

# Module manual

Master program

Entrepreneurship and Digital Transformation (Master of Arts, M.A.)

Date: 2020/11/04

Winter semester 2020/21

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Dear Readers,

Welcome to the master's programme Entrepreneurship and Digital Transformation of the Munich University of Applied Sciences!

Digital transformation that is changing all areas of our economy and society is the decisive paradigm of our time. Entrepreneurship provides the right tools and methods for designing such dynamic processes. The Master's programme thus combines what belongs together: entrepreneurship and digitalisation. The aim is to motivate students in the future field of digitalisation to think and act entrepreneurially and thereby to enable them to make our digital future worth living.

The interdisciplinary approach with students from different disciplines that work intensively on an entre- or intrapreneur project, distinguishes the master programme as a special feature. Together with the Strascheg Center for Entrepreneurship, the affiliated institute for entrepreneurship activities, the Munich University of Applied Sciences has been very successful in the field of entrepreneurial thinking and acting for many years.

The module manual is aimed both at our students to help them shape a successful course of study. In addition, we would be pleased to assist prospective students in their decision to apply.

If you would like to get in touch with us, you will find all current contact details on our website: [www.hm.edu/deepdive](http://www.hm.edu/deepdive).

We thank you for your interest and wish all students much success and pleasure in learning.

Yours sincerely,

Your Deep Dive Team

## 2 Curriculum overview (Studienplan).

Curriculum: Master programme Entrepreneurship and Digital Transformation at Munich University of Applied Sciences As of: 21.10.2020

1. Overview of modules and exams in the master programme Entrepreneurship and Digital Transformation

Module Nr.	Module name	semester hours per week			ECTS-Credit points	Type of course	Language of instruction	Type of examination
		1. Sem.	2. Sem.	3. Sem.				
ED 1.1	Subject specific compulsory elective modules I*	3			4	SL/E/S/Proj	English/German	written exam or oral exam or module work or presentation For specific information please see the respective curriculum of the selected elective modules.
ED 1.2	Digital Technologies	4			6	SL/E	English	written exam (60 minutes)**
ED 1.3	Entrepreneurship I	4			5	SL	English	written exam (60 minutes) **
ED 1.4	Project I	6			15	Proj	English	module work (project report) (0,8) and presentation (0,2) **
ED 1.9	Master seminar			2	5	SL	English	module work (project synopsis) **
ED 1.10	Master thesis				25		English	master thesis

\* credit hours, ECTS credit points, type of course, language of instruction and examination dependent on individually selected module \*\* Exact time and scope will be determined by professor or lecturer at the beginning of each semester.

**2. Notes**

**2.1 Compulsory elective modules**  
The subject-specific compulsory elective modules have to be selected to the extent of 8 ECTS credit points from the compulsory and compulsory elective modules of all „consecutive“ master programmes of Munich University of Applied Sciences. In consultation with the student, the project supervising professor, as well as the module administrators of the respective modules the selection is to be made between the end of September until the end of the third week of October. For this purpose the student is required to compile a list of his/her 3 prioritized compulsory elective modules that have to be finalized in the above mentioned time period.

**2.2 Master thesis**  
The specific procedure is outlined in the sheet *Guidelines Master thesis*.

**2.3 Other regulations**  
Please note the study and examination regulations for the master programme Entrepreneurship and Digital Transformation as well as the general study and examination regulations (ASPO) of Munich University of Applied Sciences as amended.

**Abbreviations:** ECTS: European Credit Transfer and Accumulation System. E: Exercise. Proj: Project. SL: Lecture in form of a seminar. SHW: Semester hours per week.

## 3 Course catalogue

### Compulsory module: Digital Technologies

<b>Course name</b> <b>Course ID</b>	<b>Digital Technologies</b> ED 1.2
<b>Semester</b>	1
<b>Frequency</b>	Winter semester
<b>Period</b>	1 semester
<b>Administrator</b>	Rainer Schmidt, Alf Zugenmaier
<b>Course instructor/s</b>	Rainer Schmidt, Alf Zugenmaier
<b>Language</b>	English
<b>Classification of the course</b>	Master program <i>Entrepreneurship and Digital Transformation</i> Compulsory module
<b>Teaching format</b> <b>Credit hours</b>	lecture (group size: ca. 30) <b>2 SWS</b> exercise <b>2 SWS</b> (total: <b>4 SWS</b> )
<b>Work load</b>	Total: 180 h presence in lecture: 45 h preparation and self study: 135 h
<b>Credits</b>	<b>6 ECTS</b>
<b>Prerequisites</b>	none
<b>Use of module</b>	The teaching will be continued and deepened in module ED 1.6
<b>Learning outcomes</b>	<p><b>Professional competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- understand the impact of digitization on processes, products, services and business models</li> <li>- apply the approaches and technologies relevant for digitization</li> <li>- apply digital technologies to assure a seamless exchange of information also across organizational boundaries</li> <li>- use digital technologies to automate and control the execution of tasks, e.g. performed in different organisations using both</li> </ul>

	<p>centralized and decentralized approaches</p> <ul style="list-style-type: none"> <li>- apply collection and analysis of data to automated decisions</li> <li>- use new kinds of user interfaces to enhance processes, products and services</li> <li>- use social paradigms to collect knowledge and enable new business models</li> </ul> <p><b>Self competency</b> Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- explain the role of self-reflection in the learning process and for personal development with their own words</li> <li>- understand their impact on other individuals and identify them</li> </ul> <p><b>Social competency</b> Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- conduct exercises and projects in interdisciplinary, intercultural teams</li> <li>- explain their own values that are relevant for the implementation of innovation processes</li> </ul> <p><b>Method competency</b> Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- define adequate scientific methods and apply those for conducting projects to collect data and develop solutions</li> <li>- cluster and analyze collected data, acquired insights, findings, and solutions</li> </ul>
<p><b>Course contents</b></p>	<p>Focus of the module will be adapted to the needs and previous knowledge of the students, covering the following in differing depths:</p> <ul style="list-style-type: none"> <li>- Definitions of Digitization and models of its impact. [1], [2], [3]</li> <li>- Automation, e.g. using Python</li> <li>- Basic technologies, such as: Data Science [4], Artificial Intelligence [5], Cloud-Computing [6], Decision Support [7], Social Information Systems [8], Big Data [9], Cyber-Physical Systems, Internet of Things, Industrial Internet [13]</li> <li>- Seamless information exchange using Databases, JSON, XML etc. [9]</li> </ul>

	<ul style="list-style-type: none"> <li>- Business Process Management and Automation [10], [11], [6]</li> <li>- Decision support and information gathering: Artificial Intelligence, Data Science, Machine Learning, Deep Learning [4] [7]</li> <li>- Human computer interaction, e.g. Voicebots [12]</li> <li>- Social information systems [8]</li> <li>- Data Protection and Information Security</li> </ul>
<b>Grading basis</b>	written exam
<b>Literature</b>	<p>Individual articles, such as:</p> <p>[1] C. Matt, T. Hess, and A. Benlian, 'Digital Transformation Strategies', <i>Bus Inf Syst Eng</i>, vol. 57, no. 5, pp. 339–343, Sep. 2015.</p> <p>[2] R. Schmidt, A. Zimmermann, M. Möhring, S. Nurcan, B. Keller, and F. Bär, 'Digitization – Perspectives for Conceptualization', in <i>Advances in Service-Oriented and Cloud Computing</i>, Taormina, Italy, 2015, pp. 263–275.</p> <p>[3] K. Dörner and D. Edelman, 'What "digital" really means   McKinsey &amp; Company'. [Online]. Available: <a href="http://www.mckinsey.com/industries/high-tech/our-insights/what-digital-really-means">http://www.mckinsey.com/industries/high-tech/our-insights/what-digital-really-means</a>. [Accessed: 06-May-2016].</p> <p>[4] F. Provost and T. Fawcett, <i>Data Science for Business: What You Need to Know about Data Mining and Data-analytic Thinking</i>, 1 edition. Sebastopol, Calif.: O'Reilly Media, 2013.</p> <p>[5] S. J. Russell and P. Norvig, <i>Artificial intelligence: a modern approach</i>. Malaysia; Pearson Education Limited, 2016.</p> <p>[6] P. Mell and T. Grance, 'The NIST Definition of Cloud Computing', 10-Jul-2009. [Online]. Available: <a href="http://csrc.nist.gov/groups/SNS/cloud-computing/">http://csrc.nist.gov/groups/SNS/cloud-computing/</a>. [Accessed: 06-Jan-2011].</p> <p>[7] R. Schmidt, M. Möhring, and A. Zimmerman, 'Dynamic Capabilities of Decision-oriented Service Systems', <i>IJISSS</i>, vol. 10, no. 3, pp. 41–63, Jul. 2018.</p> <p>[8] R. Schmidt, R. Alt, and S. Nurcan, 'Social Information Systems', in <i>Proceedings of the 52nd Hawaii International Conference on System Sciences</i>, Hawaii, 2019.</p> <p>[9] R. Schmidt, M. Möhring, S. Maier, J.</p>

	<p>Pietsch, and R.-C. Härting, 'Big Data as Strategic Enabler - Insights from Central European Enterprises', in <i>Business Information Systems</i>, W. Abramowicz and A. Kokkinaki, Eds. Springer International Publishing, 2014, pp. 50–60.</p> <p>[10] M. Dumas, M. La Rosa, J. Mendling, and H. A. Reijers, <i>Fundamentals of Business Process Management</i>. Berlin, Heidelberg: Springer Berlin Heidelberg, 2013.</p> <p>[11] J. Mendling <i>et al.</i>, 'Blockchains for Business Process Management-Challenges and Opportunities', <i>arXiv preprint arXiv:1704.03610</i>, 2017.</p> <p>[12] G. López, L. Quesada, and L. A. Guerrero, 'Alexa vs. Siri vs. Cortana vs. Google Assistant: a comparison of speech-based natural user interfaces', in <i>International Conference on Applied Human Factors and Ergonomics</i>, 2017, pp. 241–250.</p> <p>[13] R. Rajkumar, I. Lee, L. Sha and J. Stankovic, 'Cyber-physical systems: The next computing revolution,' <i>Design Automation Conference</i>, Anaheim, CA, 2010, pp. 731-736.</p>
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**Compulsory module: Entrepreneurship I**

<b>Course name</b>	<b>Entrepreneurship I</b>
<b>Course ID</b>	ED 1.3
<b>Semester</b>	1
<b>Frequency</b>	Winter semester
<b>Period</b>	1 semester
<b>Administrator</b>	Klaus Sailer
<b>Course instructor/s</b>	Klaus Sailer, Herbert Gillig
<b>Language</b>	English

<b>Classification of the course</b>	Master program <i>Entrepreneurship and Digital Transformation</i>  Compulsory module
<b>Teaching format</b>  <b>Credit hours</b>	lecture (seminaristischer Unterricht) (group size: 30)  <b>4 SWS</b>
<b>Work load</b>	Total: 150 h  presence in lectures: 45 h  preparation and self-study: 105 h
<b>Credits</b>	<b>5 ECTS</b>
<b>Prerequisites</b>	The prerequisites are fulfilled with admission to the course of studies.
<b>Use of module</b>	The teaching will be continued and deepened in module ED 1.7 (Entrepreneurship II).
<b>Learning outcomes</b>	<p><b>Professional competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- name various models of innovation processes and describe their core elements and the different stages in an innovation process</li> <li>- develop and apply business models in the field of digital transformation</li> <li>- assign the different approaches of innovation processes to convenient projects (in particular for projects in the field of digital transformation)</li> <li>- describe various sources of innovation</li> <li>- name various approaches of personality profiles and assign the profiles to respective manifestations, compare the profiles, and discuss the influence of individuals with varying profiles on the success of an innovation project</li> <li>- compare the different systems and approaches in the field of entrepreneurship in varying economic regions</li> </ul> <p><b>Self competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- define the term self-reflection and critical</li> </ul>

	<p>thinking</p> <ul style="list-style-type: none"> <li>- name the prerequisites for creativity and describe various approaches of creativity</li> <li>- classify different creativity techniques for the individual phases of the innovation process</li> </ul> <p><b>Social competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- describe tasks and roles of team members and/or employees in various organizations</li> <li>- outline the explicit and implicit context of teamwork as well as its challenges</li> <li>- know the basics of ethics (values, worldviews, societal influences) and describe his/her own values that are relevant for the implementation of innovation processes</li> </ul> <p><b>Method competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- know methods, tools and approaches for various innovation types and processes</li> <li>- demonstrate in which phase of the innovation process what type of tools are appropriate for what kind of tasks</li> <li>- explain which tools provide what kind of results and how to use those results</li> </ul>
<p><b>Course contents</b></p>	<p>The following topics will be addressed in the course:</p> <ul style="list-style-type: none"> <li>- introduction to innovation and entrepreneurship (definition, types, processes)</li> <li>- entrepreneurial vs. intrapreneurial processes</li> <li>- the entrepreneurial personality</li> <li>- responsible entrepreneurship and (social) impact</li> <li>- innovation eco systems and networks</li> <li>- innovation models and methods (e.g. S-Curve, Diffusion of Innovation, Open Innovation, Design Thinking, Lean Startup, Real Time Innovation) and their core elements</li> <li>- business model design (value proposition, architecture of value creation, revenue model)</li> <li>- <i>intrapreneurship</i>: integration in corporate business and revenue model</li> <li>- new product and service development: methods of prototype design and testing</li> <li>- assessment of financial framework and pricing</li> <li>- how to pitch an idea (to users, customers, investors)</li> </ul>

<b>Grading basis</b>	written test (90min)
<b>Literature</b>	<p>AULET, B. (2013). <i>Disciplined Entrepreneurship</i>. New Jersey: John Wiley &amp; Sons. ISBN 978-1118692288</p> <p>BESSANT, J., TIDD, J. (2015). <i>Innovation and Entrepreneurship</i>. 3rd edition. Chichester: John Wiley &amp; Sons. ISBN 9781118993095</p> <p>BROWN, T. (2009). <i>Change by Design. How Design Thinking Can Transform Organizations and Inspire Innovation</i>. Harper Business. ISBN 9780061766084</p> <p>CHESBROUGH, H.W. (2005). <i>Open Innovation: The New Imperative for Creating and Profiting from Technology</i>. Boston: Harvard Business Review Press. ISBN 1422102831</p> <p>HISRICH, R., PETERS, M., SHEPHERD, D. (2013). <i>Entrepreneurship</i>. 9th International Edition. New York: McGraw-Hill Education. ISBN 978-007-132631-5</p> <p>KAWASAKI, G. (2015). <i>The Art of the Start 2.0</i>. Portfolio Penguin. ISBN 9780241187265</p> <p>KIM, W.C., MAUBORGNE, R. (2005). <i>Blue Ocean Strategy. How to create uncontested market space and make the competition irrelevant</i>. Boston: Harvard Business School Press. ISBN1-59139-619-0</p> <p>OWENS, T., FERNANDEZ, O. (2014). <i>The Lean Enterprise: How corporations can innovate like startups</i>. Hoboken: Wiley &amp; Sons. ISBN 9781118852170</p> <p>READ, S. et al. (2011). <i>Effectual entrepreneurship</i>. First Edition. New York: Routledge. ISBN 978-0415586443</p>

	<p>RIES, E. (2017). <i>Lean Startup. How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses</i>. Currency. ISBN 1524762407</p> <p>ROGERS, E. (2003). <i>Diffusion of Innovations</i>. Fifth Edition. New York: Free Press. ISBN 0743222091</p>
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## Compulsory module: Project I

<b>Course name</b>	<b>Project I</b>
<b>Course ID</b>	ED 1.4
<b>Semester</b>	1
<b>Frequency</b>	Winter semester
<b>Period</b>	1 Semester
<b>Administrator</b>	Klaus Sailer
<b>Course instructor/s</b>	professors/supervisors of the project
<b>Language</b>	English
<b>Classification of the course</b>	Master program <i>Entrepreneurship and Digital Transformation</i> Compulsory module
<b>Teaching format</b>	project-based seminar
<b>Credit hours</b>	6 SWS
<b>Work load</b>	Total: 450 h presence in project seminar: 68 h group work: 382 h

<b>Credits</b>	<b>15 ECTS</b>
<b>Prerequisites</b>	The prerequisites are fulfilled with admission to the course of studies.
<b>Use of module</b>	The teaching will be continued and deepened in module ED 1.8 (Project II).
<b>Learning outcomes</b>	<p><b>Professional competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- conduct the various stages of an innovation project based on the effectuation and human-centered methodology and apply it for their own project</li> <li>- exploit various sources of information for recognizing innovative ideas</li> <li>- select among various innovation methodologies the most promising one for their specific project</li> <li>- define among various fields of problems the most promising one in terms of validation and develop solutions</li> <li>- test results by means of qualitative methods, test various solutions through customer acceptance and to decide for one solution</li> <li>- conduct an own project from topic identification to a sustainable business model and to defend it against experts and stakeholders</li> <li>- analyze success factors and unique selling proposition of different (digital) business models</li> <li>- create a comprehensive business model and arrange its implementation together with identified stakeholders</li> <li>- create a team manifesto that manages collaboration and uses synergies of team members at best</li> <li>- name relevant stakeholders and define their role in the project</li> </ul> <p><b>Self competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- set up an evaluation system for assessing findings based on various influencing factors</li> <li>- combine the different creativity methods with personality, leadership and management approaches for the development and implementation of holistic innovative concepts</li> <li>- take a responsible role in a project team and document the findings</li> </ul>

	<p><b>Social competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- evaluate their own efficiency, effectiveness and development opportunities within a team</li> <li>- examine the alignment of their own values with the vision, project goals, and operative tasks and derive from that conclusions for further action in the innovation project</li> <li>- create a vision and mission for their own project</li> </ul> <p><b>Method competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- apply various methods and tools to their own project and evaluate the results</li> <li>- develop their own strategic solution for an innovation project, by means of success patterns that had been created by themselves</li> </ul>
<p><b>Course contents</b></p>	<p>The following topics will be addressed in the course:</p> <ul style="list-style-type: none"> <li>- building your team, team manifesto</li> <li>- project collaboration and communication tools</li> <li>- problem analysis and definition (analysis of needs)</li> <li>- qualitative research methods (i.e. interview techniques, observation)</li> <li>- stakeholder analysis</li> <li>- definition of target groups, problem-solution fit</li> <li>- market and competitor analysis</li> <li>- technical concept (requirements, specification)</li> <li>- creation of first solutions and ideas (level of innovation, feasibility)</li> <li>- business model (value proposition, unique selling point)</li> <li>- design of a low-fidelity prototype and first testing</li> </ul>
<p><b>Grading basis</b></p>	<p>project report (80%)</p> <p>presentation (20%)</p>
<p><b>Literature</b></p>	<p>AULET, B. (2013). <i>Disciplined Entrepreneurship</i>. New Jersey: John Riley &amp; Sons. ISBN 978-1-118-69228-8</p> <p>BLANK, S., DORF, B. (2012). <i>The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company</i>. ISBN 9780984999309</p>

	<p>KAWASAKI, G. (2004). <i>The Art of the Start. The time-tested, battle-hardened guide for anyone starting anything.</i> New York: Penguin Group. ISBN 1-59184-056.2</p> <p>KAWASAKI, G. (2015). <i>The Art of the Start 2.0.</i> Portfolio Penguin. ISBN 9780241187265</p> <p>RIES, E. (2017). <i>Lean Startup. How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses.</i> Currency. ISBN 1524762407</p> <p>SAILER, K. (et al.) (2018). <i>Real Time Innovation - Change the pattern. Change your thinking.</i> München: Strascheg Center for Entrepreneurship (Hrsg.). ISBN: 978-3-96222-001-3</p>
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**Compulsory module: Business models in Digital Transformation**

<b>Course name</b> <b>Course ID</b>	<b>Business Models in Digital Transformation</b> ED 1.6
<b>Semester</b>	2
<b>Frequency</b>	Summer semester
<b>Period</b>	1 Semester
<b>Administrator</b>	Thomas Kofler, Martin Hobelsberger
<b>Course instructor/s</b>	Thomas Kofler, Martin Hobelsberger
<b>Language</b>	English
<b>Classification of the course</b>	Master program <i>Entrepreneurship and Digital Transformation</i> Compulsory module
<b>Teaching format</b> <b>Credit hours</b>	lecture (group size: ca. 30) <b>2 SWS</b> exercise <b>2 SWS</b> (total: <b>4 SWS</b> )
<b>Work load</b>	Total: 150 h presence in lecture: 45 h preparation and self study: 105 h

<b>Credits</b>	<b>5 ECTS</b>
<b>Prerequisites</b>	none
<b>Use of module</b>	This module deepens knowledge from the subjects Digital Technologies and Entrepreneurship I and applies theoretical methods and concepts taught there in practice.
<b>Learning outcomes</b>	<p><b>Professional competency</b></p> <p>On successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>- name the elements of a business model and define the value of digital business values</li> <li>- explain and clarify the differences and special features of a digitally transformed business model versus a business model without digital technologies</li> <li>- describe the individual elements of a digitally transformed business model and explain the connections between them</li> <li>- develop digitally transformed business models and identify the meaning of the different individual elements on the business model as a whole</li> <li>- analyse the success factors and unique characteristics of different models as well as the intermediate steps in the development process</li> <li>- evaluate the intermediate steps in the development process and identify success factors to generate a concept for a successful, measurable business model</li> <li>- systematically evaluate the strengths and weaknesses of different implementations</li> <li>- plan and prototypically implement a business model, identify key stakeholders and verify the effectiveness through prototypical use with stakeholders</li> <li>- knowledge about potentials through technologies and their business impact</li> </ul> <p><b>Self competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- use various creativity techniques in order to induce decision-making options or alternative solutions within an innovation project</li> <li>- compare different perceptions of their own</li> </ul>

	<p>personality by conducting self assessments as well as external assessments</p> <p><b>Social competency</b> Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- conduct exercises and projects in interdisciplinary, intercultural teams</li> <li>- identify how their own values and worldviews can be used for the joint creation of a vision</li> </ul> <p><b>Method competency</b> Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- generate dates, insights, perspectives and solutions through the application of various tools and methods in a concrete project</li> <li>- derive patterns from examples, case studies, and exercises that increase the probability of success of projects</li> </ul>
<p><b>Course contents</b></p>	<p>Digitalization or digital transformation describes the continuous process of change towards digital processes, based on modern IT infrastructure, digital applications and networked systems and data. Digitization in this context describes the transformation of processes, products, and services - even the transformation of complete business models/strategies - by using information and communication technologies with the aim of creating value differently or more effectively and efficiently. The changes brought about by digitization (the use of modern digital technologies) are fundamental, disruptive and may be revolutionary. Companies face enormous risks, but also enormous opportunities by this change.</p> <p>A business model is the (simplified, structure-like, or structuring) representation of selected aspects of the resource transformation of the company as well as its exchange relationships with other market participants [6]. Digitally transformed business models use modern digital technologies to transform these business models and are already disrupting companies in all domains like telecommunications, transportation, e-commerce, automotive and many other industries.</p> <p>This course will explore how existing business models are implemented and a mapping on digital technologies can be executed. Furthermore, new digital business models will be developed.</p> <p>The following topics will be addressed in the course:</p> <ul style="list-style-type: none"> <li>- introduction to digital business modelling</li> </ul>

	<p>including B2B vs. B2C strategies and processes</p> <ul style="list-style-type: none"> <li>- process model for the development of decentralized, network-based business models for start-ups and existing businesses</li> <li>- identification and application of key digital components for the digitization of business models</li> <li>- methods, tools and idea generation for digital value creation processes, digital revenue modelling, digital strategies and leadership, digital workplace in the future</li> <li>- application of methods/tools and frameworks based on various case studies (e.g. FinTech, Smart Home, E-Health)</li> </ul>
<b>Grading basis</b>	assignment (ModA) (60%), colloquium (40%)
<b>Literature</b>	<p>[1] Gassmann, O., Frankenberger, K., &amp; Csik, M. (2017). <i>Geschäftsmodelle entwickeln: 55 innovative Konzepte mit dem St. Galler business model navigator</i>. Carl Hanser Verlag GmbH Co KG.</p> <p>[2] Gassmann, O., Frankenberger, K., &amp; Csik, M. (2014). <i>The business model navigator</i>. Harlow: Pearson Education.</p> <p>[3] Kollmann, T. (2011). <i>E-Entrepreneurship: Grundlagen der Unternehmensgründung in der Net Economy</i>. Springer-Verlag.</p> <p>[4] Hoffmeister, C. (2017). <i>Digital business modelling: digitale Geschäftsmodelle entwickeln und strategisch verankern</i>. Carl Hanser Verlag GmbH Co KG.</p> <p>[5] Jaeckel, M: <i>Die Anatomie digitaler Geschäftsmodelle</i>, Springer Vieweg 2016</p> <p>[6] Becker, W. (2011): <i>Business Models in Medium-Sized Enterprises</i>, Stuttgart: Kohlhammer</p> <p>[7] Ries, E. (2017). <i>The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses</i>, Currency</p> <p>[8] Kofler, T. (2018). <i>Das digitale Unternehmen: Systematische Vorgehensweise zur zielgerichteten Digitalisierung</i>. Springer</p>

## Compulsory module: Entrepreneurship II

<b>Course name</b>	<b>Entrepreneurship II</b>
<b>Course ID</b>	ED 1.7
<b>Semester</b>	2
<b>Frequency</b>	Summer semester
<b>Period</b>	1 semester
<b>Administrator</b>	Prof. Dr. Verena Kaiser
<b>Course instructor/s</b>	Prof. Dr. Verena Kaiser, Prof. Dr. Dominik Hammer
<b>Language</b>	English
<b>Classification of the course</b>	Master program <i>Entrepreneurship and Digital Transformation</i> Compulsory module
<b>Teaching format</b>	lecture (seminaristischer Unterricht) (group size: 30)
<b>Credit hours</b>	4 SWS
<b>Work load</b>	Total: 180 h presence in lectures: 45 h preparation and self-study: 135 h
<b>Credits</b>	6 ECTS
<b>Prerequisites</b>	The prerequisites are fulfilled with admission to the course of studies.
<b>Use of module</b>	The module builds on the learning outcomes of the first semester and integrates them into a comprehensive model and theory building that is application-oriented.  Can be used for courses of studies with business administration orientation

<p><b>Learning objectives</b></p>	<p>This module includes the introduction to entrepreneurial activities in the later stages of an innovation process, i.e. strategy implementation and internationalization of business. The teaching objectives synthesize the theoretical aspects of entrepreneurship and leadership in a startup and corporate environment. Students are enabled to understand:</p> <ol style="list-style-type: none"> <li>1. leadership competencies and skills development</li> <li>2. fostering an entrepreneurial mindset</li> <li>3. growth of entrepreneurial/intrapreneurial ventures</li> <li>4. marketing, financing, managing stakeholders, and pitching an entrepreneurial/intrapreneurial venture</li> </ol>
<p><b>Learning outcomes</b></p>	<p><b>Professional competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- staff their entrepreneurial/intrapreneurial teams to complement their own skill sets</li> <li>- develop a business plan including all components and create a standardized document for this purpose</li> <li>- pitch a project of their choice</li> <li>- explain the influence of future development strategies for digital transformation on business concepts to be defined</li> <li>- identify internal and external stakeholders and define their roles for an entrepreneurial/intrapreneurial venture</li> <li>- plan the budget available in a company to use the corporate advantages</li> <li>- identify the stakeholders within an innovation project</li> <li>- conduct international market and competitors analyses</li> <li>- develop a growth and internationalization strategy for a project</li> </ul> <p><b>Self competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- discuss the prerequisites within an organization that promote creativity</li> <li>- understand and describe their own impact on other individuals</li> <li>- explain the added value of their own competencies for an innovation project in digital transformation</li> </ul> <p><b>Social competency</b></p> <p>Upon completion of this course students will be able to:</p>

	<ul style="list-style-type: none"> <li>- determine an understanding of their own role based on their strengths and learning areas within a team</li> <li>- discuss the governance structure of the organization</li> </ul> <p><b>Method competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- demonstrate in which phase of the innovation process what type of tools are appropriate for what kind of tasks</li> <li>- explain which tools provide what kind of results and how to use those results</li> <li>- explain why in the field of entrepreneurship it is necessary to separate strategic tasks, that are decisive for success, from other activities</li> </ul>
<p><b>Course contents</b></p>	<p>The following topics will be addressed in the course:</p> <ul style="list-style-type: none"> <li>- draft of an investor pitch deck and business plan (cash-flow, profit &amp; loss, balance sheet)</li> <li>- startup vs. intrapreneurship: similarities and differences in the implementation stages</li> <li>- startup financing (intrapreneurship: obtaining corporate resources for innovation)</li> <li>- entrepreneurial digital marketing</li> <li>- communication and presentation (pitch to investors)</li> <li>- successful negotiations with stakeholders and investors</li> <li>- legal form, intellectual property, patents</li> <li>- internationalization in the digital transformation era</li> <li>- management in an international and intercultural environment</li> <li>- digital strategy and leadership</li> </ul>
<p><b>Grading basis</b></p>	<p>written assignments (ModA)</p>
<p><b>Literature</b></p>	<p>KURATKO, D.F. et al. (2011). <i>Corporate Innovation &amp; Entrepreneurship, International Edition: Entrepreneurial Development Within Organizations</i>. Cengage Learning. ISBN 978-1111526917</p> <p>LEACH, J., MELICHER, R.W. (2017). <i>Entrepreneurial Finance</i>. Cengage Learning. ISBN 978-1305968356</p> <p>GREENE, C. (2018). <i>Entrepreneurship. Ideas in Action</i>. Cengage Learning. ISBN 978-1337904698</p> <p>LUSSIER, R.N., ACHUA, C.F. (2014). <i>Leadership. Theory, Application and Skill Development</i>. Cengage Learning. ISBN 978-1285866352</p>

	<p>PENG, M., MEYER, K. <i>International Business</i>. Cengage Learning. ISBN 978-1473758438</p> <p>THOMPSON, J. et. Al. (2019). <i>Strategic Management Awareness and Change</i>. Cengage Learning. ISBN 978-1473767423</p> <p>LALOUX, F. (2016). <i>Reinventing organizations – An illustrated invitation to join the conversation on next-stage Organizations</i>. Nelson Parker.</p> <p>MILLER, D. (2017). <i>Building a Story Brand: Clarify your message so customers will listen</i>. Harper Collins Leadership. ISBN 0718033329</p> <p>DIB, A. (2018). <i>The 1-Page Marketing Plan: Get New Customers, Make More Money, And Stand out From The Crowd</i>. Page Two. ISBN 1989025013</p> <p>ISMAIL, S. (et al.) (2014). <i>Exponential organizations. Why new organizations are ten times better, faster, and cheaper than yours (and what to do about it)</i>. New York: Diversion Books. ISBN 978-1-62681-423-3</p> <p>RIES, E. (2011). <i>Lean Startup. How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses</i>. Crown Business. ISBN 9780307887894</p> <p>ROGERS, D. (2016). <i>The Digital Transformation Playbook: Rethink Your Business for the Digital Age</i>. Columbia Business School Publishing. ISBN 9780231175449 Economics and Finance. ISBN 0804770913</p> <p>WESTERMAN, G. et al. (2014). <i>Leading Digital: Turning Technology into Business Transformation</i>. Harvard Business Review Press. ISBN 9781625272478</p>
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**Compulsory module: Project II**

<b>Course name</b>	<b>Project II</b>
<b>Course ID</b>	ED 1.8

<b>Semester</b>	2
<b>Frequency</b>	Summer semester
<b>Period</b>	1 semester
<b>Administrator</b>	Herbert Gillig
<b>Course instructor/s</b>	professors/supervisors of the project
<b>Language</b>	English
<b>Classification of the course</b>	Master program <i>Entrepreneurship and Digital Transformation</i> Compulsory module
<b>Teaching format</b> <b>Credit hours</b>	project-based seminar <b>6 SWS</b>
<b>Work load</b>	Total: 450 h presence in project seminar: 68 h group work: 382 h
<b>Credits</b>	<b>15 ECTS</b>
<b>Prerequisites</b>	successful completion of Project I
<b>Use of Module</b>	Module builds on the results of Project I. Continuation especially in the modules „master thesis seminar“ and „master thesis
<b>Learning outcomes</b>	<b>Professional competency</b> Upon completion of this course students will be able to: <ul style="list-style-type: none"> <li>- design and build a prototype that will be demonstrated to potential customers and tested by them</li> <li>- check the technical effectiveness by means of testing the prototype with relevant stakeholders</li> <li>- develop a digital business model and identify the role of the different components with regard to the comprehensive model</li> </ul>

	<ul style="list-style-type: none"> <li>- use and apply the business model as a prototype for testing with lead customers</li> <li>- develop a business plan with all relevant components and write a standardized document</li> <li>- display the links between the individual chapters of a business plan and conduct a reality check of the assumptions of the business plan</li> <li>- negotiate with strategic partners and potential customers</li> <li>- characterize different stakeholders and conclude their influence and relevance from conversations and negotiations for venture creation</li> <li>- assess stakeholders' support for an innovation project and based on that work out necessary change processes</li> <li>- predict the development of scaling of a new venture and derive entrepreneurial decision-making from that</li> <li>- classify innovation within a macroeconomic context and evaluate the opportunities that are created by internationalization</li> <li>- optimize business processes, marketing activities as well as market entry through considering internationalization of the concept</li> <li>- name relevant stakeholders and their role in the innovation project</li> </ul> <p><b>Self competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- seek feedback from external mentors and fellow students</li> <li>- evaluate their own strengths and weaknesses and based on that derive activities in their teams and with external stakeholders</li> <li>- take a responsible role in a project team and document the findings</li> </ul> <p><b>Social competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- determine a structure within the team or organization that promotes entrepreneurial activities and apply it to their own project</li> <li>- refine a vision and mission for their own project</li> <li>- create a code of values and guidelines for their own project</li> </ul> <p><b>Method competency</b></p>
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	<p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- cluster the gained insights and analyze collected data, findings, and solutions</li> <li>- evaluate findings, to plan decision-making on short or long-term progress of the project and create decision templates for it</li> </ul>
<p><b>Course contents</b></p>	<p>Project II builds on the results of Project I. The focus in Project II is on the implementation of the idea/concept as well as on management issues. The following topics will be addressed in the course:</p> <ul style="list-style-type: none"> <li>- advancement and validation of prototype from low-fidelity to MVP (Lean Startup)</li> <li>- intellectual property rights und patents</li> <li>- acquisition of first real customers</li> <li>- advancement of the business model (partners, costs, pricing)</li> <li>- <i>Intrapreneurship</i>: analysis of corporate stakeholders (enablers/disablers) and resources, creation of new structures, integration into corporate mission and corporate portfolio</li> <li>- creating a marketing plan</li> <li>- How to pitch to investors</li> <li>- creating a financial plan</li> <li>- detailed planning of market entry</li> <li>- integration in digital platforms</li> <li>- setting up the logistics</li> <li>- contracts and negotiations</li> <li>- Scaling and growth (road map)</li> <li>- Internationalization and intercultural management</li> </ul>
<p><b>Grading basis</b></p>	<p>project report (80%) presentation (20%)</p>
<p><b>Literature</b></p>	<p>AULET, B. (2013). <i>Disciplined Entrepreneurship</i>. New Jersey: John Wiley &amp; Sons. ISBN 978-1-118-69228-8</p> <p>CROLL, A., YOSKOWITZ, B. (2013). <i>Lean Analytics. Use data to build a better startup faster</i>. Sebastopol: O'Reilly. ISBN 978-1-449-33567-0</p> <p>DORF, R., BYERS, T. (2008). <i>Technology ventures: from idea to enterprise</i>. New York: McGraw-Hill Companies. ISBN 978-0-07-352922-6</p>

	<p>RIES, E. (2017). <i>Lean Startup. How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses</i>. Currency. ISBN 1524762407</p> <p>SAILER, K. (et al.) (2018). <i>Real Time Innovation - Change the pattern. Change your thinking</i>. Munich: Strascheg Center for Entrepreneurship (Hrsg.). ISBN: 978-3-96222-001-3</p>
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### Compulsory module: Master thesis seminar

<b>Course name</b>	<b>Master Thesis Seminar</b>
<b>Course ID</b>	ED 1.9
<b>Semester</b>	3
<b>Frequency</b>	Winter semester
<b>Period</b>	1 semester
<b>Administrator</b>	Prof. Dr. Thomas Peisl
<b>Course instructor/s</b>	Prof. Dr. Thomas Peisl, Prof. Dr. Christian Greiner, Prof. Dr. Dominik Hammer
<b>Language</b>	English
<b>Classification of the course</b>	Master program <i>Entrepreneurship and Digital Transformation</i> Compulsory module
<b>Teaching format</b>	seminar (group size: ca. 30)
<b>Credit hours</b>	2 SWS
<b>Work load</b>	150 h presence in lecture: 20 h (delivery will be through a two-day intensive seminar at the end of semester 2)

	self study: 130 h (research proposal due week 1, semester 3)
<b>Credits</b>	<b>5 ECTS</b>
<b>Prerequisites</b>	none
<b>Use of module</b>	Pre-requisite for ED1.10 Master Thesis (recommended), Transfer to all research programs
<b>Learning outcomes</b>	<p><b>Method competency</b></p> <p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>- define the adequate research methodology for the master thesis and apply it to data collection</li> <li>- analyse the collected data and structure it in such way that it provides valuable information for the master thesis and can be used for conclusions</li> <li>- examine and assess whether the methodology (research approach and findings) is consistent and conclusions based on the methodology can be retraced</li> <li>- write a master thesis that meets the requirements of a scientific paper</li> </ul>
<b>Course contents</b>	<p>The following topics will be addressed in the course:</p> <ul style="list-style-type: none"> <li>- introduction to the philosophy of science</li> <li>- quantitative vs. qualitative methods of empirical social research</li> <li>- relevant theories and concepts in the field of entrepreneurship and intrapreneurship</li> <li>- how to write a structured literature analysis in your master thesis</li> <li>- development of research design (research questions, hypotheses)</li> <li>- data collection and analysis</li> <li>- how to write a conclusion and discussion chapter in your master thesis</li> <li>- software based reference systems (e.g. EndNote, Reference Manager)</li> </ul>
<b>Grading basis</b>	written assignment (research proposal)
<b>Literature</b>	SAUNDERS, M., THRONHILL, A., LEWIS, P. (2019). <i>Research Methods for Business Students Paperback.</i>

	<p>Eighth Edition. ISBN 978-1292208787</p> <p>YIN, R. (2018). <i>Case Study Research and Applications</i>. Sixth edition. ISBN 978-1506336169</p> <p>CRESWELL, J.W., POTH, C. N. (2017). <i>Qualitative Inquiry and Research Design: Choosing Among Five Approaches</i>. Fourth Edition. Thousand Oaks: Sage Publications. ISBN 978-1506330204</p> <p>SALDANA, J. (2015). <i>The coding manual for qualitative researchers</i>. Third Edition. Thousand Oaks: Sage Publications. ISBN 978-1473902497</p> <p>EISENHARDT, K. (1995). <i>Building Theories from Case Study Research</i>.  <a href="https://www.jstor.org/stable/258557?seq=1#metadata_info_tab_contents">https://www.jstor.org/stable/258557?seq=1#metadata_info_tab_contents</a></p> <p>STAKE, R.E. (1995). <i>The art of case study research</i>. Thousand Oaks: Sage Publications. ISBN 9780803957671</p>
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**Compulsory module: Master thesis**

<b>Course name</b>	<b>Master thesis</b>
<b>Course ID</b>	ED 1.10
<b>Semester</b>	3
<b>Frequency</b>	
<b>Period</b>	
<b>Administrator</b>	
<b>Course instructor/s</b>	professors of the study program and professors of the faculties cooperating in the study

	program
<b>Language</b>	English
<b>Classification of the course</b>	Master program <i>Entrepreneurship and Digital Transformation</i> Compulsory module
<b>Teaching format</b>	independent scientific writing
<b>Work load</b>	self study: 750 h
<b>Credits</b>	<b>25 ECTS</b>
<b>Learning outcomes</b>	Upon completion of the master thesis students will be able to deepen their knowledge in the selected field of study. They will also deepen their knowledge of scientific/academic writing. In their thesis they will apply scientific methods to research problems, analyze data, and synthesize findings. They demonstrate problem solving competencies and the capability of independent scientific writing.
<b>Prerequisites</b>	Aquisition of minimum 45 ECTS credit points; ED1.9 Master Thesis Seminar (recommended)
<b>Use of module</b>	Can be continued in other academic programs.
<b>Course contents</b>	Students specify topic and research methodology of their master thesis together with the professor that also acts as supervisor of his/her project. The topic of the thesis must refer to the project work and include a scientific examination of relevant components/activities in the project. Students conduct a comprehensive analysis of existing literature and critically discuss it, develop research questions and hypotheses, select a methodology for collecting and analyzing data, discuss results, present conclusions, and include a complete list of references.
<b>Grading basis</b>	master thesis
<b>Literature</b>	Literature depends on the selected topic. CRESWELL, J.W., POTH, C. N. (2017). <i>Qualitative</i>

	<p><i>Inquiry and Research Design: Choosing Among Five Approaches</i>. Fourth Edition. Thousand Oaks: Sage Publications. ISBN 978-1506330204</p> <p>STAKE, R.E. (1995). <i>The art of case study research</i>. Thousand Oaks: Sage Publications. ISBN 9780803957671</p>
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