowledge management in the fourth industrial revolution: Mapping the literature and scoping future avenues. IEEE Transactions on Engineering Management, 68(1), 289-300. ▪ Meissner, H., & Aurich, J. C. (2019). Implications of cyber-physical production systems on integrated process planning and scheduling. Procedia manufacturing, 28, 167-173. ▪ Sànchez-Marrè, M. (2019). Intelligent Decision Support Systems. Springer.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Seminar

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Research Essay

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

Digital Transformation and Product Management

Module Code: DLMPROEDTPM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Carolin Egger (Fundamentals of Digital Product Management) / Prof. Dr. Margit Sarstedt (Hybrid Project Management in Digital Transformation)

Contributing Courses to Module

- Fundamentals of Digital Product Management (DLMPROFDPM01)
- Hybrid Project Management in Digital Transformation (DLMADTHPDT01_E)

Module Exam Type

Module Exam	Split Exam
	Fundamentals of Digital Product Management • Study Format "Distance Learning": Exam or Written Assessment: Written Assignment, 90 Minutes Hybrid Project Management in Digital Transformation • Study Format "Distance Learning": Oral Assignment

Weight of Module

see curriculum

Module Contents

Fundamentals of Digital Product Management

- General Opportunities and Challenges in Digital Product Management
- Characteristics of Digital Products and Business Models
- Methods for Digital Product Management
- Data-Driven Approaches for Product Management
- Marketing in Digital Product Management
- Contemporary Organizational Forms

Hybrid Project Management in Digital Transformation

- Project Management and Digitalization
- Norms, Standards and Project Management Certifications
- Traditional Project Management
- Agile Project Management
- Hybrid Project Management
- Lateral Leadership in Hybrid Project Management
- Application of Hybrid Project Management in Digital Transformation

Learning Outcomes

Fundamentals of Digital Product Management

On successful completion, students will be able to

- explain and distinguish the general challenges in digital product management and VUCA / BANI business environments.
- critically examine the value creation by using digital technologies and develop an appropriate digital marketing mix based on personalization and automation from that.
- align data-driven approaches in digital product management and derive appropriate measures from data analytics including the aspects of AR / VR / AI.
- critically reflect on contemporary organizational forms enhancing digital products and business models.
- systematically reflect on the concepts and importance of digital product management.

Hybrid Project Management in Digital Transformation

On successful completion, students will be able to

- answer the question of the relevance of new forms of project management in the context of digital transformation.
- assess the relevance of key norms, standards and certifications for hybrid project management.
- select the right principles and process models from the traditional and agile project management options for digital change projects.
- design organization-specific hybrid process models for project management.
- convey central principles of lateral leadership for hybrid project management.
- apply hybrid project management principles with a particular focus on digital transformation.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the fields of Business Administration & Management and Project Management	All Master Programs in the Business & Management field

Fundamentals of Digital Product Management

Course Code: DLMPROFDPM01

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

Course Description

This course aims at providing students with an overview of the particularities in digital product management. The course outlines how uncertainty constantly accompanies digital products and how digitally savvy customers must be addressed. Looking into the methods and tools of digital product management, the course also highlights how data-driven approaches are one of the main contributors to product development and improvement. Further, marketing aspects, such as crowd sourcing and funding, growth hacking, and individual pricings are considered. By discussing contemporary organizational models and considering new work aspects such as remote employees and diversity challenges, the course concludes with a broader perspective on product management. As a result, it helps students to develop an interdisciplinary understanding of product management and its opportunities and challenges in the digital transformation.

Course Outcomes

On successful completion, students will be able to

- explain and distinguish the general challenges in digital product management and VUCA / BANI business environments.
- critically examine the value creation by using digital technologies and develop an appropriate digital marketing mix based on personalization and automation from that.
- align data-driven approaches in digital product management and derive appropriate measures from data analytics including the aspects of AR / VR / AI.
- critically reflect on contemporary organizational forms enhancing digital products and business models.
- systematically reflect on the concepts and importance of digital product management.

Contents

1. General Challenges in Digital Product Management
   - 1.1 Relevance of Digital Trends in Product Management
   - 1.2 VUCA Versus BANI Business Environments
   - 1.3 Cynefin-Framework for Product Management
   - 1.4 Designing for Evolving Users
   - 1.5 Design for Change
2. Characteristics of Digital Products and Business Models

2.1 Digitally Savvy Customers
2.2 Value Creation Using Digital Technologies
2.3 Individuality & Customization
2.4 Personalization & Automation
2.5 Indestructibility, Transmutability & Reproducibility

3. Methods for Digital Product Management
3.1 Agile (Software) Development
3.2 Minimum Viable Products
3.3 Rapid Prototyping
3.4 Scrum
3.5 Kanban

4. Data-Driven Approaches for Product Management
4.1 Data as Central Perspective
4.2 Data Sources Along the Product Lifecycle
4.3 Data Analytics
4.4 Augmented & Virtual Reality Approaches
4.5 Artificial Intelligence in Product Management

5. Marketing in Digital Product Management
5.1 Customer Co-Creation & Crowd Sourcing
5.2 Crowd Funding
5.3 Growth Hacking
5.4 Individual Pricing

6. Contemporary Organizational Forms
6.1 Objectives & Key Results
6.2 Lateral Leadership
6.3 Remote Employees
6.4 Cross-Cultural Aspects and Diversity Considerations
6.5 Contemporary Practical Approaches in Business Management

Literature
Compulsory Reading
Further Reading ▪ Cagan, M. & Jones, C. (2021). Empowered: Ordinary People, Extraordinary Products. Wiley. ▪ LeMay, M. (2022). Product Management in Practice: A Practical, Tactical Guide for Your First Day and Every Day After. O'Reilly. ▪ Project Management Institute, (2021). A Guide to the Project Management Body of Knowledge (PMBOK ® Guide). Project Management Institute. ▪ Utesheva, A. (2020). Designing Products for Evolving Digital Users: Study UX Behaviour Patterns, Online Communities, and Future Digital Trends. Berkley. ▪ Borek, A. & Prill, N. (2020). Driving digital transformation through data and AI. A practical guide to delivering data science and machine learning products. Kogan Page.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam or Written Assessment: Written Assignment, 90 Minutes

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
100 h	0 h	25 h	25 h	0 h	150 h

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	☑ Guideline
	☑ Slides	

Hybrid Project Management in Digital Transformation

Course Code: DLMADTHPDT01_E

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

Course Description

Digitalization is accompanied by immense change processes in society, business and industry and it is increasingly influencing classic management approaches. Traditional project management can still be found in many industrial companies and is also affected by this digital transformation. Due to the high degree of standardization in traditional project management, there is an increasing need to integrate more flexibility and dynamics through agile approaches. However, especially in corporate practice, many project managers are unsure when to fall back on agile and when on classic project management principles. Especially in the context of digital change projects in classic industrial companies, a combination of agile and traditional tools and principles therefore proves to be advantageous, which can be summarized with the term "hybrid project management". Against this background, this course teaches important basics of traditional, agile and hybrid project management. In addition, important lateral management principles and application fields of hybrid project management will be highlighted.

Course Outcomes

On successful completion, students will be able to

- answer the question of the relevance of new forms of project management in the context of digital transformation.
- assess the relevance of key norms, standards and certifications for hybrid project management.
- select the right principles and process models from the traditional and agile project management options for digital change projects.
- design organization-specific hybrid process models for project management.
- convey central principles of lateral leadership for hybrid project management.
- apply hybrid project management principles with a particular focus on digital transformation.

Contents

1. Project Management and Digitalization
    - 1.1 Impact of the Digital Transformation on Project Management
    - 1.2 Terminology: Project and Project Management
    - 1.3 Project Portfolio, Multi-project and Program Management
    - 1.4 Project Management Philosophies: Classic, Agile and Hybrid

1.5 New Approaches to Project Management in Digital Change Projects

2. Norms, Standards and Certifications in Project Management
   - 2.1 ISO 21500
   - 2.2 International Project Management Association (IPMA)
   - 2.3 Project Management Institute (PMI)
   - 2.4 PRINCE2
   - 2.5 Agile standards

3. Traditional Project Management
   - 3.1 Classification of Traditional Project Management Methodologies
   - 3.2 Phases in Traditional Project Management
   - 3.3 Continuous Tasks in Traditional Project Management

4. Agile Project Management
   - 4.1 Agile Manifesto and Agile Values
   - 4.2 Agile Frameworks: Scrum and Kanban
   - 4.3 Lean Project Management

5. Hybrid Project Management
   - 5.1 Selection Criteria for Project Management Methodologies
   - 5.2 Configuration of Organization-specific Hybrid Project Management Methodologies
   - 5.3 Integrated Application of Agile and Traditional Project Management Principles
   - 5.4 Project Organization in the Hybrid Approach
   - 5.5 Software Tools in Hybrid Projects

6. Lateral Leadership in Hybrid Project Management
   - 6.1 Management without Disciplinary Authority to Issue Directives
   - 6.2 Leadership Concepts and Styles for Hybrid Project Management
   - 6.3 Team Composition and Development
   - 6.4 Interdisciplinarity of Hybrid Projects in Digitalization
   - 6.5 Team Dynamics and Conflict Management

7. Application of Hybrid Project Management in Digital Transformation
   - 7.1 Hybrid Project Management in Interdisciplinary Product Development
   - 7.2 Hybrid Project Management in Strategic Innovation Management
   - 7.3 Hybrid Project Management in Digital Change Projects
   - 7.4 Further Case Studies and Practical Examples

Literature
Compulsory Reading
Further Reading ▪ Cobb, C. G. (2015): The project manager's guide to mastering agile. Principles and practices for an adaptive approach, John Wiley & Sons. ▪ Martinelli, R. J./Milosevic, D. Z. (2016): Project Management ToolBox. Tools and Techniques for the Practicing Project Manager. 2. Aufl., Wiley, s.l. ▪ Measey, P. et al. (2015): Agile Foundations. Principles, practices and frameworks, BCS Learning & Development Limited, Swindon. ▪ Project Management Institute (2017): Agile Practice Guide, Project Management Institute, Inc. (PMI). ▪ Wysocki, R. K. (2019): Effective Project Management. Traditional, Agile, Extreme, Hybrid, Wiley, Indianapolis.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Oral Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	

Agile, Social and Creative Methods

Module Code: DLMPROECAM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Anne-Kristin Langner (Design, Lean and Game: Social and creative methods) / Prof. Dr. Thomas Winkle (Agile Project Management)

Contributing Courses to Module

- Design, Lean and Game: Social and creative methods (DLMOMDLG01_E)
- Agile Project Management (DLMIEEAPM01)

Module Exam Type

Module Exam	Split Exam
	Design, Lean and Game: Social and creative methods • Study Format "Distance Learning": Oral Assignment Agile Project Management • Study Format "Distance Learning": Written Assessment: Case Study

Weight of Module

see curriculum

Module Contents

Design, Lean and Game: Social and creative methods

- Agile Working Environments
- Business Model Innovation
- Design Thinking
- Lean Management
- Lean Startup
- Game Thinking
- Giving Impact to Customers (The Crowd)

Agile Project Management

- Fundamentals of Agile Methods in Project Management
- Traditional and Agile Approaches to Project Management
- Agile Project Management With Scrum
- Agile Project Management With Kanban
- Implementing Agile Within the Organization
- Expanding Agile Across the Organization

Learning Outcomes

Design, Lean and Game: Social and creative methods

On successful completion, students will be able to

- understand and analyze agile and innovative working environments.
- create agile and innovative working environments.
- evaluate and apply social and creative methods.
- evaluate and apply customer-oriented ways of thinking and working.
- build prototypes, work with toolkits and visualize processes.

Agile Project Management

On successful completion, students will be able to

- understand the significance of agile methods to efficiently and effectively manage projects within and across organizations.
- compare the major characteristics of traditional and agile approaches to project management.
- apply the Scrum methodology as a main framework of agile project management.
- apply the Kanban methodology as a main framework of agile project management.
- implement agile value-driven strategies and effective agile product roadmaps into the organization.
- judge the scaling of agile practices across the entire organization.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of Business & Management	All Master Programs in the Methods and Project Management fields

Design, Lean and Game: Social and creative methods

Course Code: DLMOMDLG01_E

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

Course Description

Design, Lean and Game. Three words that sound so different, but – when it comes to their application as methods – have commonalities. They all can be characterized as social, since they consist of team- and group-oriented ways of collaboration. Furthermore, they redefine companies' views on the customer as the customer becomes part of the process or even the core of the business model. All principles can be called creative, too. Either due to the fact that they imply a hands-on-mentality, like building a prototype or working with a toolkit, or because of the idea that processes and workflows should be visualized. When it comes to agile and innovative working environments, one of these principles is often implemented. That is why the course starts with an introduction to agility and business model innovation in general followed by specific sections on Design Thinking, Lean Management, Lean Startup and Game Thinking as one of the latest concepts. Moving from general to special and back to general, the course closes with a section on the impact of the crowd (and therefore the customers). Principles like Crowdfunding or Crowdsourcing give customers a huge impact on, for instance, funding or product design processes.

Course Outcomes

On successful completion, students will be able to

- understand and analyze agile and innovative working environments.
- create agile and innovative working environments.
- evaluate and apply social and creative methods.
- evaluate and apply customer-oriented ways of thinking and working.
- build prototypes, work with toolkits and visualize processes.

Contents

1. Agility
   - 1.1 Basics
   - 1.2 Dimensions
   - 1.3 Chances and Risks
2. Business Model Innovation
   - 2.1 Basics
   - 2.2 Value Innovation

Literature
Compulsory Reading
Further Reading ▪ Helmhold, M. (2020): Lean Management and Kaizen. Fundamentals From Cases and Examples in Operations and Supply Chain Management. Springer Nature, Cham. ▪ Kim, A. J. (2018): Game Thinking: Innovate smarter & drive deep engagement with design techniques from hit games. gamethinking.io, Burlingame. ▪ Ries, E. (2017): The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. Penguin, London.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Oral Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Agile Project Management

Course Code: DLMIEEAPM01

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

Course Description

Agile methods accelerate the development and delivery of a product or service by the division of tasks into short phases of work and frequent reassessment and adaptation of plans. While originally used for software programming, the agile methodology has become a widely used approach in many areas of business. When applied to project management situations, agile contributes to a more flexible planning, a faster determining of the requirements and a more effective executing of a project. The concept of agile is based on the Agile Manifesto which includes four key values and twelve main principles to guide an iterative and people-centric managing of projects. In this course, students are introduced to the agile project management framework with an emphasis on the product owner's role. They learn how to develop the product vision and the product roadmap, organize the project team, identify user roles, write user stories and establish an operant project risk management. This way, students shall also develop a mindset for the agile methodology. The course puts a special emphasis on the Scrum and Kanban framework as two main pillars to agilely manage projects within and across organizations.

Course Outcomes

On successful completion, students will be able to

- understand the significance of agile methods to efficiently and effectively manage projects within and across organizations.
- compare the major characteristics of traditional and agile approaches to project management.
- apply the Scrum methodology as a main framework of agile project management.
- apply the Kanban methodology as a main framework of agile project management.
- implement agile value-driven strategies and effective agile product roadmaps into the organization.
- judge the scaling of agile practices across the entire organization.

Contents

1. Fundamentals of Agile Methods in Project Management
   - 1.1 Definition and Significance of Agile Methods in Project Management
   - 1.2 The Agile Manifesto
   - 1.3 The Agile Values and Principles
2. Traditional and Agile Approaches to Project Management

2.1 Traditional Approaches to Project Management
2.2 Agile Approaches to Project Management
2.3 Comparison of Traditional versus Agile Project Management

3. Agile Project Management with Scrum
3.1 Scrum Values and Principles
3.2 Scrum Roles, Events and Artifacts
3.3 Application Areas of Scrum

4. Agile Project Management with Kanban
4.1 Kanban Values and Principles
4.2 Kanban Boards and Cards
4.3 Application Areas of Kanban

5. Implementing Agile within the Organization
5.1 Implementing Agile Value-driven Delivery Strategies
5.2 Creating an Effective Agile Product Roadmap
5.3 Coaching an Agile Team

6. Expanding Agile across the Organization
6.1 Agile at Scale Practices across the Organization
6.2 Agile Portfolio Management
6.3 Scaled Agile Framework (SAFe)

Literature

Compulsory Reading

Further Reading

- Schwaber, K., & Sutherland, J. (2020). The 2020 Scrum guide. ScrumGuides.
- Winkle, T. (2022). Product development within artificial intelligence, ethics, and legal risk: Exemplary for safe autonomous vehicles. Springer.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests
☑ Video	☑ Guideline
☑ Audio	
☑ Slides	

Entrepreneurship and Disruptive Innovation

Module Code: DLMPROEEI

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Esin Bozyazi (Entre- and Intrapreneurship) / Sabine Pur (Disruptive Innovation)

Contributing Courses to Module

- Entre- and Intrapreneurship (DLMIEEEIS01)
- Disruptive Innovation (DLMIEEEDT01)

Module Exam Type

Module Exam	Split Exam
	Entre- and Intrapreneurship • Study Format "Distance Learning": Exam, 90 Minutes (100) • Study Format "myStudies": Exam, 90 Minutes Disruptive Innovation • Study Format "Distance Learning": Exam, 90 Minutes

Weight of Module

see curriculum

Module Contents

Entre- and Intrapreneurship

- Fundamentals of Entrepreneurship
- Fundamentals of Intrapreneurship
- Entrepreneurs and Intrapreneurs
- Corporate Innovation Management
- Methods of Innovation Management
- Innovation Management in Practice

Disruptive Innovation

- Major Areas of Innovation
- Introduction to Disruptive Innovation
- The Process of Disruption
- Significance of Disruptive Innovation
- Management of Disruptive Innovation
- Examples of Disruptive Innovation

Learning Outcomes

Entre- and Intrapreneurship

On successful completion, students will be able to

- define the motives, goals and relevance of entrepreneurship as a driver for economic wealth and social prosperity.
- determine the motives, goals and relevance of intrapreneurship as a driver for creating a competitive advantage for an organization.
- analyze the preconditions and determinants that shape an entre- and intrapreneurial mindset.
- explain the types, drivers and success factors of corporate innovation as well as the management practices to foster innovation.
- apply main management methods to create, discover and realize business opportunities.
- derive best-practice learnings from the innovation management of existing companies for own business ventures and innovation activities.

Disruptive Innovation

On successful completion, students will be able to

- explain the definitions and basic theory dealing with disruptive innovation.
- distinguish disruptive innovation from other forms of innovation.
- assess major areas in which disruptive innovation may occur.
- understand the essential elements of the process of disruption.
- determine and evaluate the significance of disruptive innovation.
- comprehend and evaluate examples of disruptive innovation.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of Business & Management	All Master Programs in the Business Administration & Management fields

Entre- and Intrapreneurship

Course Code: DLMIEEEIS01

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

Course Description

Entre- and intrapreneurship are the engine for economic wealth and social progress and a core element of the innovation capacity of a company. Whereas entrepreneurship refers to entrepreneurs who design and build up an own business, intrapreneurship is related to individuals who work on developing new ideas and products within the confines of the business that they already work at. Intrapreneurs include any person within the company that applies entrepreneurial skills, vision, and forward thinking into the role that they have in the company. Both entrepreneurs and intrapreneurs have a drive to foster innovation whenever possible, which is why they share many traits between them, such as persistence, determination, goal orientation, opportunity seeking and hard working. A main difference lies in the risk involved in being an entrepreneur or intrapreneur. Entrepreneurs are required to take on all of the risk that comes along with developing a business, which means that the losses can be significant if failure occurs. However, the rewards can also be practically incalculable. As for intrapreneurs, the risks are minimal, which is also true of the rewards. This course introduces the students to these commonalities and differences of entre- and intrapreneurship. The course is designed to support the students in finding and determining their own motives and goals of becoming an entre- or intrapreneur. The main characteristics of entre- and intrapreneurship are discussed and related to the methods and practices of innovation management. An insight into the innovation management of well-known companies fosters the transfer of the theoretical concepts of entre- and intrapreneurship to a practical context.

Course Outcomes

On successful completion, students will be able to

- define the motives, goals and relevance of entrepreneurship as a driver for economic wealth and social prosperity.
- determine the motives, goals and relevance of intrapreneurship as a driver for creating a competitive advantage for an organization.
- analyze the preconditions and determinants that shape an entre- and intrapreneurial mindset.
- explain the types, drivers and success factors of corporate innovation as well as the management practices to foster innovation.
- apply main management methods to create, discover and realize business opportunities.
- derive best-practice learnings from the innovation management of existing companies for own business ventures and innovation activities.

Contents

Literature
Compulsory Reading
Further Reading ▪ Brown, T. (2019). Change by design, revised and updated: How design thinking transformsorganizations and inspires innovation. Harper Business. ▪ Kuratko, D. F. (2020). Entrepreneurship: Theory, process, and practice (11th ed.). Cengage Learning. ▪ Lewrick, M. (2022). Design thinking for business growth: How to design and scale business modelsand business ecosystems. Wiley.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Disruptive Innovation

Course Code: DLMIEEEDT01

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

Course Description

The term “Disruptive Innovation” was defined by the American scholar Clayton M. Christensen. A disruptive innovation is an innovative product, service, or business model that eventually overturns the existing dominant businesses in the market. It is therefore also about the failure of incumbent companies to stay on top of their industries when they encounter disruptive types of market and technological changes. Disruptive innovations tend to be produced by small teams, outsiders, or entrepreneurs in start-ups, rather than existing market-leading companies. This module focusses on the process of disruption and the significance of disruptive innovation. It highlights approaches for its management and concludes with examples of disruptive innovations from recent years.

Course Outcomes

On successful completion, students will be able to

- explain the definitions and basic theory dealing with disruptive innovation.
- distinguish disruptive innovation from other forms of innovation.
- assess major areas in which disruptive innovation may occur.
- understand the essential elements of the process of disruption.
- determine and evaluate the significance of disruptive innovation.
- comprehend and evaluate examples of disruptive innovation.

Contents

1. Major Areas of Innovation
   - 1.1 Invention Versus Innovation
   - 1.2 Product and Service Innovation
   - 1.3 Business Model Innovation
   - 1.4 Process and Technology Innovation
   - 1.5 Social and Environmental Innovation
2. Introduction to Disruptive Innovation
   - 2.1 Theory of Disruptive Innovation
   - 2.2 Definition and Classification of Disruptive Innovation
   - 2.3 Types of Disruptive Innovation

2.4 Characteristics of Disruptive Innovation

3. The Process of Disruption
   - 3.1 Modelling Theory of Disruptive Innovation
   - 3.2 Performance Oversupply
   - 3.3 Asymmetry of Motivation
   - 3.4 New-Market-, and Low-End Disruption Process
   - 3.5 Performance Trajectories

4. Significance of Disruptive Innovation
   - 4.1 Characteristics of Disruptor Companies
   - 4.2 Implication for Incumbent Companies
   - 4.3 Possible Responses to Disruptive Innovations

5. Management of Disruptive Innovation
   - 5.1 Triggers of Disruptive Innovation
   - 5.2 “Designing” Disruptive Innovation
   - 5.3 Implementing Disruptive Innovation

6. Examples of Disruptive Innovation
   - 6.1 Retail Versus Amazon
   - 6.2 Physical Media Versus Music/Video Streaming Services
   - 6.3 Hotels Versus Airbnb/Taxis Versus Uber
   - 6.4 In-Classroom Teaching Versus Distance Learning
   - 6.5 Traditional Manufacturing Versus 3D Printing

Literature
Compulsory Reading
Further Reading ▪ Christensen, C. M. (1997): The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail. Boston, MA: Harvard Business School Press. ▪ Gutsche, J., & Gladwell, M. (2020). Create the future: Tactics for disruptive thinking ; The innovation handbook. Fast Company Press. ▪ Silberzahn, P. (DL 2018). A manager's guide to disruptive innovation: Why great companies fail in the face of disruption and how to make sure your company doesn't ((B. Alger, Trans.)). Diateino. ▪ Tidd, J. (2020). Digital disruptive innovation. Series on technology management. World Scientific. ▪ Le Merle, M. C., & Davis, A (2017). Corporate innovation in the fifth era: Lessons from Alphabet/Google, Amazon, Apple, Facebook, and Microsoft.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Consumer Behavior and Brand Management

Module Code: DLMIEEECBBM

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Caterina Fox (International Consumer Behavior) / Caterina Fox (Global Brand Management)

Contributing Courses to Module

- International Consumer Behavior (DLMBCBR01)
- Global Brand Management (DLMBSPBE01)

Module Exam Type

Module Exam	Split Exam
	<u>International Consumer Behavior</u> • Study Format "Distance Learning": Exam, 90 Minutes <u>Global Brand Management</u> • Study Format "Distance Learning": Exam, 90 Minutes • Study Format "myStudies": Exam, 90 Minutes

Weight of Module

see curriculum

Module Contents

International Consumer Behavior

- Consumer Behavior
- The Consumer Decision-Making Process
- Internal Influences on Consumer Behavior
- External Influences on Consumer Behavior
- International Consumer Behavior
- International Marketing Strategy and Consumer Behavior

Global Brand Management

For most companies, a major opportunity to grow their business involves looking for possibilities outside their native country. However, taking brands beyond national boundaries presents a new set of branding issues as the global marketplace is constantly changing. At the same time, various forms of regionalization are taking place, adding another layer of complexity to managing a brand portfolio. Arguably, products, pricing and distribution are increasingly becoming commodities and the new competitive arena is brand value, creating long-term, profitable brand relationships. Ultimately, strong brands will transcend industries and provide an organization with one of its most valuable assets. This course ultimately aims to introduce students to the differentiation of products and services in a world of alternatives and the benefits/disadvantages of providing customers with the power of choice.

Learning Outcomes

International Consumer Behavior

On successful completion, students will be able to

- outline the purchase decision-making process undertaken by the consumer.
- describe the internal and external influences on the consumer decision-making processes.
- identify the different research methods available to companies to collect relevant data regarding their consumers and their behavior
- develop a plan to generate required market research data regarding consumer behavior and decision-making.
- be able to generate, analyze, interpret and report relevant data regarding consumers.
- present the key concepts characterizing international consumer behavior and discuss their impact on global marketing strategies.

Global Brand Management

On successful completion, students will be able to

- analyze brands, brand components and brand management.
- examine how brands are positioned and re-positioned in regional, national and international markets and explore the concept of shared- and co-operative branding.
- promote the importance of brand valuation and measurement techniques within their company.
- form and apply tactics to address brand falsification and protection as well as to develop strategies to manage a brand crisis.
- analyze the main challenges facing international brands, and be able to measure their brand equity
- understand the factors that contribute to increasing or losing consumer-based brand equity.
- analyze a company's current brand strategy and propose viable alternatives as well as make informed decisions with greater probability of success.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Marketing & Sales	All Master Programs in the Marketing & Communication field

International Consumer Behavior

Course Code: DLMBCBR01

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

Course Description

In a global economy characterized by greater competition, companies operating internationally need comprehensive market-driven strategies to survive in the market place. The course provides students with the relevant concepts for understanding the international environment of the company with focus on the demand side/the consumer. Students learn how differences in culture, economic systems, and political environments impact consumers' behavior in terms of decision-making in the fields of acquisition, consumption, and disposal of products, services, experiences, and ideas.

Course Outcomes

On successful completion, students will be able to

- outline the purchase decision-making process undertaken by the consumer.
- describe the internal and external influences on the consumer decision-making processes.
- identify the different research methods available to companies to collect relevant data regarding their consumers and their behavior
- develop a plan to generate required market research data regarding consumer behavior and decision-making.
- be able to generate, analyze, interpret and report relevant data regarding consumers.
- present the key concepts characterizing international consumer behavior and discuss their impact on global marketing strategies.

Contents

1. Consumer Behavior
   - 1.1 Consumer Behavior and International Marketing
   - 1.2 Consumer Decision-Making in the Marketplace
2. The Consumer Decision-Making Process
   - 2.1 The Pre-Purchase Stage
   - 2.2 The Purchase Stage
   - 2.3 The Post-Purchase Stage
3. Internal Influences on Consumer Behavior
   - 3.1 Motives and Motivation

3.2 Perception
3.3 Attitude

4. External Influences on Consumer Behavior
   4.1 Culture
   4.2 Subculture
   4.3 Groups and Families

5. International Consumer Behavior
   5.1 Cultural Dimensions
   5.2 The Influence of Social Media on Consumer Decision-Making

6. International Marketing Strategy and Consumer Behavior
   6.1 International Market Segmentation and Product Positioning
   6.2 Consumer Behavior and Product Strategy
   6.3 Consumer Behavior and Communication Strategy
   6.4 Consumer Behavior and Pricing Strategy
   6.5 Consumer Behavior and Distribution Strategy

Literature

Compulsory Reading

Further Reading

- Schiffman, L. G., & Kanuk, L. L. (2014). Consumer behavior. Frenchs Forest.: Pearson Education Australia.
- Solomon, M. (2016). Consumer behavior: Buying, having, and being (12th ed.). New York City, NY: Pearson.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Global Brand Management

Course Code: DLMBSPBE01

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

Course Description

For most companies, a major opportunity to grow their business involves looking for possibilities outside their native country. However, taking brands beyond national boundaries presents a new set of branding issues as the global marketplace is constantly changing. At the same time, various forms of regionalization are taking place, adding another layer of complexity to managing a brand portfolio. Arguably, products, pricing and distribution are increasingly becoming commodities and the new competitive arena is brand value, creating long-term, profitable brand relationships. Ultimately, strong brands will transcend industries and provide an organization with one of its most valuable assets. This course ultimately aims to introduce students to the differentiation of products and services in a world of alternatives and the benefits/disadvantages of providing customers with the power of choice.

Course Outcomes

On successful completion, students will be able to

- analyze brands, brand components and brand management.
- examine how brands are positioned and re-positioned in regional, national and international markets and explore the concept of shared- and co-operative branding.
- promote the importance of brand valuation and measurement techniques within their company.
- form and apply tactics to address brand falsification and protection as well as to develop strategies to manage a brand crisis.
- analyze the main challenges facing international brands, and be able to measure their brand equity
- understand the factors that contribute to increasing or losing consumer-based brand equity.
- analyze a company's current brand strategy and propose viable alternatives as well as make informed decisions with greater probability of success.

Contents

1. Introduction to Global Brand Management
   - 1.1 Brand, Brand Equity, and Brand Value
   - 1.2 Brand Management and Brand Leadership
   - 1.3 Integrating Marketing Activities
2. Culture and Branding

Literature
Compulsory Reading
Further Reading ▪ Aaker, D. A. (1991). Managing brand equity. New York, NY: Free Press. ▪ Aaker, D. A. (2010). Building Strong Brands. Pocket Books. – 1995th ed. Available. ▪ Keller, K. L., & Swaminathan, V. (2020). Strategic brand management. Building, measuring, and managing brand equity (Fifth edition, global edition). Pearson.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Digitalized Production

Module Code: DLMPROEDP

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Eric Guiffo Kaigom (Platforms and Technologies as Enablers of Digital Transformation in Production) / Prof. Dr. Eric Guiffo Kaigom (Seminar: Intelligent Decision Support Systems for Digitalized Production)

Contributing Courses to Module

- Platforms and Technologies as Enablers of Digital Transformation in Production (DLMDTMPTETP01)
- Seminar: Intelligent Decision Support Systems for Digitalized Production (DLMDTMSIDSDP01)

Module Exam Type

Module Exam	Split Exam
	Platforms and Technologies as Enablers of Digital Transformation in Production • Study Format "Distance Learning": Exam or Written Assessment: Case Study, 90 Minutes Seminar: Intelligent Decision Support Systems for Digitalized Production • Study Format "Distance Learning": Written Assessment: Research Essay

Weight of Module

see curriculum

Module Contents

Platforms and Technologies as Enablers of Digital Transformation in Production

- Digital Engineering
- Smart Production Operations
- Intelligent Robotized Automation
- Privacy-Aware and Secure Production
- Integrated Infrastructures and Architectures
- Applications and Trends

Seminar: Intelligent Decision Support Systems for Digitalized Production

The course covers current topics in data-driven decision support systems. Participants demonstrate their capability to collect and scrutinize data as well as synthesize, structure, and present relevant information about a topic to a broad audience.

Learning Outcomes

Platforms and Technologies as Enablers of Digital Transformation in Production

On successful completion, students will be able to

- describe architectures of digital platforms and technologies for production purposes.
- integrate functionalities of digital tools to carry out digital transformations in production.
- explain how privacy-aware secure data management strenghtens platform functionalities.

Seminar: Intelligent Decision Support Systems for Digitalized Production

On successful completion, students will be able to

- understand recent developments in data-driven decision support systems.
- unfold and present non-nominal insights from data to make informed decisions.
- transfer theoretical knowledge and methods to new domains.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of IT & Technology	All Master Programs in the Engineering field

Platforms and Technologies as Enablers of Digital Transformation in Production

Course Code: DLMDTMPTETP01

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

Course Description

This course instills competencies in participants for the understanding and usage of platforms and technologies that help companies adapt their production capabilities and benefit from volatile demands and opportunities from markets. Knowledge is provided to participants to critically explore goals, architectures, and effectiveness logics of underlying technological levers as well as their integration to propel smart production. Participants develop and sharpen their skills in the evaluation and application of core data-driven and privacy-aware functionalities that help sustainably tap into new markets and offer an individualized and trustworthy experience to customers. The course familiarizes participants with an up-to-date panoramic view of trends and emerging concepts around platforms and technologies that drive digital transformations.

Course Outcomes

On successful completion, students will be able to

- describe architectures of digital platforms and technologies for production purposes.
- integrate functionalities of digital tools to carry out digital transformations in production.
- explain how privacy-aware secure data management strenghtens platform functionalities.

Contents

1. Digital Engineering
   - 1.1 Big Data Analytics
   - 1.2 Rapid Prototyping
   - 1.3 Digital Shadow and Twin
   - 1.4 Simulation-Driven Virtual Testbeds
   - 1.5 Cyber-Physical Production Systems
2. Smart Production Operations
   - 2.1 Communication Standards
   - 2.2 Industrial Monitoring
   - 2.3 Extended Reality
   - 2.4 Workforce Collaboration Interfaces

2.5 Customer Access Interfaces

3. Intelligent Robotized Automation
   - 3.1 Smart Integration
   - 3.2 Production Consistency
   - 3.3 Additive Manufacturing
   - 3.4 Robotized Reconfiguration
   - 3.5 Human-Robot-Collaboration

4. Privacy-Aware and Secure Production
   - 4.1 Privacy by Design
   - 4.2 Privacy by Default
   - 4.3 Blockchains
   - 4.4 Secure Connectors
   - 4.5 Trusted Multiparty Cloud Computing

5. Integrated Infrastructures and Architectures
   - 5.1 Industrial Internet of Things
   - 5.2 Internet of Production
   - 5.3 Distributed Ledgers

6. Applications and Trends
   - 6.1 Industry 4.0
   - 6.2 Made in China 2025
   - 6.3 Manufacturing USA
   - 6.4 Uganda's National 4IR Strategy
   - 6.5 I-Korea 4.0

Literature

Compulsory Reading

Further Reading

- Elangovan, U. (2020). Product Lifecycle Management (PLM): A Digital Journey Using Industrial Internet of Things (IIoT). CRC Press.
- Mudler, J. (2020). Multi-Cloud Architecture and Governance: Leverage Azure, AWS, GCP, and VMware vSphere to build effective multi-cloud solutions (1st edition). Packt Publishing.
- Tao, F., Zhang, M., & Nee, A. Y. C. (2019). Digital twin driven smart manufacturing. Academic Press.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam or Written Assessment: Case Study, 90 Minutes

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
100 h	0 h	25 h	25 h	0 h	150 h

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	☑ Guideline
☑ Slides	

Seminar: Intelligent Decision Support Systems for Digitalized Production

Course Code: DLMDTMSIDSDP01

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

Course Description

In this course, participants develop and demonstrate their capability to selectively embrace a specific topic on intelligent decision support systems, consistently merge information that address identified topic objectives, and share results with e.g. an academic and/or industrial audience. The course is evolutive as it focuses on up-to-date achievements in intelligent decision support systems that deliver value to organizations and customers as well. Hence, participants will be equipped with techniques that foster how to retrieve and distill their insights into targeted business units upon completion of this course.

Course Outcomes

On successful completion, students will be able to

- understand recent developments in data-driven decision support systems.
- unfold and present non-nominal insights from data to make informed decisions.
- transfer theoretical knowledge and methods to new domains.

Contents

- Participants will be exposed to and address recent developments in the field of data-driven decision support systems. Potential topics include (but are not limited to) challenges and opportunities around privacy-aware data management in production, simulation-driven what-if-analysis and -optimization in cyber-physical production systems to propel manufacturing, ontology-based knowledge management for individualized customer management and context-aware intelligent production, value creation based upon digital twins for disruptive product services, hybrid artificial intelligence-/machine learning-supported recommendations to cope with production uncertainties.

Literature
Compulsory Reading
Further Reading ▪ Manesh, M. F., Pellegrini, M. M., Marzi, G., & Dabic, M. (2020). Knowledge management in the fourth industrial revolution: Mapping the literature and scoping future avenues. IEEE Transactions on Engineering Management, 68(1), 289-300. ▪ Meissner, H., & Aurich, J. C. (2019). Implications of cyber-physical production systems on integrated process planning and scheduling. Procedia manufacturing, 28, 167-173. ▪ Sànchez-Marrè, M. (2019). Intelligent Decision Support Systems. Springer.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Seminar

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Research Essay

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

Supply Chain and Sourcing Management

Module Code: MWCH_E

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Dr. Guido Schmidt (Global Supply Chain Management) / Dr. Guido Schmidt (Supply Chain Risk Management and Controlling)

Contributing Courses to Module

- Global Supply Chain Management (MWCH01_E)
- Supply Chain Risk Management and Controlling (MWCH02_E)

Module Exam Type

Module Exam	Split Exam
	Global Supply Chain Management • Study Format "Distance Learning": Exam, 90 Minutes • Study Format "myStudies": Exam, 90 Minutes Supply Chain Risk Management and Controlling • Study Format "myStudies": Exam, 90 Minutes • Study Format "Distance Learning": Exam, 90 Minutes

Weight of Module

see curriculum

Module Contents

Global Supply Chain Management

- Value networks - motives, typologies, goals
- Directions of impact of SCM strategies

Supply Chain Risk Management and Controlling

- SCM instruments
- Controlling systems in value networks
- Risk management in value networks

Learning Outcomes

Global Supply Chain Management

On successful completion, students will be able to

- specify the goals and tasks of supply chain management and how it differs from pure logistics management.
- specify the tools and instruments for designing SCM.
- list possible measures to avoid obstacles in the implementation and operation of supply chains.
- assess the potential impact of coordinating collaborations on supply chain management.
- name the basic supply, disposal and recycling strategies and indicate their contents.
- indicate the motives for quality management in SCM and the methods and instruments used.
- assess which business software can support and control the functions of the supply chain.

Supply Chain Risk Management and Controlling

On successful completion, students will be able to

- assess tasks of the controlling department and evaluate problems in implementation of controlling systems in supply chains.
- assess the significance of key figures in supply chain controlling and know how these are used.
- reflect on instruments of SC controlling and determine combinations of classical and innovative controlling instruments.
- determine when SCM software is used in controlling and what is required for their implementation.
- explain the tools of controlling and apply them in practice.
- name and explain options that influence the success of a supply chain, why risk management is carried out within supply chains and compatible strategies for supply chains.
- understand the organizational design with System Dynamics and the use in the supply chain management.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of Transportation & Logistics	All Master Programs in the Transport & Logistics fields

Global Supply Chain Management

Course Code: MWCH01_E

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

Course Description

A problem-centered understanding of global value networks requires knowledge of their motives and goals. Furthermore, in view of the apparent diversity, it seems particularly useful to systematize these networks in certain typologies. On the basis of such systematizations it is then possible to systematize the spectrum of strategically relevant questions and design options in the field of SCM in a differentiated form. In addition, this also makes it possible to present the instrumental categories of SCM that are particularly relevant in this context.

Course Outcomes

On successful completion, students will be able to

- specify the goals and tasks of supply chain management and how it differs from pure logistics management.
- specify the tools and instruments for designing SCM.
- list possible measures to avoid obstacles in the implementation and operation of supply chains.
- assess the potential impact of coordinating collaborations on supply chain management.
- name the basic supply, disposal and recycling strategies and indicate their contents.
- indicate the motives for quality management in SCM and the methods and instruments used.
- assess which business software can support and control the functions of the supply chain.

Contents

1. Motives and Effects of Logistics Value Networks
   - 1.1 What does Supply Chain Management mean?
   - 1.2 What is logistics management?
   - 1.3 Service providers in the supply chain
   - 1.4 Importance of Supply Chain Management
2. Typologies of SCM and design models
   - 2.1 Supply chain strategy
   - 2.2 Instruments for supply chain strategies
   - 2.3 Inventory Reduction in Warehouse Management
   - 2.4 Freight cost reduction within the framework of the transport cost policy

2.5 Efficient Replenishment

3. Problem-oriented concepts and corresponding management concepts
   - 3.1 Problems in the supply chain
   - 3.2 Interfaces in the Supply Chain
   - 3.3 The Bullwhip Effect
   - 3.4 Collaborative Planning, Forecasting and Replenishment (CPFR)

4. Tasks and goals of the SCM
   - 4.1 Tasks in Supply Chain Management
   - 4.2 Goals of Supply Chain Management
   - 4.3 Sustainable Supply Chain Management (SSCM)

5. Cooperation and coordination
   - 5.1 The Corporate Strategy
   - 5.2 Sensible corporate strategies: Instruments and Methods
   - 5.3 Strategic alliances in the context of supply chain management
   - 5.4 Requirements for successful cooperation
   - 5.5 Bundling of activities and process adjustments in cooperations

6. Supply, disposal and recycling strategies
   - 6.1 Supply strategies
   - 6.2 Disposal strategies
   - 6.3 Recycling, reuse/recycling and the corresponding strategies

7. Quality assurance
   - 7.1 Quality management systems
   - 7.2 Quality Assurance in Supply Chain Management
   - 7.3 Methods in quality management
   - 7.4 Instruments in organizational design

8. Information retrieval
   - 8.1 Information Technology in Supply Chain Management
   - 8.2 Business Software
   - 8.3 The Balanced Scorecard as a control instrument

Literature
Compulsory Reading
Further Reading ▪ Arndt, H. (2010): Supply Chain Management. Optimization of logistic processes. 5th edition, Gabler, Wiesbaden. ▪ Chopra, S./Meindl, P. (2007): Supply Chain Management. Strategy, Planning and Operation. 3rd edition, Pearson, New Jersey. ▪ Cohen, S./Roussel, J. (2006): Strategic Supply Chain Management. Springer, Berlin/ Heidelberg. ▪ Corsten, H./Gössinger, R. (2008): Introduction to Supply Chain Management. 2nd edition, Oldenbourg, Munich. ▪ Handfield, R. B./Nichols, E. L. (2008): Introduction to Supply Chain Management. Prentice Hall, Upper Saddle River, NJ. ▪ Petry, T. (2006): Network strategy. Core of an integrated management of corporate networks. Gabler, Wiesbaden. ▪ Pfohl, H. C. (2009): Logistics systems. Fundamentals of Business Administration. 8th Edition, Springer, Berlin. ▪ Schulte, C. (2009): Logistics. Ways to optimize the supply chain. 5th edition, Vahlen, Munich. ▪ Simchi-Levi, D./Kaminsky, P./Simchi-Levi, E. (2008): Designing and Managing the Supply Chain. Concepts, Strategies and Case Studies. 3rd edition, McGraw-Hill, Boston. ▪ Werner, H. (2010): Supply Chain Management. Basics, strategies, instruments. Springer, Berlin.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Supply Chain Risk Management and Controlling

Course Code: MWCH02_E

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

Course Description

Global value networks prove to be particularly dynamic and sometimes fragile constructions. This observation draws attention to two important aspects of SCM: On the one hand, the need to develop an effective and efficient controlling system for such supply chains. The controlling information generated via key figure systems can make important contributions to the stabilization and optimization of the value-added network. On the other hand, to the necessity of a systematic risk management, with the focus on early identification and future prospects.

Course Outcomes

On successful completion, students will be able to

- assess tasks of the controlling department and evaluate problems in implementation of controlling systems in supply chains.
- assess the significance of key figures in supply chain controlling and know how these are used.
- reflect on instruments of SC controlling and determine combinations of classical and innovative controlling instruments.
- determine when SCM software is used in controlling and what is required for their implementation.
- explain the tools of controlling and apply them in practice.
- name and explain options that influence the success of a supply chain, why risk management is carried out within supply chains and compatible strategies for supply chains.
- understand the organizational design with System Dynamics and the use in the supply chain management.

Contents

1. Basics of controlling in and of supply chains
   - 1.1 Conceptual design of controlling in supply chain management systems
   - 1.2 The importance of controlling in the supply chain
   - 1.3 Cost Tracking
   - 1.4 Different types of supply chain controlling
2. Key figure systems in the supply chain 2.1 Meaning of key figures
   - 2.1 Types of key figures in the supply chain

Literature

Compulsory Reading

Further Reading

- Chopra, S./Meindl, P. (2007): Supply Chain Management. Strategy, Planning and Operation. 3rd edition, Pearson, New Jersey.
- Cohen, S./Roussel, J. (2006): Strategic Supply Chain Management. Springer, Berlin/ Heidelberg.
- Corsten, H./Gössinger, R. (2008): Introduction to Supply Chain Management. 2nd edition, Oldenbourg, Munich.
- Handfield, R. B./Nichols, E. L. (2008): Introduction to Supply Chain Management. Prentice Hall, Upper Saddle River, NJ.
- Petry, T. (2006): Network strategy. Core of an integrated management of corporate networks. Gabler, Wiesbaden.
- Pfohl, H. C. (2009): Logistics systems. Fundamentals of Business Administration. 8th edition, Springer, Berlin.
- Schulte, C. (2009): Logistics. Ways to optimize the supply chain. 5th edition, Vahlen, Munich.
- Simchi-Levi, D./Kaminsky, P./Simchi-Levi, E. (2008): Designing and Managing the Supply Chain. Concepts, Strategies and Case Studies. 3rd edition, McGraw-Hill, Boston.

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Business Analyst

Module Code: DLMDSEBA

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	▪ DLMDSEBA01 ▪ none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Silke Vaas (Business Intelligence I) / Prof. Dr. Silke Vaas (Project: Business Intelligence)

Contributing Courses to Module

- Business Intelligence I (DLMDSEBA01)
- Project: Business Intelligence (DLMDSEBA02)

Module Exam Type

Module Exam	Split Exam
	Business Intelligence I • Study Format "Distance Learning": Written Assessment: Case Study • Study Format "myStudies": Written Assessment: Case Study Project: Business Intelligence • Study Format "Distance Learning": Portfolio • Study Format "myStudies": Portfolio

Weight of Module

see curriculum

Module Contents

Business Intelligence I

- Data acquisition and dissemination
- Data warehouse and multidimensional modeling
- Analytical systems
- Future Business Intelligence Application Areas

Project: Business Intelligence

Implementation of a business intelligence use case.

Learning Outcomes

Business Intelligence I

On successful completion, students will be able to

- understand the motivations and use cases for, as well as fundamentals of, business intelligence.
- explain relevant types of data.
- know and disambiguate techniques and methods for modeling and dissemination of data.
- expound upon the techniques and methods for the generation and storage of information.
- select apposite business intelligence methods for given requirements.
- explain current and future business intelligence application areas.

Project: Business Intelligence

On successful completion, students will be able to

- transfer knowledge of business intelligence methodology to real-world use cases.
- analyze the suitability of different approaches with respect to the project task.
- critically reason about relevant design choices.
- make apposite architectural choices.
- formulate and implement a business intelligence use case.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of Computer Science & Software Development and Data Science & Artificial Intelligence	All Master Programs in the IT & Technology fields

Business Intelligence I

Course Code: DLMDSEBA01

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

Course Description

Business Intelligence is about the generation of information based on operational data. It is used to enable goal-oriented management practices as well as the optimization of relevant business activities. This course introduces and discusses techniques, methods, and models for data provisioning and the generation, analysis, and dissemination of information.

Course Outcomes

On successful completion, students will be able to

- understand the motivations and use cases for, as well as fundamentals of, business intelligence.
- explain relevant types of data.
- know and disambiguate techniques and methods for modeling and dissemination of data.
- expound upon the techniques and methods for the generation and storage of information.
- select apposite business intelligence methods for given requirements.
- explain current and future business intelligence application areas.

Contents

1. Motivation and Introduction
   - 1.1 Motivation and Historical Development of the Field
   - 1.2 Business Intelligence as a Framework
2. Data Provisioning
   - 2.1 Operative and Dispositive Systems
   - 2.2 The Data Warehouse Concept
   - 2.3 Architecture Variants
3. Data Warehouse
   - 3.1 The ETL-Process
   - 3.2 DWH and Data-Mart Concepts
   - 3.3 ODS and Meta-Data
4. Modeling Multidimensional Dataspaces

4.1 Data Modeling
4.2 OLAP-Cubes
4.3 Physical Storage Concepts
4.4 Star-Schema and Snowflake-Schema
4.5 Historization

5. Analytical Systems
   5.1 Freeform Data Analysis and OLAP
   5.2 Reporting Systems
   5.3 Model-Based Analytical Systems
   5.4 Concept-Oriented Systems

6. Distribution and Access
   6.1 Information Distribution
   6.2 Information Access

7. Current and Future Business Intelligence Application Areas
   7.1 Mobile Business Intelligence
   7.2 Predictive and Prescriptive Analytics
   7.3 Artificial Intelligence
   7.4 Agile Business Intelligence

Literature

Compulsory Reading

Further Reading

- Grossmann, W., Rinderle-Ma, S. (2015). Fundamentals of Business Intelligence. Berlin/ Heidelberg: Springer.
- Kolb, J. (2013). Business intelligence in plain language: A practical guide to data mining and business analytics. Createspace.
- Sharda, R., Delen, D., & Turban, E. (2014). Business intelligence and analytics: Systems for decision support. Pearson.
- Sharda, R., Delen, D., & Turban, E. (2017). Business intelligence, analytics, and data science: A managerial perspective. Pearson.
- Sherman, R. (2014). Business intelligence guidebook: From data integration to analytics. Morgan Kaufmann.
- Turban, E., Sharda, R., Aronson, J., & King, D. (2010). Business intelligence. A managerial approach (2nd ed.). Prentice Hall.
- Vaisman, A., & Zimányi, E. (2016). Data warehouse systems: Design and implementation. Springer.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods

Learning Material
- ☑ Course Book
- ☑ Video
- ☑ Audio
- ☑ Slides

Exam Preparation
- ☑ Online Tests
- ☑ Guideline

Study Format myStudies

Study Format	Course Type
myStudies	

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Case Study

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

Instructional Methods

Project: Business Intelligence

Course Code: DLMDSEBA02

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	DLMDSEBA01

Course Description

In this course the students will transfer knowledge of business intelligence approaches and methods to the implementation of a real-world business analytical use case. To accomplish this goal, students must look closely at the given task and find an apposite approach by analyzing, evaluating, and comparing different solution strategies and their constituent parts. The found solution then has to be implemented in order to arrive at a running business analytical system.

Course Outcomes

On successful completion, students will be able to

- transfer knowledge of business intelligence methodology to real-world use cases.
- analyze the suitability of different approaches with respect to the project task.
- critically reason about relevant design choices.
- make apposite architectural choices.
- formulate and implement a business intelligence use case.

Contents

- This second course in the Business Analyst specialization aims at the practical implementation of a business intelligence project. Students can choose from a list of project topics or contribute their own ideas.

Literature

Compulsory Reading

Further Reading

- Kimball, R. (2013). The data warehouse toolkit: The definitive guide to dimensional modeling (3rd ed.). Indianapolis, IN: Wiley.
- Linstedt, D., & Olschimke, M. (2015). Building a scalable data warehouse with Data Vault 2.0. Waltham, MA: Morgan Kaufmann.
- Provost, F. (2013). Data science for business: What you need to know about data mining and data-analytic thinking. Sebastopol, CA: O'Reilly.
- Sherman, R. (2014). Business intelligence guidebook: From data integration to analytics. Waltham, MA: Morgan Kaufmann.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Portfolio

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Slides	☑ Guideline

Study Format myStudies

Study Format	Course Type
myStudies	

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Portfolio

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

Instructional Methods

UI/UX Expert

Module Code: DLMAIEUIUX

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	▪ DLMAIEUIUX01 ▪ none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Adelka Niels (User Interface and Experience) / Prof. Dr. Adelka Niels (Project: Human Computer Interaction)

Contributing Courses to Module

- User Interface and Experience (DLMAIEUIUX01)
- Project: Human Computer Interaction (DLMAIEUIUX02)

Module Exam Type

Module Exam	Split Exam
	User Interface and Experience • Study Format "Distance Learning": Exam, 90 Minutes • Study Format "myStudies": Exam, 90 Minutes Project: Human Computer Interaction • Study Format "myStudies": Portfolio • Study Format "Distance Learning": Portfolio

Weight of Module

see curriculum

Module Contents

User Interface and Experience

- ROI of UX design
- Role and mindset of UX design in IT projects
- The UX design process
- UX psychology: How the human mind works
- User research
- UX design basics

Project: Human Computer Interaction

In this course the students will gain practical experience in user experience design. They will conduct user testing for a given user interface and work on developing improvements. The work process and the results will become part of a portfolio.

Learning Outcomes

User Interface and Experience

On successful completion, students will be able to

- Understand what design is about and the crucial aspects of good design
- understand and define the role of the UI/UX designer within a project.
- explain the UX design process and the user-centered mindset.
- advocate the importance of UX design for IT projects.
- describe the basic methods of user research, user testing, and user-centered design.

Project: Human Computer Interaction

On successful completion, students will be able to

- evaluate the usability of a user interface.
- conduct user testing.
- understand the practical implications of putting users first.
- make small changes in existing user interfaces and recognize the situations in which a user experience designer should be consulted.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of Data Science & Artificial Intelligence	All Master Programs in the IT & Technology fields

User Interface and Experience

Course Code: DLMAIEUIUX01

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

Course Description

UX design is crucial to the development of new IT services and applications and enhances the quality of the outcome. Applying UX design techniques can significantly and positively change the software development process, and good UX design is the result of effective teamwork. Within this course the students will understand the mindset, basic techniques, and impact of UX design on IT projects. They will learn how the UX design process works and the role of the UX designer within IT projects. They will also gain skills in the type of collaboration that produces the best results. Using their basic knowledge about good design, the students will know when it is appropriate that they make small changes to UIs themselves and when it is time to consult a designer.

Course Outcomes

On successful completion, students will be able to

- Understand what design is about and the crucial aspects of good design
- understand and define the role of the UI/UX designer within a project.
- explain the UX design process and the user-centered mindset.
- advocate the importance of UX design for IT projects.
- describe the basic methods of user research, user testing, and user-centered design.

Contents

1. ROI of UX design
   - 1.1 Efficacy
   - 1.2 Efficiency
   - 1.3 The impact of design on use errors
2. Role and Mindset of UX design in IT projects
   - 2.1 The role of UX design: the UX designer
   - 2.2 The UX mindset: putting the user first
3. The UX design Process
   - 3.1 In a waterfall process environment
   - 3.2 In an agile process environment
4. UX Psychology: How the Human Mind Works

4.1 Perceptual psychology
4.2 Information processing
4.3 Decision-making
4.4 Situation awareness
4.5 Errors

5. User Research
5.1 The benefit of user research
5.2 Basic research techniques
5.3 User testing

6. UX design Basics
6.1 Interaction design
6.2 Information architecture
6.3 Screen design
6.4 Graphic design
6.5 Rules of good design

Literature

Compulsory Reading

Further Reading

- Cooper, A., Reimann, R., Cronin, D., & Noessel, C. (2014). About face: The essentials of interaction design (5th ed.). Wiley.
- Johnson, J. (2010). Designing with the mind in mind. Elsevier.
- Preece, J., Sharp, H., & Rogers, Y. (2015). Interaction design: Beyond human-computer interaction (5th ed.). Wiley.
- Unger, R., & Chandler, C. (2012). A project guide to UX design: For user experience designers in the field or in the making. New Riders Pub.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Exam, 90 Minutes

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

Instructional Methods

Project: Human Computer Interaction

Course Code: DLMAIEUIUX02

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	DLMAIEUIUX01

Course Description

In this course the students will gain practical experience in user experience design. They will set up and conduct a user testing for a given user interface and develop improvements. The work process and the results will become part of a portfolio.

Course Outcomes

On successful completion, students will be able to

- evaluate the usability of a user interface.
- conduct user testing.
- understand the practical implications of putting users first.
- make small changes in existing user interfaces and recognize the situations in which a user experience designer should be consulted.

Contents

- User experience design focusses on the needs of users. Within this portfolio project the students put into practice basic techniques which lead to good user-centered design. They learn how to test the user experience and usability of an application by conducting user tests, and they also learn how to develop and test ideas for improvement. Students will finish this course having gained practical experience working within the mindset of putting users first.

Literature
Compulsory Reading
Further Reading ▪ Barnum, C. (2010): Usability Testing Essentials: Ready, Set...Test!, Morgan Kaufmann, Burlington, USA ▪ Cooper, A., Reimann, R., Cronin, D., & Noessel, C. (2014). About face: The essentials of interaction design. New York, NY: Wiley. ▪ Johnson, J. (2010). Designing with the mind in mind. Burlington, MA: Elsevier. ▪ Preece, J., Sharp, H., & Rogers, Y. (2015). Interaction design: Beyond human-computer interaction. New York, NY: Wiley. ▪ Microsoft Windows Dev Center. (2018). Guidelines. [Web page]. Retrieved from https://docs.microsoft.com/en-us/windows/desktop/uxguide/guidelines ▪ Unger, R., & Chandler, C. (2012). A project guide to UX design. Berkeley, CA: New Riders.

Study Format myStudies

Study Format	Course Type
myStudies	

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Portfolio

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

Instructional Methods

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Portfolio

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Slides	☑ Guideline

Social Media Models and Creation

Module Code: DLMGHESMMC

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

N.N. (Digital Social Media Business Models) / Prof. Dr. Anne Kristin Langner (Social Media Creation: Audio, Video/Motion, Text)

Contributing Courses to Module

- Digital Social Media Business Models (DLMGHESMMC01)
- Social Media Creation: Audio, Video/Motion, Text (DLMMKSMC01)

Module Exam Type

Module Exam	Split Exam
	Digital Social Media Business Models • Study Format "Distance Learning": Exam or Written Assessment: Written Assignment, 90 Minutes Social Media Creation: Audio, Video/Motion, Text • Study Format "Distance Learning": Oral Assignment

Weight of Module

see curriculum

Module Contents

Digital Social Media Business Models

- Innovation management and business model definitions
- Digital business models: definition and elements
- Success factors and strategy
- Social media business models
- Social commerce & social selling
- Social media business cases

Social Media Creation: Audio, Video/Motion, Text

- Social Media Creation: The Power of Social Media Storytelling
- Creating Compelling Text Content
- Strong Visuals and How to Communicate via Associations
- Video: Mini-Movies for Maximal Emotional Engagement
- Audio & Podcasts: Next Level Content
- Online, Offline and Crossmedial Campaigns & Storytelling

Learning Outcomes

Digital Social Media Business Models

On successful completion, students will be able to

- reproduce the history and framework conditions of digital business models.
- be able to comprehend the basic features of innovation management.
- define and analyse social media business models.
- understand and evaluate social media business cases.

Social Media Creation: Audio, Video/Motion, Text

On successful completion, students will be able to

- create engaging content for various Social Media use-cases using theoretical frameworks.
- apply the principles of successful storytelling to all major content categories.
- create and work with different content formats like text, pictures, video and audio.
- know and work with the differences between online and offline content creation.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Online & Social Media Marketing	All Master Programs in the Marketing & Communication field

Digital Social Media Business Models

Course Code: DLMGHESMMC01

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

Course Description

Many companies still interpret social media as an extension of their communication efforts into the social web. This overlooks the fact that the channels are not only capable of boosting or changing a company's own business model, but even enable completely new models. This course addresses the question of how the full potential of social media can be used for a business model.

Course Outcomes

On successful completion, students will be able to

- reproduce the history and framework conditions of digital business models.
- be able to comprehend the basic features of innovation management.
- define and analyse social media business models.
- understand and evaluate social media business cases.

Contents

1. Innovation Management and Business Model Definitions
   - 1.1 Basic Terms of Innovation Management and Connection with Digital Business Models
   - 1.2 Business Models: Genesis - Definition - Relation to Innovation
   - 1.3 Specifics of Digital Business Models Compared to Traditional Business Models
2. Digital Business Models: Definition and Elements
   - 2.1 New Elements of Digital Business Models
   - 2.2 Redefinition and Core Elements of Digital Business Models
   - 2.3 Value Architecture and Value Mechanics
3. Success Factors and Strategy
   - 3.1 Success Factors
   - 3.2 Digital Strategy
   - 3.3 Digital Transformation
4. Social Media Business Models
   - 4.1 Social Media Platforms

4.2 Social Media as a Private Person
4.3 Social Media as a Company

5. Social Commerce & Social Selling
   5.1 Social Commerce
   5.2 Social Selling

6. Social Media Business Cases
   6.1 Social Commerce
   6.2 Social Selling
   6.3 Social Blogging
   6.4 Social Communication
   6.5 Other Business Cases

Literature

Compulsory Reading

Further Reading

- Boardman, R., Henninger, C. E., Blazquez, M., & Ryding, D. (2019). Social Commerce [electronic resource]: Consumer Behaviour in Online Environments. Palgrave Macmillan.
- Roberts, M. L., Bormann, N. F., Barker, D., Zahay, D. L., & Barker, M. S. (2016). Social media marketing. a strategic approach (Second edition.). South-Western.
- Weill, P., & Woerner, S. L. (2018). What's Your Digital Business Model? [electronic resource]: Six Questions to Help You Build the Next-Generation Enterprise. Harvard Business Review Press.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam or Written Assessment: Written Assignment, 90 Minutes

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
100 h	0 h	25 h	25 h	0 h	150 h

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	☑ Guideline
	☑ Slides	

Social Media Creation: Audio, Video/Motion, Text

Course Code: DLMMKSMC01

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

Course Description

Social Media plays an ever-growing role in Online Marketing. Being able to create successful content repeatedly and consistently is vital. In order to reach and engage the desired target groups, content creation needs to follow the guiding principles of storytelling. Social Media Content Creation encompasses not only text, but also strong visual content like pictures and infographics as well as video. Newer formats like podcasts complement the portfolio.

Course Outcomes

On successful completion, students will be able to

- create engaging content for various Social Media use-cases using theoretical frameworks.
- apply the principles of successful storytelling to all major content categories.
- create and work with different content formats like text, pictures, video and audio.
- know and work with the differences between online and offline content creation.

Contents

1. Social Media Creation: The Power of Social Media Storytelling
   - 1.1 Basic Storytelling Know How: How to Create Engaging Content
   - 1.2 Basics of Visual and Editorial Communication
2. Creating Compelling Text Content
   - 2.1 Writing Skills for Online Publishing
   - 2.2 Form Follows Function: How to Adapt to Specific Use Cases (Blogs & Microblogs)
3. Strong Visuals and How to Communicate via Associations
   - 3.1 Introduction into Visual Storytelling
   - 3.2 The Power of Pictures: Composition & Editing
   - 3.3 Visualisations, Infografics and Diagrams
   - 3.4 Best Cases B2B and B2C
4. Video: Mini-Movies for Maximal Emotional Engagement
   - 4.1 Introduction – why Video is Good for Social Media
   - 4.2 Video Formats for Social Media

4.3 Technical Know-How for Video-Production: Cuts & Editing

5. Audio & Podcasts: Next Level Content
   - 5.1 Introduction: Goals and Benefits of Podcasts
   - 5.2 The Basic Concept: Target Group and Content Selection
   - 5.3 Writing for Talking: How to Create Audio Content
   - 5.4 Best Cases: Successful Formats B2B and B2C

6. Online, Offline and Crossmedial Storytelling
   - 6.1 Online vs. Offline: The Difference in Creation
   - 6.2 Connecting Media Channels (Crossmedial and Transmedial Campaigns & Storytelling)

Literature

Compulsory Reading

Further Reading

- Content Marketing Institute (2021). 3 Video Content Takeaways From Salesforce, TikTok, and Facebook. (URL: https://contentmarketinginstitute.com/2021/08/salesforce-facebook-tiktok-content-examples/ [Retrieved: 07.02.2022]).
- Handley, A. (2014). Everybody Writes: Your Go-To Guide to Creating Ridiculously Good Content. Wiley.
- Harris, Jodi. (2020). How to Create Visual Content That's Worth a Thousand Shares. Content Marketing Institute. (URL: https://contentmarketinginstitute.com/2020/03/visual-content-best-practices-examples/ [Retrieved: 07.02.2022]).
- Santo, Alexander. (2021). 8 Types of Podcasts: The Complete Guide to Audio content Marketing (Infographic). Brafton. (URL: https://www.brafton.com/blog/video-marketing/types-of-podcasts/ [Retrieved: 07.02.2022]).

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Oral Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Content Creation and Storytelling

Module Code: DLMGHECCS

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Andre Döbert (Storytelling in Social Media) / Prof. Dr. Anne Kristin Langner (Project: Content Creation)

Contributing Courses to Module

- Storytelling in Social Media (DLMMKMSTSM01)
- Project: Content Creation (DLMMMPCC01)

Module Exam Type

Module Exam	Split Exam
	Storytelling in Social Media • Study Format "Distance Learning": Written Assessment: Written Assignment Project: Content Creation • Study Format "Distance Learning": Oral Project Report

Weight of Module

see curriculum

Module Contents

Storytelling in Social Media

- Basics of Storytelling
- Narrative History, Theory, and Research
- Digital Storytelling
- Social Media Storytelling
- Social Media Storytelling and Audience Participation

Project: Content Creation

This course focuses on the development of a corporate online presence employing different channels while using content creation guidelines in order to create a professional digital experience.

Learning Outcomes

Storytelling in Social Media

On successful completion, students will be able to

- explain and distinguish theories and concepts of storytelling.
- take into account the similarities and differences of analog and digital storytelling.
- critically examine the potentials and limitations of digital storytelling.
- assess the characteristics and effects of social media storytelling.
- apply methods of digital and social media storytelling in practice.

Project: Content Creation

On successful completion, students will be able to

- assess and develop professional corporate online presences.
- establish and maintain various corporate channels depending on targeted stakeholders and specific goals.
- implement a structured content management plan to create, publish, and govern an organization's content and data.
- create performing content for each individual channel.
- analyze and assess content metrics & performance indicators.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the field of Online & Social Media Marketing.	All Master Programs in the Marketing & Communication field.

Storytelling in Social Media

Course Code: DLMMKMSTSM01

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

Course Description

Storytelling is more than telling stories or fairy tales. It is a narrative technique that is used as a professional tool in several different contexts, be it journalism, branding, or social media. The focus of this course is on social media storytelling. As this form of storytelling is based on traditional techniques and common digital structures, corresponding theory, history and research is provided. These fundamentals, for instance the difference between storytelling in terms of content, auditive and visual storytelling, enables students to assess the quality of social media storytelling and give them inspiration for their own storytelling practice. In contrast to other digital storytelling methods, social media storytelling has a strong focus on audience participation – which is a part of this course. Students learn methods and ways to engage audiences and communities. Students are enabled to transfer storytelling theories and techniques into practice and utilize those, for instance, in social media and social media marketing.

Course Outcomes

On successful completion, students will be able to

- explain and distinguish theories and concepts of storytelling.
- take into account the similarities and differences of analog and digital storytelling.
- critically examine the potentials and limitations of digital storytelling.
- assess the characteristics and effects of social media storytelling.
- apply methods of digital and social media storytelling in practice.

Contents

1. Introduction and Basics
   - 1.1 Definition and Subject of Storytelling
   - 1.2 Narrativity History, Research and Theory
   - 1.3 The Elements of a Good Story
   - 1.4 Storytelling in Reality and Fiction
2. Forms of Storytelling
   - 2.1 Content
   - 2.2 Audio
   - 2.3 Visual
   - 2.4 Audiovisual

3. Digital Storytelling
   - 3.1 Definition and Basics
   - 3.2 Transmedia Storytelling, Participatory Culture, and Media Governance
   - 3.3 Crossmedia Storytelling

4. Social Media Storytelling and Audience Participation
   - 4.1 Digital Communities and Audiences
   - 4.2 Interaction and Communication
   - 4.3 Annotations
   - 4.4 Collaboration and Co-Creation
   - 4.5 User-Generated Content

5. Storytelling in Practice
   - 5.1 Start with the Why
   - 5.2 Corporate and Brand Storytelling
   - 5.3 Storytelling in Advertising, PR, and Marketing
   - 5.4 Storytelling in Social Media – Best Practices

Literature

Compulsory Reading

Further Reading

- De Finna, A. (2016). Storytelling and audience reactions in social media. Language in Society 45(4), pp. 473-498.
- Fog, K., Budtz, C., Munch, P., Blanchette, S. (2010). Storytelling. Branding in Practice (2nd ed.). Springer.
- Guynes, S. & Hassler-Forest, D. (2017) (ed.). Star Wars and the History of Transmedia Storytelling. Amsterdam University Press.
- Hall, K. (2019). Stories that Stick. How Storytelling Can Captivate Customers, Influence Audiences, and Transform Your Business. HarperCollins.
- Pettengrill, J. (2020). Social Media and Digital Storytelling for Social Good. The Journal of Social Media in Society, 9(1), pp. 275-281.
- Sinek, S. (n. d.). The Golden Circle Presentation. https://simonsinek.com/commit/the-golden-circle.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Written Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Project: Content Creation

Course Code: DLMMMPCC01

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

Course Description

A powerful online presence serves as virtual business card and is critical for a company's professional image. Channels like a public website or corporate blog might serve a wide range of use cases, and a company can employ more than one way to present itself and engage with its stakeholders. A strong understanding of performance indicators and a structured content management plan are the foundation of successful corporate content creation.

Course Outcomes

On successful completion, students will be able to

- assess and develop professional corporate online presences.
- establish and maintain various corporate channels depending on targeted stakeholders and specific goals.
- implement a structured content management plan to create, publish, and govern an organization's content and data.
- create performing content for each individual channel.
- analyze and assess content metrics & performance indicators.

Contents

- A digital presence gives a company an ideal platform to communicate. It is crucial for businesses to connect with its audiences and stay relevant. Engaging content is not universal, it depends on the specific target group and subsequent expectations for each individual corporate channel. A structured content management plan is therefore key to longterm success. Content creation itself needs to focus on the specific requirements and goals for each channel while keeping the bigger picture in mind. A corporate blog will address users in a different manner than a PR newsroom. Mobile first content creation also follows clear guidelines. Being able to analyze and assess content and its performance in relation to specific goals is paramount to goal driven successful publishing.

Literature
Compulsory Reading
Further Reading ▪ Brenner, Michael. (2022). Key Metrics to Measure Content Marketing Performance. Marketing Insider Group. (URL: https://marketinginsidergroup.com/content-marketing/metrics-to-measure-content-performance/ [Retrieved: 07.02.2022]). ▪ Handley, A. (2014). Everybody Writes: Your Go-To Guide to Creating Ridiculously Good Content. Wiley. ▪ Thompson, J. D., & Weldon, J. (2022). Content Production for Digital Media: An Introduction. Springer.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Oral Project Report

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

E-Commerce

Module Code: MWEC-01_E

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Jonas Polfuß (E-Commerce I) / Prof. Dr. Jonas Polfuß (E-Commerce II)

Contributing Courses to Module

- E-Commerce I (MWEC01-01_E)
- E-Commerce II (MWEC02-01_E)

Module Exam Type

Module Exam	Split Exam
	E-Commerce I • Study Format "Distance Learning": Exam, 90 Minutes E-Commerce II • Study Format "Distance Learning": Written Assessment: Case Study

Weight of Module

see curriculum

Module Contents

E-Commerce I

- Basics of e-business and e-commerce
- Forms of e-commerce
- Strategic options in e-commerce
- Development of e-commerce strategies
- Measurement of success and success factors in e-commerce
- Risk benefit in e-commerce
- E-commerce in selected sectors

E-Commerce II

- Basics of online marketing and e-commerce
- web usability
- Network-based payment systems
- Legal basis
- Shop systems - tools - logistics
- Social media marketing in e-commerce
- Monitoring and analysis

Learning Outcomes

E-Commerce I

On successful completion, students will be able to

- explain the basics and theory of e-commerce.
- know analysis methods for the economic management of e-commerce.
- classify the terms e-commerce and e-business.
- explain alternative strategies and instruments of e-commerce, implement them and check their influence on success.
- work with chances and possibilities of the internet in connection with e-commerce.
- know current business models and use this knowledge to find additional distribution channels.
- analyze e-commerce from a management perspective and prepare well-founded decision documents.
- know the sectoral characteristics of e-commerce, especially how e-commerce is structured in the B2B and capital goods sector and what has to be considered in the consumer goods industry (B2C).

E-Commerce II

On successful completion, students will be able to

- assess the potential of an online shop to successfully sell products and services over the Internet.
- know the conceptual, technical and legal aspects of e-commerce
- describe important prerequisites for success in e-commerce such as product range presentation, checkout and payment processes, conversion rate, etc.
- know selection criteria for shop systems and know the most important ones (Hybris, Magento etc.)
- explain current and future challenges, so that they can implement e-shop and e-commerce projects themselves.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of E-Commerce	All Master Programs in the Marketing & Communication fields

E-Commerce I

Course Code: MWEC01-01_E

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

Course Description

This course addresses the topic of e-commerce. In addition to basic technical terms, concepts, business models and players, the opportunities and risks of electronic commerce within market-related and legal frameworks are also introduced. Based on this, the possible strategic options in e-commerce are presented in detail, on the basis of which students can derive their own e-commerce strategy.

Course Outcomes

On successful completion, students will be able to

- explain the basics and theory of e-commerce.
- know analysis methods for the economic management of e-commerce.
- classify the terms e-commerce and e-business.
- explain alternative strategies and instruments of e-commerce, implement them and check their influence on success.
- work with chances and possibilities of the internet in connection with e-commerce.
- know current business models and use this knowledge to find additional distribution channels.
- analyze e-commerce from a management perspective and prepare well-founded decision documents.
- know the sectoral characteristics of e-commerce, especially how e-commerce is structured in the B2B and capital goods sector and what has to be considered in the consumer goods industry (B2C).

Contents

1. Basics of E-Business and E-Commerce 1.1 Definition of Terms, Limitations and Links to Other Units 1.2 Mobile Commerce
   - 1.1 Trends and Opportunities
   - 1.2 Economic Framework Conditions in E-Commerce
   - 1.3 Value Creation and Business Models
   - 1.4 Actors/Market Participants and Business Relations
2. Forms of E-Commerce
   - 2.1 Types of E-Commerce Operations

2.2 Innovative Forms of Interactive E-Commerce

3. Strategic Options in E-Commerce
   - 3.1 Product Range Policy
   - 3.2 Pricing Policy
   - 3.3 Distribution Policy
   - 3.4 Communication Policy
   - 3.5 IT System Landscape and Internal Organization of E-Commerce
   - 3.6 Customer Loyalty, Trust and Reputation

4. Development of an E-Commerce Strategy
   - 4.1 Conceptual Framework
   - 4.2 Target Planning
   - 4.3 E-Business Analysis
   - 4.4 E-Business Strategy Formulation
   - 4.5 E-Business Strategy Implementation and Strategy Audit

5. Success Measurement and Success Factors in E-Commerce
   - 5.1 Success Measurements in E-Commerce
   - 5.2 Success Factors in E-Commerce

6. Opportunities and Risks in E-Commerce
   - 6.1 Legal Risks in E-Commerce (B2C)
   - 6.2 Opportunities and Risks for Pure Players
   - 6.3 Opportunities and Risks for Multi-Channel Players

7. E-Commerce in Selected Sectors
   - 7.1 E-Commerce in the Consumer Goods Sector (B2C) - E-Shop
   - 7.2 E-Commerce in the Capital Goods Sector (B2C) - E-Procurement

Literature

Compulsory Reading

Further Reading

- Turban, E., Whiteside, J., King, D., & Outland, J. (2017). Introduction to electronic commerce and social commerce. Springer.
- Laudon, K., & Traver, C. (2021). E-commerce 2021: Business, technology, and society (16th ed.). Pearson.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

E-Commerce II

Course Code: MWEC02-01_E

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

Course Description

This course expands and deepens the understanding of electronic commerce with elements of operational marketing, especially brand communication and interactive product/service and pricing, complemented by in-depth aspects of the growing importance of payment systems and mobile commerce systems.Based on the understanding of online customer behavior, participants discuss online advertising, pricing and communication, as well as PR activities, for example in the area of social networks. Another focus is on the technical requirements for successful e-commerce, such as usability, selection of shop and payment systems. The course program is supplemented by legal framework conditions and possibilities for customer integration.After completing this course, students will have a deeper understanding of marketing implications of e-commerce.

Course Outcomes

On successful completion, students will be able to

- assess the potential of an online shop to successfully sell products and services over the Internet.
- know the conceptual, technical and legal aspects of e-commerce
- describe important prerequisites for success in e-commerce such as product range presentation, checkout and payment processes, conversion rate, etc.
- know selection criteria for shop systems and know the most important ones (Hybris, Magento etc.)
- explain current and future challenges, so that they can implement e-shop and e-commerce projects themselves.

Contents

1. Basics of Online Marketing and E-Commerce
   - 1.1 Behavior of Online Customers
   - 1.2 Forms of Online Marketing
   - 1.3 Importance, Function and Impact of Online Marketing in E-Commerce
   - 1.4 Online Sales Channels, Mobile Marketing and Apps
   - 1.5 Implementation: Decision Criteria, Specifications and Project Management
2. Web Usability

2.1 Criteria of Good Web Usability
2.2 Barrier-Free Design and Responsive Design
2.3 Search Engine Optimization and Content Marketing

3. Network-Based Payment Systems
3.1 Criteria for Web-Based Payment Systems
3.2 Prepaid Systems, Pay-Now Systems and Pay-Later Systems
3.3 Mobile Payment and Scoring

4. Legal Basis
4.1 Legal Aspects of Ordering and Delivery Processes
4.2 General Terms and Conditions, Commercial Law and Right of Withdrawal
4.3 Image Rights, Trademark Protection and Data Privacy
4.4 Liability of the Shop and Website Operator

5. Shop Systems - Tools - Logistics
5.1 Success Factors and Selection Criteria of a Good Online Shop
5.2 Seal of Approval/Certification
5.3 Range of Goods and Ordering Process
5.4 Processing and Logistics
5.5 Collection and Receivables Management

6. Social Media Marketing in E-Commerce
6.1 Cross-Media Marketing of Online Shops
6.2 Customer Retention and Achievement of Reach
6.3 Conflict Management in Social Networks
6.4 Social Media Advertising and Advertising Networks

7. Monitoring and Analysis
7.1 Measuring Success: Goals, Methods and Funds
7.2 Targeting and KPI Definitions
7.3 Web Controlling
7.4 Visitor Analysis

Literature
Compulsory Reading
Further Reading ▪ Wiedenhoefer, L. (2021). Digital customer experience engineering: Strategies for creating effectivedigital experiences. Apress. ▪ Lesvitt, M. O., & Shneiderman, B. (2007). Research-based web design & usability guidelines.United States Government Printing Office.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Innovate and Change

Module Code: DLMDSEIAC-01

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Sonja Würtemberger (Change Management) / Prof. Dr. Lena Bernhofer (Innovation and Entrepreneurship)

Contributing Courses to Module

- Change Management (DLMBCM01)
- Innovation and Entrepreneurship (DLMBIE01-01)

Module Exam Type

Module Exam	Split Exam
	Change Management • Study Format "Distance Learning": Written Assessment: Case Study Innovation and Entrepreneurship • Study Format "myStudies": Exam, 90 Minutes • Study Format "Distance Learning": Exam, 90 Minutes

Weight of Module

see curriculum

Module Contents

Change Management

- The context and meaning of change
- The change process
- Perspectives for understanding change
- Implementing change

Innovation and Entrepreneurship

- Innovation management and entrepreneurship in a globalized world
- Basics of entrepreneurship
- Business ideas and company foundations
- Financing sources and processes
- Internet, digital business, and artificial intelligence
- Strategic alliances
- Family-owned companies

Learning Outcomes

Change Management

On successful completion, students will be able to

- recognize common features of organizational change and anticipate some of the standard difficulties encountered when an organization engages in change processes.
- explain the importance of organizational change.
- develop a conceptual framework for planned and improvised organizational change, and differentiate between anticipated, emergent, and opportunity-based change.
- utilize and redesign formal organizational structures to facilitate change processes.
- recognize the role of informal organizational structures and identify key stakeholders to promote change processes.
- analyze the social networks that exist within an organization, map independencies and motives/interests, and plan how to distribute information and redesign work flows.
- differentiate between groups of stakeholders and identify the most suitable strategy to adopt with each group.
- recognize the role of the change leader as a political broker and build social capital through informal methods.
- utilize stories and symbols when communicating with others in an organization to maximize leverage as a cultural change leader.
- draw on empirical evidence to plan and implement change processes in an organization.

Innovation and Entrepreneurship

On successful completion, students will be able to

- understand the importance, fundamentals, and dimensions of entrepreneurship and its derivatives (intrapreneurship, corporate entrepreneurship, stakeholder relationships, and family businesses).
- analyze the opportunities and challenges associated with evaluating a business idea and setting up a business.
- distinguish between the different motivations behind entrepreneurial activity and develop specific objectives for new enterprises.
- develop a business model, including benchmarks for assessing desired sustainable growth.
- apply different legal forms to business start-ups and select the appropriate legal form for a specific business model.
- understand the different ways in which entrepreneurship and innovation can be financed and weigh them against each other in terms of medium- and long-term advantages and disadvantages.
- develop a rigorous business plan that can be used both as a planning and financing instrument.
- apply, in principle, an entrepreneurial mindset in a variety of different contexts of future professional development.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the fields of Business Administration & Management	All Master Programmes in the Business & Management fields

Change Management

Course Code: DLMBCM01

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

Course Description

We live in a world characterized by constant change. This affects not only individuals but also organizations. Even successful organizations need to constantly reinvent themselves in order to remain successful. This course presents a discussion of change in relation to the complexities of organizational life, with an emphasis on applying theory to actual practice. Organizational change is an international phenomenon and the course includes many international case examples. With a focus on organizational change as opposed to personal change and/or entrepreneurship, this course has a distinctly different focus from the related modules "Leadership" and "Innovation and Entrepreneurship." The first part of the course considers the nature of change and different change models. The second part focuses on how different perspectives complement one another and can be used to better understand, analyze, and diagnose change processes. The course deals with issues of structure, culture, and politics. In the later part of the course, the implementation of change is considered in detail. Given that many change processes fail, this part is an important learning component to complement an in-depth understanding of change.

Course Outcomes

On successful completion, students will be able to

- recognize common features of organizational change and anticipate some of the standard difficulties encountered when an organization engages in change processes.
- explain the importance of organizational change.
- develop a conceptual framework for planned and improvised organizational change, and differentiate between anticipated, emergent, and opportunity-based change.
- utilize and redesign formal organizational structures to facilitate change processes.
- recognize the role of informal organizational structures and identify key stakeholders to promote change processes.
- analyze the social networks that exist within an organization, map independencies and motives/interests, and plan how to distribute information and redesign work flows.
- differentiate between groups of stakeholders and identify the most suitable strategy to adopt with each group.
- recognize the role of the change leader as a political broker and build social capital through informal methods.
- utilize stories and symbols when communicating with others in an organization to maximize leverage as a cultural change leader.
- draw on empirical evidence to plan and implement change processes in an organization.

Contents

Literature
Compulsory Reading
Further Reading ▪ Bolman, L. G., & Deal, T. E. (2013). Reframing organizations: Artistry, choice, and leadership (5th ed.). San Francisco, CA: Jossey-Bass. ▪ Cameron, K. S., & Quinn, R. E. (2011). Diagnosing and changing organizational culture: Based on the competing values framework (3rd ed.). San Francisco, CA: Jossey-Bass. ▪ Pentland, A. (2014). Social physics: How good ideas spread – The lessons from a new science. New York, NY: Penguin Press. ▪ McChrystal, S., Collins, T., Silverman, D., & Fussell, C. (2015). Team of teams: New rules of engagement for a complex world. New York, NY: Penguin Press. ▪ Worren, N. A. M. (2012). Organisation design: Re-defining complex systems. Harlow: Pearson.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods

Learning Material
- ☑ Course Book
- ☑ Video
- ☑ Audio
- ☑ Slides

Exam Preparation
- ☑ Online Tests
- ☑ Guideline

Innovation and Entrepreneurship

Course Code: DLMBIE01-01

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

Course Description

In today's globalized and digital world, entrepreneurs have more opportunities to develop and market products and services than ever before. However, entrepreneurship, whether in the form of entrepreneurship or intrapreneurship, presents special challenges. In order to avoid the typical pitfalls of starting and growing a business, a sound understanding of innovation management and building a business is essential. Particular attention must be paid to the financing of entrepreneurial activity, both from the perspective of the entrepreneur and the investor. Innovation and entrepreneurial activity are the basis and driving force of our economy. Even looking at other economies, it is obvious that innovation and entrepreneurship are crucial at every stage of economic development. Small enterprises in developing countries initiate the development of economic institutions and create supply, demand, and markets. These enterprises lay the foundation for economic development and growth. In developed economies, innovation and entrepreneurship are the driving forces behind competition and competitiveness in the global context. In all parts of the world, family businesses play the most important role. The rapid technological and social change present in our societies requires the innovative use of digital technologies (internet and artificial intelligence), as well as flexibility in handling new forms of organization (e.g., strategic alliances between companies). This course introduces students to the ideas behind, motives, and drivers of entrepreneurial activity and innovation and teaches them the practical aspects of the identification, analysis, and development of innovations and business ideas. The core competence of the entrepreneur—the ability to negotiate with investors and partners—is also addressed.

Course Outcomes

On successful completion, students will be able to

- understand the importance, fundamentals, and dimensions of entrepreneurship and its derivatives (intrapreneurship, corporate entrepreneurship, stakeholder relationships, and family businesses).
- analyze the opportunities and challenges associated with evaluating a business idea and setting up a business.
- distinguish between the different motivations behind entrepreneurial activity and develop specific objectives for new enterprises.
- develop a business model, including benchmarks for assessing desired sustainable growth.
- apply different legal forms to business start-ups and select the appropriate legal form for a specific business model.
- understand the different ways in which entrepreneurship and innovation can be financed and weigh them against each other in terms of medium- and long-term advantages and disadvantages.
- develop a rigorous business plan that can be used both as a planning and financing instrument.
- apply, in principle, an entrepreneurial mindset in a variety of different contexts of future professional development.

Contents

1. Entrepreneurship
   - 1.1 Entrepreneurship and entrepreneur
   - 1.2 Enterprise related theories of entrepreneurship
   - 1.3 The economic significance of entrepreneurship
2. Company formation strategy
   - 2.1 Different contexts in which companies are founded
   - 2.2 The Entrepreneur
   - 2.3 Business models and strategies
3. Innovation and innovation management
   - 3.1 Innovation
   - 3.2 Innovation management
   - 3.3 Protection of intellectual property
   - 3.4 Case study: BMW Empathic Design
4. Legal form in international comparison
   - 4.1 Germany
   - 4.2 International comparison: USA

5. Financing entrepreneurial activity I: Sources of finance
   - 5.1 Incubators, accelerators and crowdfunding
   - 5.2 Business angels
   - 5.3 Private equity and corporate venture capital
   - 5.4 Public start-up support

6. Financing entrepreneurial activity II: Financing processes
   - 6.1 The investor view: Deal sourcing and deal screening
   - 6.2 The entrepreneurial view: Negotiations with investors
   - 6.3 The evaluation of business start-ups

7. The business plan
   - 7.1 Purpose and objectives of the business plan
   - 7.2 Expectations regarding the business plan
   - 7.3 Structure and content of the business plan
   - 7.4 Guidelines for creating a business plan

8. Digital business models and artificial intelligence
   - 8.1 e-Business
   - 8.2 Artificial intelligence
   - 8.3 The Globotics Evolution

9. Cooperative strategy: Alliances and joint ventures
   - 9.1 Cooperative strategy
   - 9.2 The right “fit”
   - 9.3 The right “form”

10. Family-owned company
    - 10.1 Definitions
    - 10.2 Economic significance
    - 10.3 Strengths and weaknesses

Literature
Compulsory Reading
Further Reading ▪ Mariotti, S., & Glackin, C. (2016). Entrepreneurship: Starting & operating a small business (4th ed.). Pearson. ▪ Parker, S. C. (2009). The economics of entrepreneurship (pp. 1–28). Cambridge University Press. ▪ Scarborough, N. M., & Cornwall, J. R. (2019). Essentials of entrepreneurship and small business management (9th ed.). Pearson.

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Process Management with Scrum

Module Code: DLMPREEPMS

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	▪ none ▪ DLMPREEPMS01	MA	10	300 h

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

Module Coordinator

Prof. Dr. Nebojsa Radojevic (Process Management with Scrum) / Prof. Dr. Nebojsa Radojevic (Project: Corporate Project with Scrum)

Contributing Courses to Module

- Process Management with Scrum (DLMPREEPMS01)
- Project: Corporate Project with Scrum (DLMPREEPMS02)

Module Exam Type

Module Exam	Split Exam
	Process Management with Scrum • Study Format "Distance Learning": Written Assessment: Case Study Project: Corporate Project with Scrum • Study Format "Distance Learning": Written Assessment: Project Report

Weight of Module

see curriculum

Module Contents

Process Management with Scrum

- Scrum Origin, Basic Idea and Fields of Application
- Scrum Roles
- Product Backlog and Sprint Planning
- Executing the Scrum Process
- Helpful Tools
- Implementation and Scaling of Scrum

Project: Corporate Project with Scrum

After studying the methods of Scrum and learning about the systematic development approach, this course offers the opportunity to transfer the learned contents to practice. Choosing a real project or task within an organization, the method can be experienced and compared to the theoretical concept.

Learning Outcomes

Process Management with Scrum

On successful completion, students will be able to

- understand and explain the contents of the agile manifest.
- understand Scrum as a framework for developing, delivering, and sustaining products in a complex environment.
- describe each of the roles within a Scrum team and explain each item and each step within the Scrum process.
- handle the refinement process of the product backlog and discuss the interaction within the team and to the outside world during and after a sprint.
- understand the concept of user stories and apply the method to simple cases.
- understand and describe possibilities for the scaling of Scrum.

Project: Corporate Project with Scrum

On successful completion, students will be able to

- understand Scrum and its roles within the context of a corporate organization.
- explain the elements and processes of Scrum in detail and out of practical experience.
- create user stories, refine the product backlog and select items for a sprint.
- collaborate in the daily scrum and apply the little tools within the development team.
- discuss critically the benefits and limitations of the Scrum framework.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other moduls in the field of Project Management	All Master Programs in the Business & Management field

Process Management with Scrum

Course Code: DLMPREEPMS01

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

Course Description

Within the broad field of project management, Scrum falls into the category of agile methods. As such, Scrum is more of a process management framework than a project management method. In this course the Scrum framework will be described and discussed in detail. The Agile Manifesto will be introduced, and the basic idea of iterative and incremental development will be discussed, leading up to the methodology of Scrum. A thorough review will be done on the different roles within the Scrum team. The terms product backlog, refinement and increment are defined and explained. As core feature of Scrum, the execution of sprints and daily scrums will be detailed. For the practical application of Scrum, the handling of requirements and creation of user stories will be introduced. The student also gets to know the little tools for communication and task-tracking used within development teams. Furthermore, the student will learn when and how a Scrum process should be implemented and what kind of benefits and risks can be expected from it.

Course Outcomes

On successful completion, students will be able to

- understand and explain the contents of the agile manifest.
- understand Scrum as a framework for developing, delivering, and sustaining products in a complex environment.
- describe each of the roles within a Scrum team and explain each item and each step within the Scrum process.
- handle the refinement process of the product backlog and discuss the interaction within the team and to the outside world during and after a sprint.
- understand the concept of user stories and apply the method to simple cases.
- understand and describe possibilities for the scaling of Scrum.

Contents

1. Scrum Origin, Basic Idea and Fields of Application
   - 1.1 The Birth of Scrum – How and Why it All Began
   - 1.2 The Agile Manifesto and a Change in Perspective
   - 1.3 The Approach of Iterative and Incremental Development
   - 1.4 Defining Fields for Scrum and Fields for Not Scrum
2. Scrum Roles

Literature
Compulsory Reading
Further Reading ▪ Highsmith, J. (2002). Agile software development ecosystems. Addison-Wesley Professional. ▪ Schwaber, K. (2004). Agile project management with Scrum. Microsoft Press.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests
☑ Video	☑ Guideline
☑ Audio	
☑ Slides	

Project: Corporate Project with Scrum

Course Code: DLMPREEPMS02

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	DLMPREEPMS01

Course Description

The course „Project: Corporate Project with Scrum" is building on the basic knowledge of the Scrum Framework acquired in the previous course. The theoretical foundations of Scrum can be applied within a real company environment. The student experiences the advantages of agile work and can reflect on the Scrum roles in practice. The student is also confronted with the hurdles that arise in applying the methodology in a real situation and can experiment with own approaches to solutions.

Course Outcomes

On successful completion, students will be able to

- understand Scrum and its roles within the context of a corporate organization.
- explain the elements and processes of Scrum in detail and out of practical experience.
- create user stories, refine the product backlog and select items for a sprint.
- collaborate in the daily scrum and apply the little tools within the development team.
- discuss critically the benefits and limitations of the Scrum framework.

Contents

- The course „Project: Corporate Project with Scrum" is building on the basic knowledge of the Scrum Framework acquired in the previous course and on the general knowledge of management know-how and classical project management acquired during the previous semesters. Based on a real task to be resolved within an organization (commercial enterprise, public administration, or the like), the students can gain practical experience working with agile methods utilizing the Scrum Framework.
- The students will reflect critically on the similarities and differences they observed and, if applicable, also compare the experienced agile methods with classical methods of project management. To meet scientific criteria, a literature search and a thorough comparison of the scientific and methodological foundation to the practical aspects experienced in the project is strongly encouraged and supported. The business aspect (costs, gain, time, quality, strategic relevance, etc.) of the project should be recognized and analyzed based on scientific methods. The students will demonstrate their ability to combine specialist knowledge and transfer of this knowledge to a specific project in a professional environment. They will also critically reflect on the experienced own work with Scrum, as well as on the theoretical concept of the Scrum Framework itself.

Literature
Compulsory Reading
Further Reading ▪ Anon. (2001): Manifesto for Agile Software Development. (URL: https://agilemanifesto.org [Retrieved: 20.03.20201]). ▪ Ockerman, S./ Reindl, S. (2019): Mastering Professional Scrum: Coaches' Notes for Busting Myths, Solving Challenges, and Growing Agility. Addison Wesley Longman, Boston. ▪ Rubin, K. S. (2013): Essential Scrum: A Practical Guide to the Most Popular Agile Process. Addison-Wesley Professional, Boston. ▪ Schwaber, K. / Sutherland, J. V. (2012): Software in 30 days: How Agile Managers Beat the Odds, Delight their Customers and Leave Competitors in the Dust. Wiley, New Jersey. ▪ Sutherland, J. (2015): Scrum: The art of Doing Twice the Work in Half the Time. Random House UK, London. ▪ Verheyen, G. (2019): Scrum: A Pocket Guide: a Smart Travel Companion. 2nd edition, Van Haren Publishing, VW 's-Hertogenbosch.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Project Report

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

Project Management with PRINCE2®

Module Code: DLMPREEPMPR

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	▪ DLMPREEPMPR01 ▪ none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Nebojsa Radojevic (Project Management with PRINCE2®) / Prof. Dr. Nebojsa Radojevic (Project: Corporate Project with PRINCE2®)

Contributing Courses to Module

- Project Management with PRINCE2® (DLMPREEPMPR01)
- Project: Corporate Project with PRINCE2® (DLMPREEPMPR02)

Module Exam Type

Module Exam	Split Exam
	Project Management with PRINCE2® • Study Format "Distance Learning": Written Assessment: Case Study Project: Corporate Project with PRINCE2® • Study Format "Distance Learning": Written Assessment: Project Report

Weight of Module

see curriculum

Module Contents

Project Management with PRINCE2®

- Introduction to the PRINCE2® Method
- The Seven Themes
- The Seven Processes
- Creation of Results
- Tailoring
- PRINCE2® Agile

Project: Corporate Project with PRINCE2®

After studying the methods of the structured project management approach of PRINCE2®, this course offers the opportunity to transfer the learned contents to practice. Choosing a real project or task within an organization, the method can be experienced and compared to the theoretical concept.

Learning Outcomes

Project Management with PRINCE2®

On successful completion, students will be able to

- understand and explain the contents of the PRINCE2® framework.
- explain the seven Principles, seven Themes, seven Processes and Tailoring of the project environment.
- describe each of the roles within a PRINCE2® management team.
- explain, how the stages are connected by the defined processes.
- define reporting cycles according to the PRINCE2® guidelines.
- understand and describe how PRINCE2® can be combined with other project management methods and what additional options PRINCE2® Agile is offering.

Project: Corporate Project with PRINCE2®

On successful completion, students will be able to

- understand PRINCE2® and its principles within the context of a corporate organization.
- explain the PRINCE2® Project Management structure as well as the themes and processes of PRINCE2® in detail and out of practical experience.
- set up a Project Management Team with its associated roles.
- start and initiate a project and plan a project stage.
- work with and create management products and specialized products.
- discuss critically the benefits and limitations of the PRINCE2® framework.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the field of Project Management	All Master Programs in the Business & Management field

Project Management with PRINCE2®

Course Code: DLMPREEPMPR01

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

Course Description

Within the broad field of project management methods, the original PRINCE2® method falls into the category of classical (non-agile) methods. It is one of the leading classical project management methods. PRINCE2® is process-oriented and primarily concerned with the actions of the project management team, putting emphasis on the management aspect of a project rather than the execution side. In this course the PRINCE2® framework will be systematically described and discussed in detail. A thorough review will be done on the seven Principles, the seven Themes, the seven Processes, and on Tailoring of the project to the environment. This will be put in relation to the defined roles within the PRINCE2® project management team structure. In this course, in addition to the actions and processes handled by the project management team, the work of the task managers will be reviewed, some of the most important tools for execution of tasks will be introduced and a possible combination with the PMBOK from the PMI will be discussed. The student will learn about the well-structured interaction between project management level and project execution level including the reporting cycles. At the end of the course an outlook on the features of PRINCE2® Agile will be given. The student will gain a thorough understanding of the advantages and disadvantages of the PRINCE2® method and its derivatives.

Course Outcomes

On successful completion, students will be able to

- understand and explain the contents of the PRINCE2® framework.
- explain the seven Principles, seven Themes, seven Processes and Tailoring of the project environment.
- describe each of the roles within a PRINCE2® management team.
- explain, how the stages are connected by the defined processes.
- define reporting cycles according to the PRINCE2® guidelines.
- understand and describe how PRINCE2® can be combined with other project management methods and what additional options PRINCE2® Agile is offering.

Contents

1. Introduction to the PRINCE2® Method
   - 1.1 History of PRINCE2®
   - 1.2 Project Definition
   - 1.3 The Seven Principles

Literature
Compulsory Reading
Further Reading ▪ AXELOS Limited. (2017). Managing successful projects with PRINCE2® (6th ed.). The Stationery Office. ▪ Cooke, J. L. (2016). PRINCE2 Agile. An implementation pocket guide: Step-by-step advice for every project type. IT Governance Publishing. ▪ International Conference on Electronics, Computers, and Artificial Intelligence, Universitatea din Piteşti, Institute of Electrical and Electronics Engineers, IEEE Industry Applications Society, & ECAI. (2017, June 29–July 1). Proceedings of the 9th International Conference on Electronics, Computers and Artificial Intelligence, New Jersey. ▪ Mathis, B. (2014). Prince2 for beginners: Prince2 study guide for certification and project management. CreateSpace Independent Publishing Platform.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Case Study

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

Instructional Methods

Learning Material
- ☑ Course Book
- ☑ Video
- ☑ Audio
- ☑ Slides

Exam Preparation
- ☑ Online Tests
- ☑ Guideline

Project: Corporate Project with PRINCE2®

Course Code: DLMPREEPMPR02

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		5	DLMPREEPMPR01

Course Description

The course „Project: Corporate Project with PRINCE2®" is building on the basic knowledge of the PRINCE2® framework acquired in the previous course. The studied theoretical concept can be applied within a real company environment. The student experiences the advantages of project management in stages and can reflect on the relation between project management and task execution. The student is also confronted with the hurdles that arise in applying the methodology in a real situation and can experiment with own approaches to solutions.

Course Outcomes

On successful completion, students will be able to

- understand PRINCE2® and its principles within the context of a corporate organization.
- explain the PRINCE2® Project Management structure as well as the themes and processes of PRINCE2® in detail and out of practical experience.
- set up a Project Management Team with its associated roles.
- start and initiate a project and plan a project stage.
- work with and create management products and specialized products.
- discuss critically the benefits and limitations of the PRINCE2® framework.

Contents

- The course „Project: Corporate Project with PRINCE2®" is building on the basic knowledge of the PRINCE2® framework acquired in the previous course and on the general knowledge of management know-how and classical project management acquired during the previous semesters. Based on a real task to be resolved within an organization (commercial enterprise, public administration, or the like), the students can gain practical experience in setting up a project management team according to PRINCE2®.
- The students will reflect critically on the similarities and differences they observed, and, if applicable, also compare the experienced classical methods with agile methods of project management. To meet scientific criteria, a literature search and a thorough comparison of the scientific and methodological foundation to the practical aspects experienced in the project is strongly encouraged and supported. The business aspect (costs, gain, time, quality, strategic relevance, etc.) of the project should be recognized and analyzed based on scientific methods. The students will demonstrate their ability to combine specialist

knowledge and transfer of this knowledge to a specific project in a professional environment. They will also critically reflect on the experienced own work with PRINCE2®, as well as on the theoretical concept of the PRINCE2® framework itself.

Literature

Compulsory Reading

Further Reading

- AXELOS Limited (2017): Managing Successful Projects with Prince2. TSO, London.
- Bentley, C. (2019): The Concise PRINCE2®: Principles and Essential Themes. 3rd ed., IT Governance Publishing, Cambridgeshire.
- Cooke, J. L. (2016): PRINCE2 Agile An Implementation Pocket Guide: Step-by-Step Advice for Every Project Type. IT GOVERNANCE PUBLISHING, New York.
- International Conference on Electronics, Computers and Artificial Intelligence; Universitatea din Piteşti; Institute of Electrical and Electronics Engineers; IEEE Industry Applications Society; ECAI (2017). Proceedings of the 9th International Conference on Electronics, Computers and Artificial Intelligence - ECAI-2017: 29 June - 01 July 2017, IEEE: New Jersey.
- Mathis, B. (2014): Prince2 for Beginners: Prince2 Study Guide for certification & project management. N.p.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Project Report

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

Salesforce Consultant Specialization

Module Code: DLMSFCS

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Sebastian Werning (Salesforce Administrator and Service Cloud Consultant) / Prof. Dr. Sebastian Werning (Salesforce Sales Cloud Consultant)

Contributing Courses to Module

- Salesforce Administrator and Service Cloud Consultant (DLMSFCS01)
- Salesforce Sales Cloud Consultant (DLMSFCS02)

Module Exam Type

Module Exam	Split Exam
	Salesforce Administrator and Service Cloud Consultant • Study Format "Distance Learning": Written Assessment: Project Report • Study Format "myStudies": Written Assessment: Project Report Salesforce Sales Cloud Consultant • Study Format "Distance Learning": Oral Project Report • Study Format "myStudies": Oral Project Report

Weight of Module

see curriculum

Module Contents

Salesforce Administrator and Service Cloud Consultant

Using the learning platform Trailhead students will learn to administer the Salesforce platform. At the end of the course the students will be able to manage the Salesforce service cloud. This course is the preparation for the Salesforce Administrator Certification and Salesforce Service Cloud Certification.

Salesforce Sales Cloud Consultant

Using the learning platform Trailhead students will learn how to manage sales processes with Salesforce platform. At the end of the course the students will be able to manage the Salesforce sales cloud. This course prepares for the Salesforce Sales Cloud Consultant Certification.

Learning Outcomes

Salesforce Administrator and Service Cloud Consultant

On successful completion, students will be able to

- define what Salesforce and customer relationship management is.
- describe and compare the different options for importing and exporting data in Salesforce.
- create reports and visualize key business metrics in real-time in Salesforce.
- setup customer service with Salesforce service cloud.
- lead a customer service team in the digital era.
- define service cloud goals and metrics.

Salesforce Sales Cloud Consultant

On successful completion, students will be able to

- setup sales management with Salesforce sales cloud.
- lead a sales team in the digital era.
- create digital engagement on multiple channels.
- define sales cloud goals and metrics.
- deploy sales processes for gathering competitive insights.

Links to other Modules within the Study Program	**Links to other Study Programs of the University**
This module is similar to other modules in the field of Marketing & Sales	All Master Programs in the Marketing & Communication field

Salesforce Administrator and Service Cloud Consultant

Course Code: DLMSFCS01

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

Course Description

Salesforce is the most used software solution for customer relationship management worldwide. Using the learning platform Trailhead students will learn independently the fundamentals of Salesforce. The course explains how to administrate Salesforce and how to create processes to help supporting teams become more efficient and manage large data volumes within Salesforce. This course prepares students for the Salesforce Administrator Certification and Salesforce Service Cloud Certification.

Course Outcomes

On successful completion, students will be able to

- define what Salesforce and customer relationship management is.
- describe and compare the different options for importing and exporting data in Salesforce.
- create reports and visualize key business metrics in real-time in Salesforce.
- setup customer service with Salesforce service cloud.
- lead a customer service team in the digital era.
- define service cloud goals and metrics.

Contents

- The content on the learning platform focuses on the features and functionality used to maintain a Salesforce implementation. The content provides general knowledge of the features available to end users and the configuration options available to a Salesforce Administrator. Furthermore, the content enables to perform administrative functions using current Salesforce features design solutions using the Service Cloud functionality and to lead the implementation of these solutions within a customer organization.

Literature

Compulsory Reading

Further Reading

- According to the Information given on the learning platform

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Project Report

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

Study Format myStudies

Study Format	Course Type
myStudies	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Project Report

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

Instructional Methods

Salesforce Sales Cloud Consultant

Course Code: DLMSFCS02

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

Course Description

This course facilitates key aspects of setting up sales management with Salesforce sales cloud on the learning platform Trailhead. The course describes how to implement Salesforce sales cloud and manage it. It enables to make better business decisions based on customer data and to create a sales metrics strategy. The course shows how to create processes to help sales teams become more efficient and manage large data volumes within Salesforce. This course prepares students for the Salesforce Sales Cloud Consultant Certification.

Course Outcomes

On successful completion, students will be able to

- setup sales management with Salesforce sales cloud.
- lead a sales team in the digital era.
- create digital engagement on multiple channels.
- define sales cloud goals and metrics.
- deploy sales processes for gathering competitive insights.

Contents

- The content on the learning platform focuses on designing and deploying solutions that support sales teams and sales processes using Salesforce applications. The content enables to design solutions using the Salesforce sales cloud functionality and to lead the implementation of these solutions within an organization.

Literature

Compulsory Reading

Further Reading

- According to the Information given on the learning platform

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Oral Project Report

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Slides	☑ Guideline

Study Format myStudies

Study Format	Course Type
myStudies	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Oral Project Report

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

Instructional Methods

Big Data Applications

Module Code: DLMITEBDA

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Christian Müller-Kett (Big Data Technologies) / Radiah Rivu (Data Utilization)

Contributing Courses to Module

- Big Data Technologies (DLMDSBDT01)
- Data Utilization (DLMBBD01)

Module Exam Type

Module Exam	Split Exam
	Big Data Technologies • Study Format "myStudies": Oral Assignment • Study Format "Distance Learning": Oral Assignment Data Utilization • Study Format "myStudies": Exam, 90 Minutes • Study Format "Distance Learning": Exam, 90 Minutes

Weight of Module

see curriculum

Module Contents

Big Data Technologies

- Data types and data sources
- Databases
- Modern storage frameworks
- Data formats
- Distributed computing

Data Utilization

- Pattern recognition
- Natural language processing
- Image recognition
- Detection and sensing
- Problem-solving
- Decision-making

Learning Outcomes

Big Data Technologies

On successful completion, students will be able to

- identify different types and sources of data.
- understand different database concepts.
- learn to build new database structures.
- evaluate various data storage frameworks w.r.t. project requirements.
- analyze which data format to use for a given project.
- understand what roles you could take in such projects.
- create a distributed computing environment for a given project.
- understand the ethical impact of big data technology choices.

Data Utilization

On successful completion, students will be able to

- understand how identity, similarity, and diversity of data can be utilized in problem-solving approaches.
- differentiate between complicated and complex systems of investigation.
- identify the variability of a problem under investigation.
- distinguish between invariant and dynamic features of an investigated system.
- synthesize gained insights to propose a reliable data analytics solution.
- apply different approaches for acquiring and using a knowledge management system.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the field of Data Science & Artificial Intelligence	All Master Programmes in the IT & Technology field

Big Data Technologies

Course Code: DLMDSBDT01

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

Course Description

Data are often considered the “new oil”, the raw material from which value is created. To harness the power of data, the data need to be stored and processed on a technical level. This course introduces the four “Vs” of data, as well as typical data sources and types. This course then discusses how data are stored in databases. Particular focus is given to database structures and different types of databases, e.g., relational, noSQL, NewSQL, and time-series.Beyond classical and modern databases, this course covers a wide range of storage frameworks such as distributed filesystems, streaming, and query frameworks. This is complemented by a detailed discussion of data storage formats ranging from classical approaches such as CSV and HDF5 to more modern approaches like Apache Arrow and Parquet.Finally, this course gives an overview of distributed computing environments based on local clusters, cloud computing facilities, and container-based approaches.

Course Outcomes

On successful completion, students will be able to

- identify different types and sources of data.
- understand different database concepts.
- learn to build new database structures.
- evaluate various data storage frameworks w.r.t. project requirements.
- analyze which data format to use for a given project.
- understand what roles you could take in such projects.
- create a distributed computing environment for a given project.
- understand the ethical impact of big data technology choices.

Contents

1. Data Types and Data Sources
   - 1.1 The 4Vs of data: volume, velocity, variety, veracity
   - 1.2 Data sources
   - 1.3 Data types
2. Databases
   - 2.1 Database structures
   - 2.2 Introduction to SQL

2.3 Relational databases
2.4 nonSQL, NewSQL databases
2.5 Timeseries DB

3. Modern data storage frameworks
3.1 Distributed Filesystems
3.2 Streaming frameworks
3.3 Query frameworks

4. Data formats
4.1 Traditional data exchange formats
4.2 Apache Arrow
4.3 Apache Parquet

5. Distributed Computing
5.1 Cluster-based approaches
5.2 Containers
5.3 Cloud-based approaches

Literature

Compulsory Reading

Further Reading

- Date, C. J. (2003). An introduction to database systems. Pearson.
- Kleppmann, M. (2017). Designing data-intensive applications. O'Reilly.
- Wiese, L. (2015). Advanced data management. De Gruyter.

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Oral Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Online Tests
	☑ Video	☑ Guideline
	☑ Audio	
	☑ Slides	

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Oral Assignment

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Guideline
☑ Creative Lab	☑ Reader	
	☑ Video	

Data Utilization

Course Code: DLMBBD01

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

Course Description

The course Data Utilization introduces case-based applications that take advantage of regularities and patterns found within continuously generated texts, images, or sensor data. The cases solve issues of pattern recognition, natural language processing, image recognition, detection and sensing, problem-solving, and decision support. The cases are related to the application fields of cybersecurity, linguistics, augmented reality, intelligent transportation, problem-solving, and decision support.

Course Outcomes

On successful completion, students will be able to

- understand how identity, similarity, and diversity of data can be utilized in problem-solving approaches.
- differentiate between complicated and complex systems of investigation.
- identify the variability of a problem under investigation.
- distinguish between invariant and dynamic features of an investigated system.
- synthesize gained insights to propose a reliable data analytics solution.
- apply different approaches for acquiring and using a knowledge management system.

Contents

1. Introduction
   - 1.1 The Meaning of Identity, Similarity, and Diversity
   - 1.2 Data Patterns and Ontologies
2. Pattern Recognition
   - 2.1 Analysis of User Interaction, Attitude, and Behavior
   - 2.2 Predictive Analytics
   - 2.3 Preventing the Unknown: User Behavior Analytics in Cybersecurity
3. Natural Language Processing
   - 3.1 Concepts of Natural Language
   - 3.2 Speech Recognition and Acoustic Modeling
   - 3.3 Discerning the Meaning: Linguistics and Social Media

4. Image Recognition
   - 4.1 Basics of Image Representation
   - 4.2 Integral Transforms and Compression
   - 4.3 Exploiting the Visual: Image Recognition for Augmented Reality

5. Detection and Sensing
   - 5.1 Sensor Construction and Techniques
   - 5.2 Intelligent Agents and Surveillance
   - 5.3 Managing the Complex: Sensor Networks in Intelligent Transportation Systems

6. Problem-solving
   - 6.1 Knowledge Sharing and the Cloud
   - 6.2 Rule-based Systems
   - 6.3 Learning from Nature: Expert Systems in Business

7. Decision Support
   - 7.1 Invariants, Determinants, and Alternatives in Decision-making
   - 7.2 Correlation and Causality in Strategic Decision-making
   - 7.3 Approaching the Crossroads: Dashboards and Visualization

8. Data Security and Data Protection
   - 8.1 Securing Data Storage and Processing Infrastructure Against Unauthorized Access
   - 8.2 Compliance and Regulations, GPDR

Literature

Compulsory Reading

Further Reading

- Bajcsy, P., Chalfoun, J., & Simon, M. (2017). Web microanalysis of big image data. Berlin:Springer. (Database: ProQuest).
- Delen, D. (2015). Real-world data mining: Applied business analytics and decision making. NewYork, NY: Pearson.
- Farzindar, A., Inkpen, D., & Hirst, G. (2017). Natural language processing for social media (2nd ed.).San Rafael, CA: Morgan & Claypool Publishers. (Database: ProQuest).
- Hsu, H., Chang, C., & Hsu, C. (Eds.). (2017). Big data analytics for sensor-network collectedintelligence. Cambridge, MA: Academic Press. (Database: ProQuest).
- Pearl, J., & Mackenzie, D. (2018). The book of why: The new science of cause and effect. New York,NY: Basic Books.

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Practice Exam
☑ Video	☑ Online Tests
☑ Audio	
☑ Slides	

Data Science and Analytics

Module Code: DLMBDSA

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Ulrich Kerzel (Data Science) / Prof. Dr. Andrew Adjah Sai (Analytical Software and Frameworks)

Contributing Courses to Module

- Data Science (DLMBDSA01)
- Analytical Software and Frameworks (DLMBDSA02)

Module Exam Type

Module Exam	Split Exam
	Data Science • Study Format "myStudies": Exam, 90 Minutes • Study Format "Distance Learning": Exam, 90 Minutes Analytical Software and Frameworks • Study Format "Distance Learning": Written Assessment: Written Assignment • Study Format "myStudies": Written Assessment: Written Assignment

Weight of Module

see curriculum

Module Contents

Data Science

- Introduction to data science
- Use cases and performance evaluation
- Pre-processing of data
- Processing of data
- Selected mathematical techniques
- Selected artificial intelligence techniques

Analytical Software and Frameworks

- Introduction to analytical software and frameworks
- Data storage
- Statistical modeling
- Machine learning
- Cloud computing platforms
- Distributed computing
- Database technologies

Learning Outcomes

Data Science

On successful completion, students will be able to

- identify use cases and evaluate the performance of data-driven approaches.
- understand how domain specific knowledge for a particular application context is required to identify objectives and value propositions for data science use cases.
- appreciate the role and necessity for business-centric model evaluation apposite to the respective area of application.
- comprehend how data are pre-processed in preparation for analysis.
- develop typologies for data and ontologies for knowledge representation.
- decide for appropriate mathematical algorithms to utilize data analysis for a given task.
- understand the value, applicability, and limitations of artificial intelligence for data analysis.

Analytical Software and Frameworks

On successful completion, students will be able to

- comprehend how cloud computing and distributed computing support the field of data analytics.
- understand in-memory database technologies for real-time analytics.
- apply advanced statistics and machine learning solutions to solve data analysis problems.
- compare the capabilities and limitations of the presented software solutions.
- understand how to identify the right technological solution for a specific application domain.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the field of Data Science & Artificial Intelligence	All Master Programmes in the IT & Technology field

Data Science

Course Code: DLMBDSA01

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

Course Description

The course provides the framework to create value from data. After an introduction the course covers how to identify suitable use cases and evaluate the performance of data-driven methods. In an interdisciplinary approach, the requirements from a specific application domain need to be understood and transferred to the technological understanding to identify the objectives and value proposition of a Data Science project. The course covers techniques for the technical processing of data and then introduces advanced mathematical techniques and selected methods from artificial intelligence that are used to analyze data and make predictions.

Course Outcomes

On successful completion, students will be able to

- identify use cases and evaluate the performance of data-driven approaches.
- understand how domain specific knowledge for a particular application context is required to identify objectives and value propositions for data science use cases.
- appreciate the role and necessity for business-centric model evaluation apposite to the respective area of application.
- comprehend how data are pre-processed in preparation for analysis.
- develop typologies for data and ontologies for knowledge representation.
- decide for appropriate mathematical algorithms to utilize data analysis for a given task.
- understand the value, applicability, and limitations of artificial intelligence for data analysis.

Contents

1. Introduction to Data Science
    - 1.1 Overview of Data Science
    - 1.2 Terms and Definitions
    - 1.3 Applications & Notable Examples
    - 1.4 Sources of Data
    - 1.5 Structured, Unstructured, Streaming
    - 1.6 Typical Data Sources and their Data Type
    - 1.7 The 4 V's of Data: Volume, Variety, Velocity, Veracity
    - 1.8 Introduction to Probability Theory
    - 1.9 What Are Probabilities and Probability Distributions

1.10 Introduction to Bayesian Statistics
1.11 Relation to Data Science: Prediction as a Probability

2. Use Cases and Performance Evaluation
   2.1 Identification of Use Cases for Data Science
   2.2 Identifying Data Science Use Cases
   2.3 From Prediction to Decision: Generating Value from Data Science
   2.4 Evaluation of Predictions
   2.5 Overview of Relevant Metrics
   2.6 Business-centric Evaluation: the Role of KPIs
   2.7 Cognitive Biases and Decision-making Fallacies

3. Pre-Processing of Data
   3.1 Transmission of Data
   3.2 Data Quality and Cleansing of Data
   3.3 Transformation of Data (Normalization, Aggregation)
   3.4 Reduction of Data Dimensionality
   3.5 Data Visualisation

4. Processing of Data
   4.1 Stages of Data Processing
   4.2 Methods and Types of Data Processing
   4.3 Output Formats of Processed Data

5. Selected Mathematical Techniques
   5.1 Linear Regression
   5.2 Principal Component Analysis
   5.3 Clustering
   5.4 Time-series Forecasting
   5.5 Overview of Further Approaches

6. Selected Artificial Intelligence Techniques
   6.1 Support Vector Machines
   6.2 Neural Networks and Deep Learning
   6.3 Feed-forward Networks
   6.4 Recurrent Networks and Memory Cells
   6.5 Convolutional Networks
   6.6 Reinforcement Learning

6.7 Overview of Further Approaches

Literature

Compulsory Reading

Further Reading

- Akerar, R., & Sajja, P.S. (2016). Intelligent techniques for data science. Cham: Springer.
- Bruce, A., & Bruce, P. (2017). Practical statistics for data scientists: 50 essential concepts. Newton, MA: O'Reilly Publishers.
- Fawcett, T. & Provost, F. (2013). Data science for business: What you need to know about data mining and data-analytic thinking. Newton, MA: O'Reilly Media.
- Hodeghatta, U. R., & Nayak, U. (2017). Business analytics using R – A practical approach. Berkeley, CA: Apress Publishing. (Database: ProQuest).
- Liebowitz, J. (2014). Business analytics: An introduction. Boca Raton, FL: Auerbach Publications. (Available online).
- Runkler, T. A. (2012). Data analytics: Models and algorithms for intelligent data analysis. Wiesbaden: Springer Vieweg.
- Skiena, S. S. (2017). The data science design manual. Cham: Springer.

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Analytical Software and Frameworks

Course Code: DLMBDSA02

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

Course Description

Analytical Software and Frameworks provides insight into contemporary software and platforms solutions for data analytics in business. The course introduces relevant frameworks and software used in modern data science projects. Commercial and open-source for cloud computing, distributed computing and machine learning, as well as a commercial development platform for in-memory database analytics, are covered. Additional software solutions may be covered by the lecturer as convenient. In particular in the written assignment, students are required to apply their technological knowledge to a specific scenario which requires interdisciplinary thinking of how to merge the particularities of a given application domain with the technological options.

Course Outcomes

On successful completion, students will be able to

- comprehend how cloud computing and distributed computing support the field of data analytics.
- understand in-memory database technologies for real-time analytics.
- apply advanced statistics and machine learning solutions to solve data analysis problems.
- compare the capabilities and limitations of the presented software solutions.
- understand how to identify the right technological solution for a specific application domain.

Contents

1. Introduction
   - 1.1 Software Systems
   - 1.2 Frameworks
   - 1.3 Distributed Computing
   - 1.4 Databases and Data Warehousing
2. Data Storage
   - 2.1 Data Clustering
   - 2.2 Data Replication
   - 2.3 Data Indexing
   - 2.4 Data Warehousing
3. Statistical Modeling Frameworks

Literature

Compulsory Reading

Further Reading

- Konstantinos Domdouzis, Peter Lake, & Paul Crowther. (2021). Concise Guide to Databases: A Practical Introduction: Vol. Second edition Konstantinos Domdouzis, Peter Lake, Paul Crowther. Springer.
- Perkins, L., Redmond, E., & Wilson, J. R. (2018). Seven Databases in Seven Weeks: A Guide to Modern Databases and the NoSQL Movement: Vol. Second edition. Pragmatic Bookshelf.
- Keith Gordon. (2022). Principles of Data Management: Facilitating Information Sharing: Vol. Third edition. BCS, The Chartered Institute for IT.
- Mahanti, R. (2019). Data quality: dimensions, measurement, strategy, management, and governance /. ASQ Quality Press.
- Avinash Navlani, Armando Fandango, & Ivan Idris. (2021). Python Data Analysis: Perform Data Collection, Data Processing, Wrangling, Visualization, and Model Building Using Python: Vol. Third edition. Packt Publishing.
- Gayathri Rajagopalan. (2021). A Python Data Analyst's Toolkit: Learn Python and Python-based Libraries with Applications in Data Analysis and Statistics. Apress.
- Latifian, A. (2022). How does cloud computing help businesses to manage big data issues. Kybernetes, 51(6), 1917–1948.
- Wolfram Wingerath, Norbert Ritter, & Felix Gessert. (2019). Real-Time & Stream Data Management: Push-Based Data in Research & Practice. Springer.
- Alka Jarvis, Jose Johnson, & Prakash Ananad. (2022). Successful Management of Cloud Computing and DevOps. ASQ Quality Press.
- Golightly, L., Chang, V., Xu, Q. A., Gao, X., & Liu, B. S. (2022). Adoption of cloud computing as innovation in the organization. International Journal of Engineering Business Management, 14, 1–17.
- J. Dinesh Peter, Amir H. Alavi, & Bahman Javadi. (2018). Advances in Big Data and Cloud Computing: Proceedings of ICBDCC18 (Vol. 1st ed. 2019). Springer.
- Sharma, S., Chang, V., Tim, U. S., Wong, J., & Gadia, S. (2019). Cloud and IoT-based emerging services systems. Cluster Computing, 22(1), 71–91.
- Alejandro Vaisman, & Esteban Zimányi. (2022). Data Warehouse Systems: Design and Implementation: Vol. Second edition. Springer.
- Harsh Chawla, & Pankaj Khattar. (2020). Data Lake Analytics on Microsoft Azure: A Practitioner's Guide to Big Data Engineering: Vol. 1st ed. Apress.
- Andreas Meier, & Michael Kaufmann. (2019). SQL & NoSQL Databases: Models, Languages, Consistency Options and Architectures for Big Data Management. Springer Vieweg.
- Lindsay, D., Gill, S. S., Smirnova, D., & Garraghan, P. (2021). The evolution of distributed computing systems: from fundamental to new frontiers. Computing, 103(8), 1859–1878.
- Rashmi Ranjan Rout, Soumya Kanti Ghosh, Prasanta K. Jana, Asis Kumar Tripathy, Jyoti Prakash Sahoo, & Kuan-Ching Li. (2022). Advances in Distributed Computing and Machine Learning: Proceedings of ICADCML 2022. Springer.
- Rehman, T. B. (2018). Cloud computing basics. Sterling, VA: Stylus Publishing, LLC.
- M. Tamer Özsu, & Patrick Valduriez. (2019). Principles of Distributed Database Systems. Springer.
- Cloud networking and storage. (2020). CompTIA Cloud Essentials+ Study Guide; Page 35-76.
- Robert Johansson. (2018). Numerical Python: Scientific Computing and Data Science Applications with Numpy, SciPy and Matplotlib. Apress.
- Ashwin Pajankar, & Aditya Joshi. (2022). Hands-on Machine Learning with Python: Implement Neural Network Solutions with Scikit-learn and PyTorch. Apress.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Written Assignment

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests
☑ Video	☑ Guideline
☑ Audio	
☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Written Assessment: Written Assignment

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

Instructional Methods	
Learning Material	**Exam Preparation**
☑ Course Book	☑ Online Tests

AI and Mastering AI Prompting

Module Code: DLMEAIMAIP

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	10	300 h

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

Module Coordinator

Prof. Dr. Claudia Heß (Artificial Intelligence) / N.N. (Project: AI Excellence with Creative Prompting Techniques)

Contributing Courses to Module

- Artificial Intelligence (DLMAIAI01)
- Project: AI Excellence with Creative Prompting Techniques (DLMPAIECPT01)

Module Exam Type

Module Exam	Split Exam
	Artificial Intelligence • Study Format "Distance Learning": Exam, 90 Minutes • Study Format "myStudies": Exam, 90 Minutes Project: AI Excellence with Creative Prompting Techniques • Study Format "Distance Learning": Written Assessment: Project Report

Weight of Module

see curriculum

Module Contents

Artificial Intelligence

- History of AI
- Expert Systems
- Neuroscience
- Modern AI Systems
- AI Application Areas

Project: AI Excellence with Creative Prompting Techniques

In this module, students delve into the world of generative AI applications, creating AI-generated content such as text, images, and videos. They learn to design, analyze, and evaluate different prompting techniques in these systems and apply them within their respective fields of study.

Learning Outcomes

Artificial Intelligence

On successful completion, students will be able to

- remember the historical developments in the field of artificial intelligence.
- analyze the different application areas of artificial intelligence.
- comprehend expert systems.
- apply Prolog to simple expert systems.
- comprehend the brain and cognitive processes from a neuro-scientific point of view.
- understand modern developments in artificial intelligence.

Project: AI Excellence with Creative Prompting Techniques

On successful completion, students will be able to

- comprehend and implement various prompting techniques in generative AI applications.
- analyze, assess, and combine different prompt techniques for various expected AI outputs.
- implement ethical considerations into the design and execution of various generative AI applications.
- design, implement, and refine effective prompts and their combinations for real-world scenarios through various hands-on exercises.
- showcase creative and innovative thinking and reasoning in the application of advanced prompting techniques to solve multidimensional problems in their specialized area of study.

Links to other Modules within the Study Program	Links to other Study Programs of the University
This module is similar to other modules in the field of Data Science & Artificial Intelligence	All Master Programs in the IT & Technology field

Artificial Intelligence

Course Code: DLMAIAI01

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

Course Description

The quest for artificial intelligence has captured humanity's interest for many decades and has been an active research area since the 1960s. This course will give a detailed overview of the historical developments, successes, and set-backs in AI, as well as the development and use of expert systems in early AI systems.In order to understand cognitive processes, the course will give a brief overview of the biological brain and (human) cognitive processes and then focus on the development of modern AI systems fueled by recent developments in hard- and software. Particular focus will be given to discussion of the development of "narrow AI" systems for specific use cases vs. the creation of general artificial intelligence.The course will give an overview of a wide range of potential application areas in artificial intelligence, including industry sectors such as autonomous driving and mobility, medicine, finance, retail, and manufacturing.

Course Outcomes

On successful completion, students will be able to

- remember the historical developments in the field of artificial intelligence.
- analyze the different application areas of artificial intelligence.
- comprehend expert systems.
- apply Prolog to simple expert systems.
- comprehend the brain and cognitive processes from a neuro-scientific point of view.
- understand modern developments in artificial intelligence.

Contents

1. History of AI
   - 1.1 Historical Developments
   - 1.2 AI Winter
   - 1.3 Notable Advances in AI
2. Expert Systems
   - 2.1 Overview Over Expert Systems
   - 2.2 Introduction to Prolog
3. Neuroscience
   - 3.1 The (Human) Brain

3.2 Cognitive Processes

4. Modern AI Systems
   - 4.1 Recent Developments in Hard- and Software
   - 4.2 Narrow vs General AI
   - 4.3 NLP and Computer Vision

5. AI Application Areas
   - 5.1 Autonomous Vehicles & Mobility
   - 5.2 Personalized Medicine
   - 5.3 FinTech
   - 5.4 Retail & Industry

Literature

Compulsory Reading

Further Reading

- Chowdhary, K. R. (2020). Fundamentals of Artificial Intelligence. Springer India.
- Russell, S. & Norvig, P. (2022). Artificial intelligence. A modern approach (4th ed.). Pearson Education.
- Ward, J. (2020). The student's guide to cognitive neuroscience. (4th ed.). Taylor & Francis Group.

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Online Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Study Format myStudies

Study Format	Course Type
myStudies	Lecture

Information about the examination	
Examination Admission Requirements	**Online Tests:** yes
Type of Exam	Exam, 90 Minutes

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

Instructional Methods		
Tutorial Support	**Learning Material**	**Exam Preparation**
☑ Course Feed	☑ Course Book	☑ Practice Exam
	☑ Video	☑ Online Tests
	☑ Audio	
	☑ Slides	

Project: AI Excellence with Creative Prompting Techniques

Course Code: DLMPAIECPT01

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

Course Description

In this course, students explore the exciting world of prompting in various generative AI applications. They involve themselves in hands-on exercises that combine various prompting techniques to create new AI-generated content, including text, images, and videos. Through these exercises, students learn how to effectively use, analyze, combine, and assess these systems within their specialized fields of study.

Course Outcomes

On successful completion, students will be able to

- comprehend and implement various prompting techniques in generative AI applications.
- analyze, assess, and combine different prompt techniques for various expected AI outputs.
- implement ethical considerations into the design and execution of various generative AI applications.
- design, implement, and refine effective prompts and their combinations for real-world scenarios through various hands-on exercises.
- showcase creative and innovative thinking and reasoning in the application of advanced prompting techniques to solve multidimensional problems in their specialized area of study.

Contents

- In this course, students engage in a practical application of a generative AI use case by choosing from the options provided in the extensive supplementary guide. The course presents practical examples as study materials and exercises with both individual and combined prompting techniques for open-source text, image, and video generation use cases. The exercises are crafted to inspire and lead students in executing their distinct generative AI use case work and provide guidance on describing the use case and selecting a mixture of prompting techniques. Additionally, students are led to critically evaluate the design, implementation, and the outcomes from both technical and ethical perspectives.

Literature
Compulsory Reading
Further Reading ▪ Dang, H., Mecke, L., Lehmann, F., Goller, S., & Buschek, D. (2022). How to prompt? Opportunities and challenges of zero- and few-shot learning for human-AI interaction in creative applications of generative models. arXiv. https://arxiv.org/pdf/2209.01390.pdf ▪ Epstein, Z., Hertzmann, A., Herman, L., Mahari, R., Frank, M. R., Groh, M., Schroeder, H., Smith, A., Akten, M., Fjeld, J., Farid, H., Leach, N., Pentland, A. S., & Russakovsky, O. (2023). Art and the science of generative AI: A deeper dive. arXiv. https://arxiv.org/pdf/2306.04141.pdf ▪ Gozalo-Brizuela, R., & Garrido-Merchán, E. C. (2023). A survey of generative AI applications. arXiv. https://arxiv.org/pdf/2306.02781.pdf ▪ Wei, J., Wang, X., Schuurmans, D., Bosma, M. Ichter, B., Xia, F., Chi, E. H., Le., Q. V., & Zhou, D. (2023). Chain-of-though prompting elicit reasoning in large language models. arXiv. https://arxiv.org/pdf/2201.11903.pdf

Study Format Distance Learning

Study Format	Course Type
Distance Learning	Project

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Written Assessment: Project Report

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

Instructional Methods	
Tutorial Support ☑ Course Feed ☑ Intensive Live Sessions/Learning Sprint	**Exam Preparation** ☑ Guideline

4. Semester

Master Thesis

Module Code: MMTHE

Module Type	Admission Requirements	Study Level	CP	Student Workload
see curriculum	none	MA	30	900 h

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

Module Coordinator

Degree Program Advisor (SGL) (Master Thesis) / Degree Program Advisor (SGL) (Colloquium)

Contributing Courses to Module

- Master Thesis (MMTHE01)
- Colloquium (MMTHE02)

Module Exam Type

Module Exam	Split Exam
	Master Thesis • Study Format "Distance Learning": Master Thesis (90) • Study Format "myStudies": Master Thesis (90) Colloquium • Study Format "Distance Learning": Colloquium (10) • Study Format "myStudies": Colloquium (10)

Weight of Module

see curriculum

Module Contents

Master Thesis

- Master's thesis

Colloquium

- Colloquium on the Master's thesis

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	Links to other Study Programs of the University
This module is similar to other modules in the field(s) of Methods.	All Master Programmes in the Business & Management field(s).

Master Thesis

Course Code: MMTHE01

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		27	none

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	Course Type
Distance Learning	Thesis

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Master Thesis

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
810 h	0 h	0 h	0 h	0 h	810 h

Instructional Methods

Study Format myStudies

Study Format	Course Type
myStudies	Thesis

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Master Thesis

Student Workload					
Self Study	**Contact Hours**	**Tutorial/Tutorial Support**	**Self Test**	**Independent Study**	**Hours Total**
810 h	0 h	0 h	0 h	0 h	810 h

Instructional Methods

Colloquium

Course Code: MMTHE02

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MA	English		3	none

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 Distance Learning

Study Format	Course Type
Distance Learning	Thesis Defense

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Colloquium

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

Instructional Methods
Learning Material ☑ Slides

Study Format myStudies

Study Format	Course Type
myStudies	Thesis Defense

Information about the examination	
Examination Admission Requirements	**Online Tests:** no
Type of Exam	Colloquium

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

Instructional Methods
Learning Material ☑ Slides