



**Exponential  
University**  
of applied sciences

# Short Module Manual Digital Transformation Management (M.A.)

XU Exponential University  
of Applied Science



## SHORT FACTS

<b>Graduation</b>	Master of Arts	<b>Type of Study</b>	Full-time
<b>Scope</b>	60 ECTS	<b>Total numbers of semesters</b>	2 semesters
<b>Language</b>	English	<b>Matriculation Date</b>	Every Semester
<b>Teaching method</b>	Seminars in small groups, additional excursions, case studies, integration into practice		

## Course and content of studies

### SEMESTER 1

<b>MEM 7</b>	<b>Digital Transformation</b>	<b>5 ECTS</b> oral exam
	<ul style="list-style-type: none"> <li>• <b>Digital Journey:</b> Industry 4.0, digital future markets, IoT, generations of digitalization, communication in the digital age</li> <li>• <b>Digital Solutions:</b> Digital business models, connecting real and virtual worlds, digital leadership, hardware and software solutions, M2M communication</li> </ul>	
<b>MEM 1</b>	<b>Digital Management</b>	<b>5 ECTS</b> case study
	<ul style="list-style-type: none"> <li>• <b>Digital Strategy:</b> Elements of a digital strategy, strategy implementation and -controlling</li> <li>• <b>Digital Governance:</b> Significance and aspects of digital governance, control models, structure and process analysis, introduction to innovation and knowledge management, risk and compliance management</li> </ul>	
<b>MEM 2</b>	<b>Digital Organization</b>	<b>5 ECTS</b> written exam
	<ul style="list-style-type: none"> <li>• <b>Digital Culture:</b> Fundamentals of organizational culture, transformation of organizational culture, concepts of organizational development, fundamentals of change management, significance of corporate culture</li> <li>• <b>Digital Change/Change Management (Project):</b> Basics and preparation, analysis and diagnosis, concept development and planning, implementation and realization, evaluation of digital change processes.</li> </ul>	
<b>MEL 1</b>	<b>Digital Human Resources</b>	<b>5 ECTS</b> term paper
	<ul style="list-style-type: none"> <li>• <b>Digital Recruitment:</b> Recruiting, e-recruiting, importance of social media, legal aspects and limits of digital recruiting</li> <li>• <b>Digital Assessment/Performance Management:</b> Performance management and measurement, retention management, potential management, software solutions for personnel development</li> </ul>	



**MSK 1**

**Leadership Skills**

**5 ECTS**

oral exam

- **Digital Leadership** : Fundamentals of digital leadership, factors influencing digital leadership, management methods in the digital transformation, new leadership approaches to digital leadership
- **Emotional Leadership** : Fundamentals and basic concepts of Emotional Leadership, prerequisites for Emotional Leadership, developing leaders with Emotional Intelligence, building companies/departments/teams and organizations with Emotional Intelligence

**ELECTIVE MODULES 1 OF 3**

**MEL 10**

**Digital Marketing**

**per 5 ECTS**

presentation

- **Social Media Marketing**: Introduction online marketing, social media marketing, development of social media strategy, guidelines and policy, implementation of social media strategies, evaluation
- **Search Engine Marketing**: Fundamentals, goals and importance of search engine marketing, SEO, search engine advertising, SEM tools

**MEL 11**

**Digital Engineering**

**per 5 ECTS**

presentation

- **Agile Software Engineering (Scrum)/Software Engineering Process**: Introduction and phases of software engineering, classic procedure and process model of software development at a glance, agile software engineering, Scrum, other agile methods
- **Software Engineering Project/Coding Project**: Introduction App or web programming, project planning, application creation, testing and integration/publishing, presentation and discussion

**MEL 12**

**Digital Security**

**per 5 ECTS**

presentation

- **Information Security Management**: Importance of IT security, technologies, procedures and measures of IT security, security strategies, security of IT infrastructure, security of IT systems and IT applications, security in networks, security and communication, cryptological procedures and protocols
- **IT-Security in Practice**: Vulnerability analysis, procedure models for different security incidents, structure and conception of IT security and IT risk managements systems, cooperation and involvement of authorities



**MSK 2    Research Skills**

**5 ECTS**  
term paper

- **Research Methods and Evaluation:** Quantitative and qualitative research methods, statistics
- **Research Project:** Planning and implementation of a research project, presentation and defense

**MT 2    Master Thesis Set-up**

**5 ECTS**  
oral exam

- **Master Thesis Colloquium:** Scientific work, scientific-ethical quality criteria, concept presentation of the master thesis
- **Master Thesis Reflection/Coaching:** Professional supervision of the Master Thesis

**MT 1    Master Thesis**

**15 ECTS**  
thesis

**ELECTIVE MODULES 1 OF 5**

**MELS 1    Data Mining & Big Data**

**per 5 ECTS**  
term paper

- **Big Data in Marketing:** Data-based decision making in the digital era, digital marketing and data-driven business, data science & strategy, data architecture, descriptive and diagnostic analytics, platform infrastructure
- **Artificial Intelligence in Marketing:** Predictive and prescriptive analytics in marketing, machine and deep learning algorithms and tools, AI products and use-case ideation, AI project and product management, data and AI

**MELS 2    Mobile Apps & Cloud Technologies**

**per 5 ECTS**  
term paper

- **Mobile Apps & Cloud Computing:** Mobile app design and advanced web technologies, mobile and social app programming, cloud technologies and system design, higher performance computing
- **Cross-platform Cloud App Development Project:** Research methods applied to mobile and cloud computing (user and market research), mobile and cloud computing technology project (development of a real-time cross-platform social app)



**MELS 3 Cyber Risk Analysis & Blockchain Systems**

**per 5 ECTS**  
term paper

- **Cybersecurity Risk Analysis:** Cybersecurity and risk management, security protocols, cloud computing technology and security, cybersecurity governance, cybersecurity in industrial sectors, cybersecurity and ethics, case study
- **Blockchain:** Differences between Web 3.0 v-a-v current "stateless" Internet, Bitcoin, blockchain and other distributed ledgers, token security, cryptography, Web 3.0 in business and society/applications and use cases, case study

**MELS 4 Blockchain Systems & Fintech  
Payment Technologies**

**per 5 ECTS**  
term paper

- **Blockchain Systems:** Blockchain basics, the future of money and DeFi, stable tokens, privacy tokens, trading tokens, decentralized credit systems, token sales
- **Fin Tech Payment Technologies:** History of money and payment systems, basic mechanisms of payments, 4 party system, payment networks (national, transnational, international), FinTech, legal foundations

**MELS 5 Big Data & Artificial  
Intelligence in Health**

**per 5 ECTS**  
term paper

- **Big Data:** Big Data in medicine (provider, payer, MedTech, pharma), data categories and quality, central concepts of statistics in evidence-based medicine, data sovereignty as informational freedom design, legal requirements
- **Artificial Intelligence:** AI in medicine, data mining systems, machine learning, neural networks, interoperability, HL7, DICOM, PACS, icon arrays, electronic medical records, clinical data and privacy, human-robot interaction

**IN TOTAL :**

**60 ECTS**

