Exponential University of applied sciences

Short Module Manual
Digital Business

XU Exponential University
of Applied Science

Exponential University of applied sciences

SHORT FACTS

Graduation	Bachelor of Science	**Type of Study**	Full-time and Part-Time
Scope	180 ECTS	**Total numbers of semesters**	6/8 Semesters
Language	English	**Matriculation Date**	April / October

Teaching method Seminars in small groups, additional excursions, case studies, integration into practice, Projects

Course and content of studies

SEMESTER 1

DM 1 Foundations of Digital Business 5 ECTS

DB FD 1.1: Business Process Management

Students can:

- Assess and critically reflect on the importance of processes, process languages and process modeling.
- Identify simple business processes using appropriate tools, analyze, model and derive recommendations for optimization.
- Explain the concept of business process management (BPM) and the necessity of digitization and automation of business processes.
- Understand the importance of business process management for a company's success and describe the elements and objectives of BPM.
- Describe the procedure for introducing business process management in the company and name possible problems and important success factors.
- Understand the possible social effects (reservations, fears) of introducing BPM.
- Distinguish between different software solutions for Business Process Management.

DB FD 1.2: Software Systems for Business

Students will be able to:

- Understand and assess application scenarios of analytical (OLAP) and transactional systems (OLTP) and differentiate between them.
- Explain the objectives and tasks of business systems.
- Understand the historical development of operational decision support systems up to current developments.
- Describe the fundamentals of the design and structure of analytical information systems.
- Describe the underlying and current basic technological concepts, such as data warehouse, data mining, big data analytics and reporting.
- Understand how decision-support systems must be organizationally embedded in the company in order to install sustainable information logistics.
- Discuss and assess the importance of a company-wide data pool (data warehouse) for the analysis of large, unstructured data volumes for decision support.

Exponential University of applied sciences

SEMESTER 1

SB 1 Sustainability and Circular Economics — 5 ECTS

SB 1.1: General Concepts and Areas of Sustainability

The Students can:

- Derive and critically reflect on the origin and meaning of the term sustainability and circular economy.
- Explain the UN Sustainable Development Goals (SDGs) using examples.
- Understand the basics and structure of sustainable business models and apply this knowledge to digital and sustainable business models.
- Differentiate and evaluate various digital and sustainable business models in the consumer goods (B2C) and capital goods (B2B) sectors.
- Develop basic sustainable business models, taking into account different dimensions (e. g. product, communication, marketing, etc.).
- Apply the success factors of digital business models.
- Different structural elements of sustainability (e.g. infrastructure, core activities, business partners), the offering (e.g. the value proposition), the customers (e.g. customer segments and customer relationships) and the financial structure (e.g. cost structure and revenue generation) of sustainable business models.
- Name and critically reflect on examples of regulatory and social changes in the markets.
- Identify new trends and developments in the area of sustainability and reflect on them using practical examples.

DM SC 1.2: Technologies of Sustainability

The Students can:

- Name central technologies in the area of sustainability / curricular economy.
- Demonstrate the importance of green engineering in different dimensions and industries using examples.
- Identify sustainable mobility and logistics, for example mobility concepts, e-mobility, logistics concepts.
- Identify key areas of waste disposal/recycling technologies and discuss them using practical examples.
- Identify green IT and its development potential.
- Identify the fields of action of energy management.
- Identify sustainable technologies with the dimensions of substitution, prevention and efficiency.
- Critically discuss specific examples of technologies for successful, digital sustainable business development.

BM 1 Marketing and Budgeting — 5 ECTS

BM 1.1: Marketing

The Students can:

- Name the development and concepts of marketing.
- Name and define approaches to marketing theory.

SEMESTER 1

- List the elements of the marketing mix (four P's), define them and name alternative/ complementary theories and and differentiate between the theories.
- Define buyer behavior using various models.
- Understand and interpret sales forecasts.
- Know and critically reflect on current technologies and trends in marketing.

BM 1.2: Budgeting/Pricing

The Students can:

- Define the term budget, name the contents of the budget and derive the relevance for projects.
- Name and differentiate between different types of budgeting and select the appropriate budgeting type.
- Name the components of a project budget and distinguish them from an overall budget.
- Set up the budget for a project or a department/team.
- Understand the pricing procedure, carry out price calculations and differentiate between different pricing systems.

QM 1 Quantitative Methods I — 5 ECTS

LV QM 1.1 Mathematics I

Students will be able to:

- Describe the tasks of analysis and name the sub-areas of analysis.
- Define properties and functions of functions and graphs.
- Calculate with functions and interpret the graphs derived from them.
- Describe the tasks of differential calculus and calculate tasks.
- Describe sequences and series and calculate tasks in this area.
- Describe different types of integrals, differentiate between them and make calculations.

LV QM 2.1 Mathematics II

Students will be able to:

- Understand, differentiate and calculate different types of interest.
- Define, differentiate and calculate different types of annuities.
- Understand and calculate amortization.
- Define rates and the rate of return, understand the relationship and calculate the rate of return.
- Understand investment calculation, define and apply the concept.

IM 1 Digital Transformation for Sustainability — 5 ECTS

LV IM 1.1 Disruptive Innovations

Students will be able to:

- Describe the terms digitalization, digital transformation and disruptive innovations.

SEMESTER 1

- Describe sustainability in terms of the UN Sustainable Development Goals with special take ecological and social factors into account.
- Describe and categorize the technological, economic and social changes associated with digital transformation, particularly with regard to their potential impact on environmental and social sustainability.
- Understand the challenges of digital transformation and in particular the technological and economic requirements, especially from the perspective of environmental and social sustainability, and take them into account in their actions. sustainability and take them into account in their actions.
- Define the term digital future markets.
- Understand the concept, characteristics, technologies and trends of the Internet of Things.
- Understand the changes in human communication based on the theories they have learned, discuss and evaluate the effects and recognize further changes.
- Define the terms Generation X, Y, Z, identify them as players in Industry 4.0 and the Internet of and the Internet of Things and thus open up different ways to develop innovations, which appeal to the respective generation.

LV IM 1.2 Digital Solutions for Sustainable Development

Students will be able to:

- Identify and assess new digital business models and classify them from a sustainability perspective.
- Name new digital business models as a solution to changes in Industry 4.0 and the Internet of Things.
- Name new technological applications/solutions and assess their fields of application as well as their opportunities and risks (as far as possible at the present time).
- Name new communicative applications/solutions and the resulting opportunities for describe the resulting possibilities for more effective communication.
- Explain the new digital solutions used (and planned) in the world of work and life with particular with special consideration of technological aspects.
- Understand the potential of the digital transformation and the associated changes for achieving the UN development goals and transfer them to specific fields of application.

SK1 Academic Skills 5 ECTS

LV SK1.1 Scientific Work

The students can:

- Understand the requirements of scientific work and apply the knowledge acquired in the course to their own work apply the knowledge acquired in the course to their own work.
- Understand and observe the rights and obligations when writing academic papers.
- Name and differentiate between the various types of academic work and observe the requirements of each type.
- Name and apply basic methods and concepts of scientific work.
- Recognize scientific problems, formulate research questions and propose suitable propose suitable methodological approaches.
- Name, use and differentiate between different scientific sources.

SEMESTER 1

- Systematically analyze, evaluate and reflect on scientific sources.
- Understand the forms and implications of plagiarism and cite sources of all kinds correctly.
- Approach different forms of academic work in a self-organized and structured manner.
- Carry out scientific work with the aid of suitable software for text and data processing data processing as well as for presentation and collaboration present.

LV SK1.2 Study Skills

Students can:

- Critically reflect on and classify sources of all kinds.
- Describe and apply approaches for validating sources and identifying false information describe and apply.
- Identify the practical use of scientific knowledge and transfer it to transfer it to application contexts.
- Use and apply digital sources and tools responsibly.
- Learn consciously and pay attention to different learning and working types and styles.
- Recognize the effects of conscious or subconscious predispositions or biases on the reception and Understanding and creating scientific and non-scientific work describe.
- Describe the peer learning approach and interact with fellow students in a meaningful and respectful way interact with fellow students in a meaningful and respectful way, both in class and online and beyond, in compliance with the university's Code of Conduct.
- Demonstrate the links between their studies and (future) professional practice and use their studies for their personal development and professional positioning and profile building.

SEMESTER 2

DM 2 Business and Technology 5 ECTS

DM 2.1: Business Informatics

The students can:

- Explain the subject matter, objectives and tasks of business informatics and assess the relevance of information technology for companies.
- Understand and explain the tasks, areas of application and possibilities of modern information technology in and explain the functions, economic significance and differentiation of types of business software. explain the functions, economic significance and differentiation of types of business software.
- Understand and classify the tasks involved in planning, developing and introducing information systems and understand and categorize the management of IT.
- Understand which changes and challenges in companies, competition and society and society as a result of the digital transformation.
- Know and critically reflect on current trends and technologies in context.

DM 2.2: Hardware and Software Technologies

Students will be able to:

- Explain the fundamentals, methods and technologies of practical computer science from the point of view of business applications, understanding the basic theoretical and technical principles in business informatics.
- Describe the basic structure of computers and computer systems.

SEMESTER 2

- Differentiate between system software and application software and classify different types of programming languages.
- Explain the basic structure and functionality of transactional and analytical systems and understand their importance in operational use.

SB 2	Data and Knowledge for Sustainable Business	5 ECTS

SB 2.1: Sustainable Innovation Management

Students will be able to:

- Differentiate between current methods and approaches for sustainable innovation management differentiate and assess and explain the objectives and methods of the innovation process in order to plan, promote and manage innovation so that sustainable ideas can be systematically and quickly utilized/implemented in the company.
- Classify and understand the importance of sustainable innovation management.
- Describe factors of an innovation-friendly organization and show how a suitable environment for innovation can be created in the company.
- Design an innovation management system as an example and describe the the implementation steps.
- Plan, organize, implement and control all innovation activities within the scope of strategic innovation management plan, organize, implement and control all innovation activities to create and maintain competitive advantages in a circular economy.
- Delineate the objectives, tasks and processes of sustainable technology management, research and and development and innovation management.
- Apply selected methods and concepts for the development of sustainable technology strategies and for evaluating the performance of technologies in practice.
- Describe current processes of technology and innovation management and transfer them into practice by way of example.

SB 2.2: Knowledge Management and Sustainability

Students will be able to:

- Define and differentiate between information and knowledge management and understand their significance in the company to sustainability concepts.
- Distinguish between different forms, terms and carriers of knowledge.
- Derive goals and fields of action for knowledge management in the company.
- Explain models and instruments of sustainable knowledge management.
- Explain and apply current methods and techniques of knowledge management and evaluate their support their establishment in the company for sustainable application.
- Design a knowledge management strategy based on operational requirements and and outline implementation steps for integration into the company and transfer into practice
- Systematically record, evaluate and strategically implement knowledge in the company.
- Assess the possibilities and limits of sustainable knowledge management.

SEMESTER 2

BM 2 HRM and Organization 5 ECTS

BM 2.1: Human Resources Management

Students will be able to:

- Name and describe the basic concepts and fundamentals of human resources management, i.e. the objectives, tasks and functions and the relationship between human resources and organization.
- Explain the economic, social, legal, organizational and labor market policy aspects of human resources management.
- Understand the central contents and methods of personnel management functions and use selected instruments of personnel planning, personnel recruitment, personnel selection, personnel deployment and personnel management. personnel selection, personnel deployment and personnel management.
- Understand the differences in HR strategies for companies of different sizes (from start-ups to large (from start-ups to large companies, public administration, etc.) and critically reflect on them.
- Demonstrate the structure of an HR strategy for start-ups.
- Assess the legal, economic and cultural aspects of selected methods/instruments methods/instruments and take them into account in their planning and decisions.
- Different structural elements of sustainability (e.g. infrastructure, core activities, business partners), the offering (e.g. the value proposition), the customers (e.g. customer segments and customer relationships) and the financial structure (e.g. cost structure and revenue generation) of sustainable business models.
- Identify and critically assess current trends and technologies in the field of HR.

BM 2.2: Organizations in the Digital Age

Students can:

- Name the basics of organizational theory, describe the goals and tasks.
- Define different organizational theories and understand and apply their significance for organizational design.
- Name the subject and elements of organizational design for companies of different size and differentiate between them.
- Differentiate between different organizational units and understand the functions of the different units and understand their functions.
- Name traditional organizational models and understand the realignment of organizational models.
- Select organizational techniques, in particular analysis and planning techniques, apply them in a targeted manner.
- Integrate the informal organization into the overall picture of the organization and understand its influence on the formal organization.
- Understand the causes of change in organizations and identify forms and management of change. forms and management of change.
- Name and apply current frameworks for digital transformation in HR.

Exponential University of applied sciences

SEMESTER 2

QM 2 Quantitative Methods II — 5 ECTS

LV QM 1.2 Statistics I

Students can:

- Name the subject of statistics and enumerate the basic terms.
- Name methods and types of data collection and types of data collection.
- Present data graphically and in tabular form.
- Name, recognize and calculate measures of position.
- Recognize and calculate the dispersion of data.
- Define the concept of concentration and recognize and calculate indices and coefficients calculate indices and coefficients, (optional).
- Understand and apply combinatorics.
- Name and apply the elements of probability theory.
- Work with random variables, distinguish between discrete and continuous variables, determine expected values and determine expected values and variances.
- Define, calculate and interpret quantiles, medians and modal values of a distribution.
- Recognize, define and understand discrete and continuous standard distributions.
- Understand and apply limit theorems and approximations.

LV QM 2.2 Statistics II

Students can:

- Estimate parameters and use the various estimation methods.
- Carry out parametric hypothesis tests using different methods/theories and interpret the results.
- Carry out non-parametric tests using different methods/theories and interpret the results.
- Calculate/perform and evaluate a correlation analysis.
- Calculate/perform and evaluate a regression analysis.

IM2 Green Interaction Design: UI/UX for Sustainability — 5 ECTS

LV IM2.1 Introduction to Sustainable Design

The students can:

- Define and explain sustainable design and its meaning in the context of digital design.
- Understand the environmental impact of digital design and the role of designers in reducing this impact.
- Understand the importance of sustainable design over the entire product life cycle, from production to disposal.
- Understand the principles of sustainable design, such as durability, recyclability and energy efficiency.
- Explain how to design sustainable digital experiences.

SEMESTER 2

- Understand ways to design sustainable digital experiences, e.g. to reduce energy consumption energy consumption or to promote sustainable behaviors.
- Develop digital design solutions that are environmentally friendly and meet the needs and meet the needs and expectations of users.
- Measure and evaluate the environmental impact of digital products and services evaluate them.

LV IM2.2 Green UI/UX Design

The students can:

- Understand and explain principles and concepts of green UI/UX design.
- Understand and explain practices for sustainable design and user experience.
- Understand and explain the importance of accessibility and inclusion for sustainable design.
- Integrate sustainability into the user experience through design solutions, e.g. through sustainable user interface (UI) design and the promotion of sustainable behaviors.
- Collect and analyze user behavior to gain insights into user behavior and preferences.
- Develop personas for users that represent the target group.
- Map user journeys to understand the user's experience across all touchpoints with the product.
- Create low-fidelity wireframes to outline the layout and content of digital experiences.
- Develop high-fidelity prototypes to test and refine the design.
- Design interactive elements such as buttons, forms and menus.
- Develop user tests to evaluate the usability of digital experiences.
- Analyze and interpret the results of user tests to identify areas for improvement identify

SK2 Professional Skills 5 ECTS

LV SK2.1 Communication

Students will be able to:

- Understand and implement the most important principles and concepts of communication.
- Understand the historical development of the media system and describe the resulting changes.
- Explain the special features of different forms of communication and measures.
- Explain the stakeholders and target groups of different forms of communication and measures.
- Understand which factors influence the success of a communicative action or measure.
- Control communicative processes in order to achieve a desired effect.
- Receive and reflect on their own and others' communication behavior.
- Design and dramaturgically develop a presentation, carry it out, follow up and reflect on it, using media content in a meaningful and targeted way and observing the elements of communication they have learned.
- Name and understand the rules of moderation and observe them in their own moderation.

SEMESTER 2

- Explain and purposefully apply moderation techniques such as visualization, questions, active listening, summarizing, reframing, etc.
- Reflect on their inner attitude and role as a moderator.
- Outline and further develop their professional profile through the use of social media and the conscious creation of appropriate digital content.

LV SK2.2 Project Management and Collaboration

The students can:

- Name and describe the basic terms and principles of project management and differentiate a project from other activities.
- Identify and define a project with the help of methods and instruments of project development and project organization.
- Plan and implement a project with the help of project development and project organization methods and tools and define suitable organizational units and processes for this purpose define suitable organizational units and processes.
- Name, understand and fulfill various roles in the context of project and team work and their tasks (e.g. name, understand and perform team leadership).
- Put together a team according to various aspects and define the define the team members' scope of action.
- Organize teamwork in transdisciplinary teams and/or among spatially separated organize team members.
- Appreciate diversity within the team and make the best possible use of it for the team's success and the satisfaction of the team members.
- Identify methods of managing project and team work, differentiate between them and apply the relevant method in a given situation.
- Understand, recognize and react appropriately to team dynamics and use team-building measures.
- Recognize and classify conflicts.
- Explain methods of conflict management and mediation, select and apply them according to the situation.
- Deal with criticism, give constructive feedback and classify and improve feedback culture.
- Assess the importance of (team) internal communication including various measures (sprints, jours fixes, etc.)
- Reflect on teamwork and evaluate project work and use this to improve future processes.

SEMESTER 3

DM 3 Digital Transformation and Business Models — **5 ECTS**

DM 3.1 Digital Transformation

The students can:

- Describe and critically reflect on the terms digitalization, digital transformation and disruptive innovations and critically reflect on them.
- Critically reflect on the current state of research on the topic.
- Describe the technological, economic and social changes associated with digital transformation and social changes associated with digital transformation and - as far as possible - evaluate them.
- Understand the changes in human communication based on the theories learned, discuss and evaluate the effects and recognize further changes.

SEMESTER 3

- Name different current forms of corporate innovation with the various facets of digital transformation. facets of digital transformation.
- Assess maturity levels of digital transformation according to current models.
- Use case studies to name the phases of digital transformation.

DM 3.2: Business Models

Students will be able to:

- Define the term business model and describe concepts and forms of business models.
- Explain the necessity and objectives of adapting existing business models and development of new business models due to the digital transformation.
- Describe approaches and methods for analyzing and evaluating business models and apply them as examples.
- Describe the advantages and disadvantages as well as application scenarios of typical digital business models and draw conclusions.
- Describe the basics, elements and dimensions of business model development.
- Describe the phases and methodology of business model innovation and apply them to practical examples.
- Apply selected techniques of business model development using practical examples.
- Develop the basic features of their own business models.

SB 3 Sustainable Business 5 ECTS

SB 3.1: Sustainable Business Frameworks

The students can:

- Identify and explain the characteristics (patterns) that differentiate sustainable businesses from other businesses.
- Explain and apply frameworks and concepts to maximize stakeholder value creation by understanding the relationships and trade-offs between economic, environmental and social value creation.
- Understand how network-based collaborations and partnerships can influence the direction and operationalization of sustainable business models.
- Understand concepts and frameworks of sustainable business models to identify Explain and apply concepts and frameworks of sustainable business models to identify opportunities for improvement in relation to real business models of existing companies.
- Learn the importance of creating a diverse and inclusive work environment, treating employees fairly and engaging with the community in a positive way.
- Understand the concept of corporate social responsibility (CSR) and its role in sustainable sustainable business practices.

SB 3.2: Sustainable Business Design

Students will be able to:

- Understand and apply the key principles for designing sustainable business models.
- Understand and analyze industry and market opportunities and risks in establishing and managing sustainable business models.
- Discuss and design a sustainable business project.
- Understand the concept of sustainable branding and marketing: Students will learn how to communicate the sustainability aspects of a business, product or service to customers and stakeholders and develop strategies for building a sustainable brand.

3SEMESTER 3

- Recognize concepts of sustainable operations management: Students will explore sustainable operations management, including sustainable supply chain management, energy and water efficiency, waste reduction, and sustainable facilities management.

BM 3 Accounting 5 ECTS

BM 3.1: Cost Accounting

Students will be able to:

- Understand and explain the importance of accounting in a company.
- Explain the differences between external and internal accounting.
- Identify and analyze the types of costs that occur in a company.
- Understand cost center accounting and use it to identify cost over-recovery or under-recovery.
- Name, differentiate and apply various cost accounting systems.
- Apply selected methods of cost accounting systems (e.g. partial cost accounting, full cost accounting).
- Understand multi-level contribution margin accounting and apply it as a cost accounting tool (calculate contribution margins and evaluate the results).
- Explain the steps of cost management and the importance of cost accounting for controlling.
- Name current technologies and trends in accounting and critically reflect on them. critically reflect on them.
- Understand accounting approaches and tools for companies of different sizes (from start-ups to large companies).

BM 3.2: Financial Accounting

Students will be able to:

- Understand bookkeeping as (one of) the foundations of business accounting.
- Name, describe and explain the basic elements of bookkeeping.
- Name the methods and techniques of bookkeeping and apply them in selected areas of bookkeeping (e.g. payment transactions, personnel).
- Understand the entire accounting cycle from the opening to the closing balance sheet and read and evaluate balance sheets.
- Use computer programs/applications used in modern bookkeeping/accounting to implement simple bookkeeping methods and techniques.

QM 3 Research Methods 5 ECTS

LV QM 3.1 Business Research Methods

Students will be able to:

- Distinguish between research and evaluation methods and plan, realize and evaluate their own research projects.
- Explain the principles, opportunities and risks of quantitative and qualitative social research.
- Present the approaches to standardization and work in a hypothesis-oriented manner.
- Describe selected methods of quantitative and qualitative social research.

SEMESTER 3

- Assess the reasonable and appropriate compatibility of qualitative and quantitative methods of social research.
- Develop, formulate and justify a scientific research question.
- Develop possible solutions for the research question developed.
- Apply selected research methods, including measurement methods, sampling methods, data collection methods, data evaluation methods and take into account scientific requirements for investigations and surveys.

LV QM 3.2 Market Research (Project)

Students will be able to:

- Name, describe and explain selected basics of market research, in particular the term, objectives, tasks and types of market research; classification and orientation of market research; data and sources of market research.
- Describe the market research process and plan and implement a study (including the research process, phases of the market research process, research approaches and research designs).
- Explain selected market research methods and apply them in the context of a practical project, taking into account measurement methods, sampling methods, data collection methods, data evaluation methods and requirements for studies and surveys.
- Develop a data collection procedure (personal survey, written survey, online survey, ...)
- Collect, process and analyze data and present and defend the results.
- Master statistical/data processing programs (e.g. IBM SPSS) and use them for data preparation and data evaluation.
- Recognize and take into account ethical problems in market research.

IM3 Innovation 5 ECTS

LV IM3.1 Innovation Management

The students can:

- Understand the term innovation management and understand that it must be anchored in the corporate strategy and corporate objectives in order to be realized.
- Name the components, criteria and characteristics of sustainable innovation management and apply them in the description and assessment of innovation processes.
- Name the steps of different innovation processes, differentiate between different approaches, take sustainability aspects into account and select a suitable process.
- Derive and initiate the necessary steps and actions of the selected innovation process.
- Differentiate between product and process innovations, identify common intersections and design the innovation process according to the type of innovation.
- Describe the basics of evaluating innovations, apply selected methods of evaluation and collect key figures (e.g. cross-process key figures, process-related key figures, sustainability indicators).
- Understand the intersections of existing organizational units and their relationship to innovation management and integrate the relevant organizational units into the innovation process.
- Create and implement a concept for the introduction of sustainable innovation management in a company.

Exponential University of applied sciences

SEMESTER 3

LV IM 3.2 Innovation Techniques (Workshop)

The students can:

- Name various approaches, techniques and methods for sustainable innovation and select, plan, implement and evaluate these in the various phases of the innovation process and innovation management.

TC1	Coding and Cybersecurity for Everyone	5 ECTS

TC 1.1: Coding for Everyone

After completing the module, students will be able to:

- Understand the basic concepts of coding, its role in computer science and basic concepts such as algorithms, data structures and programming languages.
- Understand basic programming concepts such as variables, data types, operators, conditional statements, loops, functions and objects.
- Understand the basic syntax and semantics of a modern programming language such as Python or Java.
- Develop software programs using a modern programming language, e.g. Java or Python
- Learn team-oriented work by working on tasks in smaller groups during the programming exercises.

TC 1.2: Cybersecurity for Everyone

After completing the module, students will be able to:

- Name the objectives of data security.
- Recognize and understand the legal regulations.
- Understand the background behind the most common data attacks.
- Name and differentiate between various cryptographic methods and be up to date with regard to be up to date on encryption.
- Protect data and access with antivirus programs and firewalls.
- Assess cybercrime, evaluate threats to their own company and take appropriate measures.

SEMESTER 4

SA1	Study Abroad / Entrepreneurship Semester	20 ECTS

The students can:

- Act and work academically in different cultural contexts.
- Use the opportunities offered by a new academic environment to further develop their personal and professional skills.
- Classify and apply knowledge about local and international contexts and specifics of their respective subject areas.
- Work together with fellow students in a new (academic) environment.
- Apply and deepen their language skills.

Exponential University of applied sciences

SEMESTER 4

SA2 Internship 10 ECTS

The students can:

- Apply for suitable internships independently, if necessary with the support of the internship supervisor.
- Combine the theoretical knowledge acquired during their studies with professional practice and solve professional problems based on the skills they have learned.

SEMESTER 5

BM 4 Finance and Investment 5 ECTS

BM 4.1 Finance

Students will be able to:

- Understand, collect and analyze key figures of financial management.
- Differentiate between different forms of financing.
- Name, differentiate between and use various instruments of capital cover in view of entrepreneurial requirements and objectives, differentiate between them and use them.
- Identify and assess the possibilities of credit substitutes.

BM 4.2. Investment

Students will be able to:

- Define, interpret and classify the term investment.
- Draw up an investment plan and understand and analyze existing plans.
- Assess and categorize the certainty/uncertainty of decisions.
- Create investment calculations.
- Create and understand a utility value analysis.
- Competently represent and assess investment proposals.
- Critically analyze prepared investment proposals.
- Differentiate between investment strategies for companies of different sizes.

BM 5 Ethics, Inclusion and Law 5 ECTS

LV BM 5.1: Ethics and Inclusion

Students will be able to:

- Differentiate between ethics and morality.
- Define business ethics and understand it as an extension/modification of ethics.
- Name and differentiate between the basic positions of ethics.
- Understand the necessity of ethics and morals for business and management and act ethically and morally accordingly.
- Identify approaches to business ethics and derive their own courses of action as a quintessence.
- Identify business ethical stakeholders and describe their actions.

SEMESTER 5

- Recognize ethical problems and conflicts and develop possible solutions taking into account different interests.
- Assess and consider the ethical consequences of decisions and developments.
- Understand and categorize ethical issues relating to IT and artificial intelligence.
- Understand the importance of diversity, equality and inclusion.
- Derive and apply recommendations for action to promote diversity, equality and inclusion.

LV BM 5.2: Law

Students will be able to:

- Name and differentiate between the various areas of law in the Federal Republic of Germany.
- Identify and apply the relevant legal and statutory principles of the BGB.
- Understand the structure of the BGB and find their way around the legal provisions.
- Take into account the area of personal law of the BGB in their daily work.
- Work on case studies based on the relevant laws and understand judgments.
- Name and understand central principles for legal foundations, also in the context of other jurisdictions.
- Name the principles of contract drafting, observe them when drawing up contracts and ensure compliance with them when reviewing contracts.
- Name the contents of different types of contracts and, when drawing up or reviewing contracts, check the templates for completeness and supplement the contracts if necessary.
- Conclude contracts in an international environment and take into account the national/ international take into account the specific features of national/international legislation.
- Describe the construction, validity and effect of multilateral international agreements.
- Name the principles of data protection and the protection of intellectual property and understand them.

IM4 Organization 5 ECTS

LV IM4.1 Organizational Agility - Agile Organizations

The students can:

- Understand innovation and change management as the basis of agile companies.
- Apply change management approaches to transform an organization into an agile organization.
- Understand corporate culture as the foundation of an agile organization and consider it as one of the first points in the transformation process.
- Identify and differentiate between agile principles and values and integrate them into the transformation process as required.
- Understand agile leadership as a basic component of an agile organization and pave the way for agile leadership.
- Understand communication as the basis of an agile organization and identify different communication channels to support an agile organization.
- Understand the principles of agile methods of production management, organizational design or (product) development and differentiate them from conventional methods and procedures.

SEMESTER 5

- Understand the limits and dangers of change management and agile organizations and counter these risks in projects.

LV IM4.2 Organizational Productivity - Innovative Organizational Cultures

Students will be able to:

- Understand Beyond Budgeting and see it as an alternative to Taylorist models.
- Name different design fields of Beyond Budgeting, differentiate them from classic controlling and organizational models and identify and understand the advantages and disadvantages of the different models.
- Identify ways to introduce Beyond Budgeting in an organization.
- Understand, observe and counter the limits and risks of changing an organization to Beyond Budgeting.

TC2 Data Science Fundamentals 5 ECTS

TC 2.1: Data Science Essentials

Students will be able to:

- Understand the basics and central concepts of data science and their significance for business decision-making.
- Describe the role of data science in modern marketing processes and practices.
- Describe the difference between data and information and explain how data is collected , processed and analyzed
- Describe the life cycle of data from data collection to data visualization.
- Understand the importance of data quality and its influence on business decisions.
- Identify different types of data (e.g. smart data, big data) and explain how they are used for business decisions.
- Understand the basics of data visualization and explain how it can be used to communicate key insights to stakeholders.
- Describe and categorize the key ethical considerations in data science, including privacy, data security and biases.
- Case studies that demonstrate, categorize and evaluate the benefits of data science for business decision making.

TC 2.2: Data Science Tools

Students will be able to:

- Describe how to collect and process data for analysis, including techniques for cleaning and transforming data.
- Use tools such as Excel or Google Sheets to perform basic data analysis tasks such as data cleaning, filtering and visualization.
- Understand the basics of statistical analysis and its application in marketing and business.
- Perform initial exploratory data analysis to gain insights into data and identify patterns and trends.
- Create simple charts and graphs in terms of data visualization to effectively communicate findings.
- Understand and, if necessary, apply basic machine learning techniques such as clustering and classification to solve simple marketing and business problems.

SEMESTER 5

TC 2.2: Data Science Tools

- Take into account ethical considerations and limitations of data analysis in marketing and business, especially with regard to data protection, data security and biases, in data analysis processes.
- Interpret the results of data analysis and communicate them clearly and precisely to target groups without technical qualification.
- Expand skills such as teamwork, communication skills, conflict resolution, self-organization and time management in professional practice.
- Find their way in new situations and react flexibly to challenges.
- Understand, classify and reflect on the processes in the internship provider's organization and the roles of colleagues.
- Assess, evaluate and reflect on the professional and personal challenges of the internship and reflect on them.

SEMESTER 6

DM 4 Strategy and Governance 5 ECTS

DM 4.1 Digital Strategy

Students can:

- Explain which strategies (corporate, business unit and functional area strategies) and approaches/solutions are needed to meet the challenges of digital change.
- Explain the elements of a digital strategy.
- Apply methods to analyze the market, company and competition, business models, applications and technologies that influence the existing business model or open up new business models.
- Draw conclusions for the direction of the digital strategy based on the analyses.
- Apply methods of strategy evaluation.
- Design exemplary digital strategies and apply tools to develop digital business models, tap digital potential for existing products and establish digital market and customer access.
- Design exemplary implementation plans for developed strategies.
- Apply methods of strategy controlling.

DM 4.2 Digital Governance

The students can:

- Understand the importance of (digital) governance for the future success of companies.
- Explain the advantages and disadvantages of various models for managing digitalization in companies and design adapted operational management models.
- Apply a range of methods to analyze and evaluate structures and processes for their suitability with regard to the digital transformation of a company and derive necessary changes.
- Outline how company processes and structures need to be realigned in order to anchor digitalization in the company and ensure sustainable implementation.
- Describe the significance, objectives and methods of the innovation process.
- Explain how to systematically plan, promote and manage innovations so that ideas can be systematically and quickly utilized/implemented in the company.
- Assess the importance of knowledge management in the company.

SEMESTER 6

- Describe the objectives, requirements, structural integration and design of knowledge management systems.
- Explain and take into account the key requirements of risk and compliance management

BT 1 Bachelor Thesis Set-Up 5 ECTS

LV BT 1.1 Preparation Bachelor Thesis

Students can:

- Differentiate between quantitative and qualitative research approaches and select the appropriate method for their own Bachelor's thesis.
- Name the quality criteria of scientific ethics and observe them when writing the thesis.
- Differentiate between the various scientific approaches (induction, deduction) and combine them as required in their own work.
- Find, specify and formulate the topic and research question for their own thesis.
- Plan the Bachelor's thesis in terms of time and know how to stick to the plan.
- Research and prepare suitable material and use it in the Bachelor's thesis.
- Prepare the thesis formally well.
- Name citation rules and citation styles, point out the dangers of conscious and unconscious plagiarism and take measures to prevent plagiarism.

LV BT 1.2 Bachelor Thesis Reflection/Coaching

The students can:

- Systematically search for and process international literature and other sources on the current state of research on the topic to be dealt with.
- Present theories and models for the scientific analysis of the problem and apply them to a practical issue.
- Develop solutions for the topic or combine models and theories on the basis of their research and investigations.
- Document their work process.
- Present and defend their concept.
- Provide constructive feedback on their fellow students' thesis projects.

BT2 Bachelor Thesis 10 ECTS

The students can:

- Independently formulate a research question and write a thesis using scientific methods within a specified period of time, which provides an answer to the initial question.
- Independently collect data, gather information and link it in a meaningful way in order to arrive at results in line with the initial question.
- Document, critically reflect on, discuss and categorize the research process in the Bachelor's thesis.
- Contribute to the scientific discourse in the chosen subject area by using appropriate language and adhering to formal requirements.
- Discuss questions that arise during the work on the Bachelor's thesis with their supervisor.

Exponential University of applied sciences

Entrepreneurship Semester / Semester 7 (Optional)

EIT 1	**Start-Up Campus**	**5 ECTS**

LV EIT 1.1 Start-Up Campus Input

- Students will learn how to think and act like an entrepreneur.
- Students will familiarize themselves with the self-understanding and the basics (concepts, types, etc.) of entrepreneurship research and will be able to differentiate between them.
- Students will learn to apply and evaluate entrepreneurial concepts in practice (e.g., Lean Start-up Method).

LV EIT 1.2 Start-Up Campus Project

- Students will learn to develop innovative business concepts with a focus on digital and environmentally sustainable business models (Business Model Canvas).
- Students will learn to collaborate in interdisciplinary teams on the development of their own business plans and the renewal of business models.
- Students will learn to present, discuss, and evaluate their business concept internally and with external experts.

EIT 2	**Business Model Innovation & Research**	**5 ECTS**

LV EIT 2, 2.1 Business Model Innovation & Research Input

- Students will learn to understand, follow, and apply the development and use of Design Thinking methods for business creation and the genesis of entrepreneurial innovation.
- Students will learn to identify qualitative and quantitative customer and market research methods and apply them for evidence-based business decisions and business development.
- Students will learn to understand and apply techniques in prototype development.

LV EIT 2, 2.2 Business Model Innovation & Research Project

- Students will learn to successfully develop innovative business ideas, products, or services with a focus on the digital, environmentally sustainable transformation of the economy, using the methods and techniques described above.
- Students will be able to present their own business concept and prototype attractively and competently, both internally and to external experts.

EIT 3	**Start-up Management & Scaling**	**5 ECTS**

LV EIT 3, 3.1 Start-up Management & Scaling Input

- Students will learn the basics of competency- and profile-based matching and successful collaboration in autonomous, self-responsible, interdisciplinary teams and will be able to apply them.
- Students will learn the basics of employee-centered leadership and conflict management and will be able to apply them.
- Students will learn to identify and name the phases and success factors in the lifecycle of companies, particularly start-ups.
- Students will learn the basics of strategic organizational development.
- Students will learn how to recognize trends early and simulate scenarios to capitalize on entrepreneurial opportunities.

- Students will learn the basics of agile methods and start-up management and will be able to apply them.

LV EIT 3, 3.2 Start-up Management & Scaling Project

- Students will learn how to exchange ideas and reach agreements in interdisciplinary teams regarding motivation, motives, direction, task design, and work distribution.
- Students will learn how to recognize conflicts within the team and resolve them purposefully.
- Students will learn to apply agile methods to work effectively and efficiently in autonomous, self-responsible, interdisciplinary teams.
- Students will learn how to handle entrepreneurial uncertainties and prepare growth, merging, and exit strategies to react to different realities.
- Students will be able to communicate their start-up management and scaling strategy effectively, both orally and in writing, to their team and external stakeholders.

EIT 4 International and Intercultural Management — 5 ECTS

Students will be able to

- Distinguish between the basic types of international companies and organizations.
- Assess the impact of globalization and cross-border connectivity on business strategies and innovative management techniques.
- Describe the theoretical, structural, and integrative connections between topics and concepts of international management.
- Describe the application areas of international management approaches.
- Identify key socioeconomic topics, concepts, and challenges of doing business in an international environment, as well as approaches for their regulation.
- Describe and reflect on the implications of technological developments for approaches and topics in international management.

LV EIT 4.2: Intercultural Management

Students will be able to

- Recognize and describe different cultural dimensions.
- Identify and describe types of companies and organizations with regard to cultural specifics.
- Identify and interpret intercultural competencies for decision-makers in internationally operating companies and organizations.
- Apply management techniques to address issues based on their knowledge of the requirements for international leaders.
- Recognize and critically reflect on stereotypes in international and intercultural management.
- Describe and reflect on the implications of technological developments for approaches and topics in intercultural management.

Exponential University of applied sciences

Semester 5 and 6

Specialization — 10 ECTS

AoC DBS 1 Digital Healthcare

This module equips students with the essential skills and expertise to navigate and lead in the evolving digital healthcare landscape. Students will gain in-depth knowledge of the healthcare industry while learning to apply digital tools and technologies to optimize healthcare delivery, operations, and patient outcomes.

Key focus areas include:

- Understanding the structure and challenges of the modern healthcare sector
- Using data analytics for informed decision-making and performance tracking in healthcare
- Implementing digital transformation strategies to streamline healthcare processes
- Applying technology solutions such as AI, IoT, and telemedicine in healthcare settings
- Developing business management, innovation, and marketing strategies tailored to healthcare
- Leading digital and social media campaigns for healthcare organizations
- Exploring sustainable healthcare practices and digital ethics
- Preparing for roles in digital healthcare consulting, strategic development, and project management

AoC DBS 2 Strategy and Consulting

- Strategic Thinking & Business Models: Understanding digital and sustainable business models, competitive analysis, and long-term value creation.
- Consulting Skills: Developing client-focused problem-solving skills, communication strategies, and consulting methodologies.
- Sustainable Strategy: Integrating sustainability into corporate strategy using ESG frameworks and innovation models.
- Marketing & Social Media: Planning data-driven marketing campaigns, leveraging social media for brand and impact.
- Business Process & Digital Tools: Enhancing operations through digital process optimization, agile methods, and business intelligence tools.
- Real-World Application: Students work on live or simulated consulting projects with businesses, applying strategy and sustainability concepts in practice.

AoC DBS 3 Technology Management

Data Security: information- and IT-security, goals of data security, legal framework and regulations, security concepts and standards in accordance with BSI IT basic protection and security management, security measures

- Cyber Security: Risk management (process cycle), cyber security measures, cryptographic procedures

Semester 5 and 6

- Manufacturing Technologies: Additive manufacturing process, procedure materials, fields of application, industrial application and sectors, economic aspects of the use of additive manufacturing processes, future scenarios and trends
- Future Industries / Industry 4.0: fundamentals and challenges of industry 4.0, technologies of industry 4.0 and their fields ofapplication, introduction of industry 4.0 companies, practical examples for industry 40 in procurement, logistics etc

Digital Marketing & Social Media Management

- Digital Marketing Implementation B2C: Commonalities and differences between B2C/ B2B marketing, customer approach, economic and technological aspects in B2C marketing, case examples/ designing marketing content (B2C) in group work.
- Social Media Marketing B2C: Commonalities and differences between B2C/B2B in social media, target groups and goals in B2C, opportunities and risks, case examples/ designing social media content (B2C) in group work.
- Social Media Marketing B2B: Commonalities and differences between B2C/B2B in social media, target groups and goals in B2B, opportunities and risks, case examples/ designing social media content (B2B) in group work.

**2 Electives in the above specialisation, 5 ECTS per elective module

Selected elective module beyond the chosen Areas of Concentration; Can be freely chosen from the bachelor's programs at XU Exponential University; Prerequisites for participation and execution according to the specifications of the respective elective module.

IN TOTAL	180 ECTS