

Master’s degree in Digital Transformation of Corporate Business, module catalogue

Module code, title, ECTS	Learning outcomes <i>(‘ clear statements of what the student is expected to <b>achieve, acquire</b> and <b>perform</b> at the end of the module and in many cases how s/he is expected to demonstrate that achievement’)</i>	Content, topics	Ethical, Diversity and Equal Opportunity issues addressed	Performance, social, personal skills addressed	Link to other modules	Prerequisites	International aspects	Integration with semester project	Teaching methods	Assessment, exam
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Semester A – Data management

<b>A 01</b>  <b>Information Security Management,</b>  <b>4 ECTS</b>	<p>Students are <b>aware</b> of the main IT security aspects and the key elements of information systems and understand the main processes in information security management, relevant managerial tools, models and techniques.</p> <p>They are able to <b>create</b> security policies and to implement security standards and main principles for successful management.</p> <p>Students have comprehensive <b>knowledge</b> of the technologies and platforms used for information security measures (like design and assessment of safe infrastructure, data protection measures etc.)</p> <p>Students display comprehensive <b>knowledge</b> and understanding of security in cyber space under theoretical, conceptual, legislative and partly technical aspects. And they are able to <b>use</b> this perspective in corporate environments.</p> <p>Students are <b>aware</b> of and understand IT security concepts in industrial environments with a focus on CI (Critical Infrastructure) and CII (Critical Information Infrastructure). They are able to efficiently <b>perform</b> the implementation and management of information security in these environments.</p>	<p>Digitization, Digital Citizenship &amp; Introduction to Information Security</p> <p>The concept of ISMS (Information Security Management System)</p> <ul style="list-style-type: none"> <li>- Risk analysis</li> <li>- Security measures and their selection</li> <li>- Safety standards series 27000</li> <li>- Network and application information security</li> <li>- Personal information security</li> <li>- Sectoral ISMS (critical infrastructure, healthcare, ....)</li> <li>- Legal environment of the EU</li> </ul> <p>Information Security Technology</p> <ul style="list-style-type: none"> <li>- Network security, Application security, Security and data protection, Virtualization, Cloud computing, ...</li> </ul> <p>Cyber Security</p> <ul style="list-style-type: none"> <li>- EU legal framework</li> <li>- Attacks, hacking, botnets</li> <li>- Penetration testing</li> <li>- Web &amp; E-mail security</li> <li>- Case studies</li> </ul> <p>Risk Minimization in Critical Infrastructure</p> <ul style="list-style-type: none"> <li>- Basic concepts and definitions of CI and CII at state / enterprise levels</li> <li>- Legislation and standards in the area</li> <li>- Basic problems, differences in principles of solution of commercial (office, logistics etc.) communication systems and security management</li> </ul>	<p>Ethics in security, data and privacy protection, protection of intellectual property, industrial espionage</p>	<p>Upgrade skills:</p> <ul style="list-style-type: none"> <li>- communication by roleplaying</li> <li>- implementation of a security policy element &amp; by extracting security information across departments</li> <li>- leadership by developing motivational and argumentative strategy for introducing security measures</li> <li>- conflict resilience by anticipating possible antagonism</li> <li>- analytical skills by assessing existing infrastructure against target standards.</li> <li>- awareness of interdependency technical - social implementation</li> </ul>	<p>Interconnection of technology areas in terms of complexity, manageability and continuous development.</p> <p>Relation to area management (process management, project management, HR management ...)</p> <p>and the use of global digital (cyber) environment.</p>	<p>Knowledge of ICT and IS, knowledge of management theories (process management, project management, strategic management etc.)</p>	<p>Legal aspects and strategy framework of EU (NIS directive, Cybersecurity strategy, ISO/IEC 27000+, GDPR, ...)</p>	<p>Semester project A07 implies task assigned on specific aspects of data management and security, selected and proposed by the company.</p> <p>This module supplies knowledge and tools for security management relevant for the project.</p>	<p>Lectures, group and individual activities, seminar, coached group assignments, case studies, simulation game.</p>	<p>Written and oral exam, project (presentation and report)</p>
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<b>A 02</b>  <b>Data Science</b>  <b>4 ECTS</b>	<p>Students have the <b>knowledge</b> of data environment and possible analytical approaches to solve business task (questions).</p> <p>They are able to <b>formulate</b> business questions (tasks) depending on data environment (and available resources).</p> <p>They are able to <b>analyze</b> data from different sources to find solution for crucial business question.</p> <p>They are able to <b>use</b> various techniques, methods and tools for data analysis.</p> <p>They <b>understand</b> the complexity of Data environment and are aware of ethical questions (like privacy in Big Data environments).</p>	<p>Data Science</p> <ul style="list-style-type: none"> <li>- Process of Data Science and its connection to Business Intelligence, Machine Learning and Statistics</li> <li>- Current trends and development Data Landscape</li> <li>- Traditional data versus Big Data</li> <li>- Different approach for structured, semi-structured and unstructured data</li> </ul> <p>Fundamentals of Business Intelligence</p> <ul style="list-style-type: none"> <li>- BI development</li> <li>- Role in the architecture of IS / ICT</li> <li>- Application areas</li> <li>- Links to other applications and areas</li> <li>- BI and Big Data environment</li> </ul> <p>Data Processing</p> <ul style="list-style-type: none"> <li>- Data Collection</li> <li>- Data Pre-processing</li> <li>- Data Processing</li> <li>- Big Data challenges</li> </ul> <p>Data Analysis</p> <ul style="list-style-type: none"> <li>- Descriptive analytics</li> <li>- Predictive analytics</li> <li>- Prescriptive analytics</li> <li>- Big Data - problematic areas</li> </ul> <p>Practical use cases</p> <p>Data Interpretation and ethical aspects</p>	<p>Ethical issues in data and privacy protection, misuse and manipulation with data</p>	<p>Based on enhanced awareness of digital technologies, analytical thinking and responsible acting</p>	<p>Information Security Management, Emerging Technologies, Advanced Analytics</p>	<p>Basic knowledge of ICT and statistics. Basic knowledge of databases and programming recommended but not necessary.</p>	<p>Analysis of data across disciplines, countries and organizations.</p>	<p>Semester project A07 implies task assigned on specific aspects of data management and security, selected and proposed by the company.</p> <p>This module supplies knowledge and tools for data management part of the project.</p>	<p>Lecture ( outline of basic principles and methodology, practical problems and model solutions); individual and coached case study assignments</p>	<p>Individual assignments and written exam.</p>
<b>A 03</b>  <b>Advanced Analytics</b>  <b>4 ECTS</b>	<p><b>Identify</b> and <b>articulate</b> different opportunities for using data mining techniques to answer typical questions in Sales, Marketing and Operations.</p> <p><b>Use</b> the R and Python programming languages and associated tools to analyze business data in order to provide evidence-based answers to a range of business questions.</p>	<p>The course is structured around "vertical" topics (problems) and "horizontal" topics (methods). The vertical topics encompass a range of problems from sales, marketing and operations, such as product adoption, purchasing prediction models, market basket analysis</p> <p>The horizontal topics include data mining and statistical analysis topics:</p> <p>* Data mining: classification (e.g.</p>	<p>Statistical methods and validity issues</p>	<p>Taking initiative, advocating and evangelizing (benefits of data analytics for business development)</p>	<p>Information Security Management, Emerging Technologies, Data Science, Digital Marketing</p>	<p>Basics of statistics and data analysis</p>	<p>Mining, analyzing and clustering data by markets and/or countries; analyzing data across national borders</p>	<p>Semester project A07 implies task assigned on specific aspects of data management and security, selected and proposed by the company.</p>	<p>Lecture ( outline of basic principles and methodology, practical problems and model solutions); individual</p>	<p>Individual assignments and written exam.</p>

	<p><b>Understand</b> the cross-applicability of data analytics techniques, e.g. across-the-board use of association analysis for finding prevalent relationships in two-way two-mode data tables; or ability to <b>identify</b> cross-selling/up-selling possibilities from self-organizing map clustering</p> <p><b>Combine</b> multiple data analytics techniques to provide multi-faceted answers to business questions</p> <p><b>Understand</b> benefits, costs and ethical implications of investing into data analytics as a tool for business analysis and development</p>	<p>decision trees, neural nets, support vector machines), clustering (e.g. hierarchical, k-means, biclustering and self-organizing maps), association analysis (e.g. association rule mining), recommendation (e.g. collaborative filtering) and prediction (using e.g. decision tree, neural nets).</p> <p>* Classic statistical analysis: multidimensional scaling, principal component analysis, singular value decomposition and correspondence analysis</p> <p>In addition, linear regression and logistic regression techniques will also be put to a more concrete applied use as the testing error will be minimized in industrial settings.</p>						<p>This module supplies knowledge and tools for data analysis relevant for the project.</p>	<p>and coached case study assignments</p>	
<p><b>A 04</b></p> <p><b>Big Data</b></p>	<p>Students are able to</p> <p>- <b>understand</b> and <b>harness</b> data mining</p>	<p>The objective of this module is to</p> <p>- describe the Big Data landscape</p>	<p>Examining ethical questions of privacy in Big</p>	<p>Enhance awareness of digital</p>	<p>Advanced Statistics, IT Security,</p>	<p>This course is for those new to data science. Completion</p>	<p>Analysis of data across disciplines,</p>	<p>Semester project A07 implies task</p>	<p>Lecture (outline of basic</p>	<p>Individual assignments and</p>

<b>Analytics</b>  <b>4 ECTS</b>	<p>methods and tools to <b>answer</b> crucial business questions with the help of internal and external data sources.</p> <p>- <b>predict</b> outcomes under supervised learning conditions</p> <p><b>generate</b> competitive advantages gained from analysing both semi-structured and unstructured data.</p>	<p>including examples of real-world Big Data problems</p> <p>- explain the V's of Big Data (volume, velocity, monitoring, analysis and reporting)</p> <p>- identify what are and what are not Big Data problems</p> <p>- provide an explanation of mathematical methods and programming tools used for Big Data analysis</p> <p>- examining ethical questions of privacy in Big Data</p>	Data.	<p>technologies</p> <p>Strengthen computational and data-aware thinking</p>	Platforms	of prior programming is recommended but not needed, although the ability to install applications is necessary to complete the individual assignments.	countries and organizations.	assigned on specific aspects of data management, selected and proposed by the hosting company	principles and methodology, practical problems and model solutions); individual and coached case study assignments	written exam.
<b>A 05</b>  <b>Emerging Technologies</b>  <b>4 ECTS</b>	<p>Students <b>understand</b> fundamentals of emerging technologies. They have ability to <b>adapt, analyze</b> and <b>use</b> new technologies in their further career.</p> <p>Students <b>understand</b> the technical and economic foundations of Emerging technology architecture and are able to <b>design</b> corporate processes accordingly.</p> <p>They are able to <b>formulate</b> business requirements accordingly to technology aspects.</p>	<p>- Business Informatics &amp; Cloud Computing</p> <p>- System Integration &amp; Robotic Process Automation</p> <p>- Industry 4.0</p> <p>- Internet of Things &amp; Smart Cities</p> <p>- Blockchain and Smart Contracts</p> <p>- Artificial Intelligence in Business Applications</p> <p>- DevOps: Development and IT Operations</p> <p>- Governance of Emerging Technologies</p> <p>- Implementation of Emerging Technologies</p> <p>- Principles of Emerging Technologies Regulation</p>	<p>Machines operate more independently in real-time and their actions affect the physical world immediately. Feedback and control of these local actions is critical for top performance and safety.</p>	<p>Sharpen students' awareness of possible change aversion in migration to new emerging technologies.</p> <p>Strengthen supportive leadership skills by developing team-oriented deployment scenarios</p>	Big data analysis, IT-Security, Human Resources, Project management	Participants should have some understanding of business informatics architecture and software development.	International value chains, outsourcing vs. Insourcing.	Semester project A07 implies task assigned on specific aspects of data management, selected and proposed by the hosting company	Lecture, seminar, coached group assignments, simulation game, virtual class room, blended learning	Written or oral exam, research paper (group presentation and project report)
<b>A 06</b>  <b>Internet of</b>	<p>Students <b>understand</b> in how far Internet of Things architecture differs fundamentally from the traditional</p>	<p>- The technical and business innovators of the Industrial Internet</p>	Machines operate more independently in	Sharpen students' awareness of	Big data analysis, IT-Security,	Participants should have some understanding of	International value chains, outsourcing/i	Semester project A07 implies task	Lecture, seminar, coached	Written or oral exam, research paper, group presentation, project

<b>Things/Industry 4.0</b>  <b>4 ECTS</b>	Internet.  Students <b>understand</b> the technical and economic foundations of IoT architecture and are able to <b>design</b> corporate human processes accordingly.	IoT reference architecture  - Designing Industrial Internet Systems  - Examining the Access Network technology and protocols  - Examining the middleware transport protocols - Middleware software patterns - Software design concepts - Middleware Industrial Internet of Things platforms  - IoT WAN technologies and protocols  - Securing the Industrial Internet  - Introducing Industry 4.0  - Smart factories	real-time and their actions affect the physical world immediately. Feedback and control of these local actions is critical for top performance and safety. Human Machine Interactivity.	possible change aversion in IoT migration  Strengthen supportive leadership skills by developing team-oriented deployment scenarios	Human resources	Enterprise IT architecture and Internet protocols	outsourcing	assigned on specific aspects of data management, selected and proposed by the hosting company	group assignments, simulation game, virtual classroom, blended learning	report
<b>A 07</b>  <b>Corporate Project A</b>  <b>6 ECTS</b>	Students can <b>evaluate, suggest</b> and <b>plan</b> specific IT security, IoT or Big Data applications, measures or projects in a corporate environment and <b>communicate</b> effectively about their benefits and implementation.	General project focus is on data management, data-driven processes and the economics of digitization. Specific focus of the project assigned is defined by hosting company		Students can integrate into existing work processes and communicate about their mission with staff and management	Project challenges students to apply, in a corporate environment, knowledge on data management and economics acquired over the term			Semester project with task assigned on specific aspects of data management selected and proposed by the hosting company. Assignment applies skills and knowledge acquired on modules and offers opportunity to train the	Independent in-company student group work, tutored by academic and corporate coach	Written report, presentation, product (if app.)

								performance, social and personal skills addressed on modules (cf respective column)		
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Module	Learning outcomes	Content, topics	Ethical	Soft skills	Modules links	Prerequisites	Internat/I	Project link	Teaching	Exam
Semester B – Corporate functions and processes, management										
<b>B 01</b> <b>dFinance</b> <b>and</b> <b>FinTech</b>  <b>5 ECTS</b>	<p>Students <b>understand</b> the changing institutional and organizational framework and macroeconomic environment for capital allocation within an economy and its implications for the corporate sector. They can <b>use</b> FinTech applications for financial planning, supply chain financing, cash flow management and debt and equity finance. They <b>are aware</b> of advantages and disadvantages of FinTech applications compared to traditional finance models and can <b>assess</b> their specific risks in operation and regulation. Participants are able to <b>use</b> data analytics for the assessment and the corporate management of financial and investment risks.</p>	<ul style="list-style-type: none"> <li>- Banking, FinTechs, capital markets</li> <li>- Regulatory framework and monetary policy</li> <li>- Financial planning (Treasury software)</li> <li>- Supply chain financing and working capital management (e-Invoices, Blockchain, SmartContracts, Reverse factoring)</li> <li>- Payments and cash flow management</li> <li>- Corporate risk management in extended use of data analytics (interest rates, currencies, credit risk, platform specific risks)</li> <li>- Portfolio theory and FinTechs (P2P lending, RoboAdviser)</li> <li>- Capital budgeting – Crowd investments</li> </ul>	<p>Sustainable finance, finance and property rights, corporate governance and ownership rights</p>	<p>Students demonstrate computational and data-aware thinking when making financial decisions.</p> <p>Students are able to convince teams and Management of the benefits of big data analytics.</p> <p>Students can contribute to implementing new innovative processes and show resilience when disrupting old business models and functions.</p>	<p>Big Data Analysis and statistic methods used for risk assessment, IT security, Platform business, DLaw – financial regulation</p>	<p>Sound knowledge of basic finance and investment theory</p>	<p>International integration of financial markets</p>	<p>Corporate project to be assigned (B06) on digital business processes addresses digital flows of finance a.o. (blockchain, smart contracts, digital supply chain finance etc)</p>	<p>Lecture involving guest speakers; coached group assignments based on case studies</p>	<p>Written exam, research paper, group presentation and project report</p>



<b>B 02</b>  <b>Digital Marketing</b>  <b>5 ECTS</b>	<p>Students <b>understand</b> and can <b>manage</b> strategies, operations and tools used in digital marketing and communication. They can <b>evaluate</b> digital marketing impact with qualitative and quantitative methods and <b>feed</b> results into other corporate processes.</p>	<p>The main topics related to digital marketing are focused on:  Overview of digital marketing, web marketing, search engine optimisation (SEO), online advertising, social media marketing (Facebook &amp; LinkedIn), mastering Google (AdWords Advertising, Analytics &amp; Applications), micro blogging - Twitter, copywriting for the web, social media &amp; mobiles, mobile marketing, email marketing, video &amp; audio (podcasting) marketing, strategic &amp; action planning and privacy. Topic related to digital services at the end of the module.  All topics contain a balanced mix of theoretical background and practical applications involving cases and exercises.</p>	<p>Transparency and fairness, data protection</p>	<p>Students can communicate innovation drives across functions and hierarchies.</p> <p>Students show and can stimulate creativity and initiative in marketing and customer communication.</p>	<p>Links to other modules (dLogistics, Internet of Things / Industry 4.0 and partially to IT Security and Platforms) are important and can be done by using cross-module case studies and projects.</p>	<p>Fundamentals of Marketing</p>	<p>Global brands, internationalization/localization, cross-culture, social media</p>	<p>Corporate project to be assigned (B06) on digital business processes addresses digital interaction with markets and customers</p>	<p>Lecture with more theoretical information ; seminar with practical examples; case studies delivered in teams with focus on creativity and innovation by participants</p>	<p>Written exam, group presentation, individual project report</p>
<b>B 03</b>  <b>Global Economics</b>  <b>5 ECTS</b>	<p>Students <b>understand</b> and can critically <b>analyze</b> issues of a globalized and digitized economy, its dynamics, trends, impacts and actors/relationships from a cross-disciplinary perspective.</p> <p>They can <b>understand</b> and <b>design</b> corporate policies addressing these developments.</p>	<ul style="list-style-type: none"> <li>- Key concepts in economic theory relating to the development of current economies.</li> <li>- Subjects of the world economy and forms of relationships.</li> <li>- Globalisation vs. localisation.</li> <li>- The history of European integration and the current position of the EU in the global economy and its competitiveness, the euro crisis.</li> <li>- New drivers of innovation, competitiveness and growth.</li> <li>- New economy - transition from heavy industry to technology-based economy.</li> <li>- Knowledge economy. Internet economy.</li> <li>- New concepts of GDP measurement and balance payment.</li> <li>- Internet-based media of exchange. Digital currencies. Alternative currencies.</li> <li>- Causes and consequences of the</li> </ul>	<p>causes and consequences of the divergence of developing countries, sustainable development</p>	<p>Students can helicopter their thinking, e.g. relating global digital issues to microeconomic problems</p> <p>Students can make educated business decisions drawing on their understanding of global and digital</p>	<p>Obvious connections with</p> <ul style="list-style-type: none"> <li>- C05 International project</li> <li>- B05 Corporate processes</li> <li>- A05 Big Data Analytics</li> <li>- B05 dGovernance and dLaw (which tend to be partly international)</li> <li>- B01 dFinance and FinTech</li> </ul>	<p>Basic knowledge of microeconomics &amp; macroeconomics and interest in development of current world economics and society is expected.</p>	<p>Understanding relationships within the global economy.</p> <p>Theories on causes and consequences of the divergence of countries and sustainable development.</p>	<p>Semester project assignment (A08) by hosting company implies specific aspects of data management and global economic and business trends e.g. IoT</p>	<p>Lecture involving a.o. guest speakers, group assignments on case studies</p>	<p>Paper</p>

		divergence of developing countries. Sustainable development.		trends.						
<b>B 04</b>  <b>dGovernance und dLaw</b>  <b>5 ECTS</b>	<p>Students <b>understand</b> national and EU legislation on digital trade and contracts, IP, cyber-security, data protection, employment and marketing.</p> <p>They are able to <b>plan</b> corporate activities in compliance with legal standards.</p> <p>They are able to <b>incorporate</b> smart contracts into internal and external processes</p>	<ul style="list-style-type: none"> <li>- Legal issues of Industry 4.0 in particular with regard to technical IP such as patents, designs and possible conflicts as to standardization in an industry 4.0 environment.</li> <li>- Trade secret protection in connected factories and open supply chains.</li> <li>- Cybersecurity and its legal implications.</li> <li>- Data protection law particularly with regard to Big Data and cloud computing.</li> <li>- Employment law (e.g. assessment of crowd sourcing).</li> <li>- Marketing law focussing on issues arising from digital marketing inter alia via social networks.</li> <li>- Smart contracts and digital signatures</li> </ul> <p>The course will be based on theoretical parts as well as a number of case studies enabling the students to deepen their understanding and practise in fields relevant for corporate business in a digital world.</p>	<p>References towards ethical or diversity aspects; Screening content concerning ethical and diversity questions and topics.</p> <p>Listing ethical and diversity topics to be discussed in class</p>	<p>Students acknowledge the relevance of dLaw and the necessity for business to comply with it.</p> <p>Students are qualified to advocate values, e.g. lawfulness and compliance in designing business processes.</p>	<p>Links with</p> <ul style="list-style-type: none"> <li>- A05 Big Data Analytics</li> <li>- A06 IoT</li> <li>- B02 dMarketing</li> <li>- C02 New Work</li> <li>- B01 dFinance and FinTech</li> </ul>	<p>Basic knowledge of Business Law (labour, contracts, liability, IP, data security, tax)</p>	<p>International trade, EU legislation, UN trade regulation, customs and taxation</p>	<p>Module B04 prepares participants for legal issues arising on project B06 (data protection, IP, contracts)</p>	<p>Lecture, seminar, coached group assignment s, simulation game, virtual class room, blended learning</p>	<p>Written or oral exam, research paper, group presentation, project report</p>
<b>B 05</b>  <b>Corporate processes and organisation</b>  <b>5 ECTS</b>	<p>Students have a sound <b>understanding</b> of the digital change affecting standard corporate functions and processes.</p> <p>They <b>are aware</b> of models and scenarios of digital change and can propose relevant strategic options.</p> <p>They are able to <b>map, analyse</b> and <b>redesign</b> corporate processes along the necessities of digital transformation.</p> <p>They can <b>communicate</b> effectively about organizational options across teams, departments, functions and</p>	<ul style="list-style-type: none"> <li>- Received organizational and process models, value chains</li> <li>- Classic business process modelling</li> <li>- Disruptive factors and impacts driven by Digitalization</li> <li>- New agile forms of organization</li> <li>- Customer-centered organizations</li> <li>- Technology-driven processes and human organization</li> <li>- Models of implementing Digitalization</li> <li>- Digitalization strategies, corporate communication and change</li> <li>- Hierarchy and leadership under</li> </ul>	<p>Openness, transparency and inclusive mapping and design of corporate processes</p>	<p>Students understand the withholding and accelerating factors in winning over staff for change.</p> <p>Students embrace innovative</p>	<p>Links to</p> <ul style="list-style-type: none"> <li>- A06 IoT</li> <li>- C02 New Work</li> <li>- C01 Entrepreneurship and Innovation</li> <li>- C04 Change Management</li> </ul>	<p>Basic knowledge of Business Administration (corporate functions, incorporation, processes, value chains, controlling)</p>	<p>Outsourcing/ insourcing, offshoring, co-creation, virtual business, transnational teams</p>	<p>Module B05 supplies skills relevant for mapping, analyzing and re-designing processes on project B06 (BPM, transaction analysis, company and team</p>	<p>Lecture, simulation, roleplays, case studies</p>	<p>Written exam, paper, group case study assignment</p>

	levels of hierarchy.	Digitalization		change and display cross-hierarchy and cross-function communication skills in advocating and implementing it.				organization)		
<b>B 06</b> <b>Corporate project B</b> <b>5 ECTS</b>	Students can <b>suggest, plan</b> and <b>evaluate</b> the introduction or re-design of a specific data-driven activity or process in a host company. They can <b>communicate</b> effectively within teams and across hierarchies about benefits, procedures and implementation.	General project focus is on corporate processes and management of digitized organisations. Specific focus of the project assigned is defined by hosting company.	Challenge of complying with legal standards in real life (data protection, IP, labour relations, contracts, sustainability, fair trade)	Students can advocate, deliver and integrate their project in a corporate environment.	Project B06 challenges students to apply, in a corporate environment, knowledge on business processes and organization acquired over the term		International stakeholders in processes of the hosting company (sourcing, markets, recruiting, R&D)	Semester project with task assigned on specific aspects of management and business processes selected and proposed by the hosting company. Assignment applies skills and knowledge acquired on modules and offers opportunity to train the performance, social and personal skills addressed on modules (cf respective column)	Independent in-company student group work, tutored by academic and corporate coach	Written report, presentation, product (if app.)



Module	Learning outcomes	Content, topics	Ethical	Soft skills	Modules links	Prerequisites	Internat/I	Project link	Teaching	Exam
Semester C – Entrepreneurship and change										
<b>C 01</b>  <b>Entrepreneurship &amp; Innovation</b>  <b>5 ECTS</b>	<p>Students have a cross-disciplinary <b>overview</b> of core topics of entrepreneurship (leadership, innovation, entrepreneurial process, SME, family firm, spin-off, intrapreneurship, knowledge management, clusters and networks, technology, social entrepreneurship, risk).</p> <p>They are able to <b>analyse</b> strategic options, to <b>plan</b> and <b>manage</b> business startup and development and to <b>design</b> corporate processes and core functions. They actively <b>embrace</b> entrepreneurial challenges.</p>	<p>1L. Entrepreneurship. Entrepreneur, innovation, GEM, forms and fields of entrepreneurship.</p> <p>2L. World trends. Opportunities for entrepreneurship, entrepreneurial process: presumptions and stages, different approaches. Business ideas and business idea generation.</p> <p>3S. Business concept, business model, intellectual property. Break-even point. Support mechanisms for entrepreneurship. Financial resources and how to get them.</p> <p>4L. Entrepreneurship education: target groups, goals, methods.</p> <p>5L. Business plan and its components.</p> <p>6L. Entrepreneurs - main business hero.</p> <p>7L. Starting and growing an innovative company and how it fit into the business environment.</p> <p>8L. Knowledge-based entrepreneurship: knowledge models and tools.</p> <p>9L. Knowledge-based entrepreneurship: clusters and ecosystems.</p> <p>10L. Strategies, marketing and management in the context of an innovative company.</p> <p>Business plan presentations and final exam.</p>	<p>Sustainability as an innovation parameter, inclusive team management, transparency of decisionmaking, ethical investment, respect for diversity</p>	<p>Students show initiative, entrepreneurial drive and motivation in prospecting and planning new digital business opportunities and processes.</p> <p>Students show digital leadership, readiness for risktaking and team orientation in innovation and business creation.</p>	<p>Links to</p> <ul style="list-style-type: none"> <li>- A06 IoT</li> <li>- C02 New Work</li> <li>- C04 Change Management</li> <li>- B05 Corporate processes and organization</li> </ul>	<p>Basic knowledge of incorporation, corporate functions, processes, value chains; good presentation skills</p>	<p>Market entry, international sourcing, world trends, funding</p>	<p>C01 prepares students for managing startups and entrepreneurship/intrapreneurship, which is to contribute to the success of corporate project C06</p>	<p>Lecture part on models and general topics;</p> <p>Project work and simulations on startup and innovation process</p>	<p>Project presentation / mock pitch</p>
<b>C 02</b>  <b>New Forms of Work in the Digital</b>	<p>Students can <b>apply</b> digital technologies to create efficient ways of working</p> <p>They can <b>identify</b> and bridge digital skills gaps.</p>	<ul style="list-style-type: none"> <li>- dCompetencies and their development</li> <li>- Collaboration tools in the digital era (virtual teams, diversity in team work)</li> <li>- dHRM (talent acquisition, dRecruit</li> </ul>	<p>Digital ethics (legal frameworks, labour law), workplace ethics, team</p>	<p>Students combine resilience and inclusive empathy in planning re-</p>	<p>Links to</p> <ul style="list-style-type: none"> <li>- A06 IoT</li> <li>- C01 Entrepreneurship and Innovation</li> </ul>	<p>Basic understanding of HR functions, theory of organizations</p>	<p>Cross-border outsourcing/insourcing, virtual business, transnational</p>	<p>C02 raises students' awareness of creative and effective work organization, a</p>	<p>Lecture, workshop with group discussions, case studies for</p>	<p>Individual paper assigned, written exam, simulation</p>

<b>Era</b>  <b>5 ECTS</b>	They can <b>organize</b> enhanced virtual and conventional collaboration in teams and <b>lead</b> respective change processes.	ment, dTraining) - Empowering an agile workforce - Gamification in personnel work	diversity (national, gender, age, cognitive)	organization of work under Digitization.  Students can communicate necessities and opportunities of digital change convincingly.  Students are aware of motivational strategies addressing uncertainty with staff.	- C04 Change Management - B02 dGovernnce and dLaw - C03 dLeadership - B05 Corporate processes and organization		teams, diversity/cross-culture	central issue in startups and entrepreneurship/intrapreneurship projects, which is the focus of corporate project C06	problem-solving by groups, simulations	
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<b>C 03</b>  <b>dLeadership for the Digital Era</b>  <b>5 ECTS</b>	<p>Students <b>understand</b> and can <b>apply</b> concepts of digital leadership.</p> <p>They can <b>design, implement</b> and <b>evaluate</b> digitally supported work processes.</p> <p>They can <b>analyse</b> control and support needs and <b>implement</b> respective processes.</p> <p>They are able to <b>build, empower</b> and <b>motivate</b> work teams and individuals in a collaborative and communicative workstyle, showing a self-reflective and reversible attitude.</p> <p>They can <b>apply, implement</b> and <b>deploy</b> digital communication tools.</p>	<ul style="list-style-type: none"> <li>- Mindset for digital transformation</li> <li>- New dimensions of leadership, new leading approaches</li> <li>- New ways of communication and interaction</li> <li>- Team leadership and team work in the digital era</li> <li>- Organizational culture and its role</li> <li>- Stress management</li> </ul>	<p>Ethical leadership, CSR corporate social responsibility</p>	<p>Students are aware of a variety of leadership styles and understand the need for collaborative, reversible and communicative leadership.</p> <p>Students can reflect on their leadership performance and their attitude towards team members.</p>	<p>Links to</p> <ul style="list-style-type: none"> <li>- C01 Entrepreneurship and Innovation</li> <li>- C04 Change Management</li> <li>- B02 dGovernance and dLaw</li> <li>- C02 New Work</li> <li>- B05 Corporate processes and organization</li> </ul>	<p>Basic understanding of leadership concepts;</p> <p>Good communication skills</p>	<p>Leadership in international environments , diversity, cross-cultural management</p>	<p>Leadership skills in digital environments influence the success of corporate project C06</p>	<p>Lecture, workshops with group discussions, reflective oral and written exercises, team exercises, round-table book reviews, individual and group presentations</p>	<p>individual assignment reports on case studies, written exam</p>
<b>C 04</b>  <b>Change management</b>  <b>5 ECTS</b>	<p>Students have a deep <b>understanding</b> of digital transformation both on the machine and the human side.</p> <p>They can actively <b>design, initiate, lead, impulse</b> and <b>oversee</b> digital change processes with both goal orientation and human empathy.</p> <p>They <b>are aware</b> of opposition, obstacles, imminent conflicts and risks and can <b>apply</b> strategies to overcome these.</p>	<ul style="list-style-type: none"> <li>- Trend scouting and forecasting</li> <li>- Corporate strategy under uncertainty conditions</li> <li>- Redesigning value chains</li> <li>- Psychological barriers to change</li> <li>- Analysing readiness, hesitation and resistance</li> <li>- Change scenarios</li> <li>- Incentivization and advocating</li> <li>- Teambuilding, evangelization, (digital) leadership</li> </ul>	<p>Ethical leadership, fairness and transparency, empathy and fairness in addressing and implementing change</p>	<p>Students embrace and can advocate change within and across teams and hierarchies.</p> <p>They can motivate and energize collaborators and inspire confidence.</p>	<p>Links to</p> <ul style="list-style-type: none"> <li>- A06 IoT</li> <li>- C01 Entrepreneurship and Innovation</li> <li>- C04 Change Management</li> <li>- B02 dGovernance and dLaw</li> <li>- C02 New Work</li> <li>- B05 Corporate processes and organization</li> <li>- C03 dLeadership</li> </ul>	<p>Basic understanding of standard business processes, concepts of organization and value chains, basic knowledge of organizational psychology</p>	<p>Trends in international markets, re-organisation, global value chains</p>	<p>Change management skills are required for students to supply an effective transformation scenario on corporate project C06</p>	<p>Simulation, roleplays, interviews with guest speakers, coached group project</p>	<p>Simulation / assessment center, paper</p>

<b>C 05</b> <b>International project</b>  <b>5 ECTS</b>	<p>Students can <b>work</b> seamlessly in virtual teams across institutional, functional, national, cultural and interpersonal borders on technological, organizational and business-related issues. They <b>apply</b> concepts and theory of digital transformation to issues in corporate and public-sector or civil society environments.</p>	<ul style="list-style-type: none"> <li>- Analyzing specific corporate problems and needs and providing adequate and innovative digital solutions</li> <li>- Communicating with corporate functions on proposed solutions and their implementation</li> <li>- Planning implementation and integration of solutions into corporate processes</li> <li>- Planning and managing project workflow across institutions, departments, national boundaries and cultures</li> <li>- Developing change strategies by underpinning machine-to-machine communication with innovative human interaction models</li> <li>- Analyzing ethical issues in digital change projects and suggesting conflict resolution</li> </ul>	<p>Labour relations, equal opportunities, fair employment, gender relations, social inclusion, environment, sustainability principles and their implementation</p> <p>Tools for monitoring ethical behaviour (reports, indicators, benchmarking)</p>	<p>Students can analyse cross-cultural conflicts and synergies across national and organizational boundaries.</p> <p>They can organize effective face-to-face and virtual international communication and build transnational teams.</p>	<p>Links to</p> <ul style="list-style-type: none"> <li>- C01 Entrepreneurship and Innovation</li> <li>- C04 Change Management</li> <li>- B02 dGovernance and dLaw</li> <li>- C02 New Work</li> <li>- B05 Corporate processes and organization</li> </ul>	<p>Basics of Internet of Things/Industry 4.0, New Forms of Work, Risk Minimization, Change Management and dLaw.</p>	<p>Working in virtual cross-border teams, sourcing knowledge transnationally with a view of implementing solutions locally</p>	<p>The ecosystem of startups and digital entrepreneurship being international by definition, this module prepares students for international business and addressing diversity in cross-cultural communication when delivering corporate project C06.</p>	<p>Project-based group work, corporate assignments and reviews, idea labs, coaching, workshops, virtual collaboration</p>	<p>Report and presentation</p>
<b>C 06</b> <b>Corporate Project C</b>  <b>5 ECTS</b>	<p>Students are able to <b>suggest, share, plan</b> and <b>develop</b> a data-driven project in a startup / incubation / micro-business / intrapreneurship environment. They are able to <b>generate</b> interest, to <b>advocate</b> their project and to <b>contribute</b> to the organization's overall objectives.</p>	<p>General project focus is on digital change management and entrepreneurship.</p> <p>Specific focus of the project assigned is defined by hosting company.</p>	<p>Challenge of acting in accordance with sustainability, fairness and diversity norms, students thus applying values and skills acquired / consolidated on modules C01 to C05.</p>	<p>Students can adjust to the organizational culture of a startup and create digital value by blending into new workstyles and processes.</p>	<p>Project C06 challenges students to apply, in a startup or digital change environment, entrepreneurial knowledge and skills acquired during term.</p>		<p>The ecosystem of startups and digital entrepreneurship being international by definition, project 06 challenges students to mobilize the international business and in cross-cultural skills acquired</p>	<p>Semester project with task assigned on entrepreneurship and change, selected and proposed by the hosting company. Assignment applies skills and knowledge acquired on modules and offers opportunity to train the</p>	<p>Independent in-company student group work, tutored by academic and corporate coach</p>	<p>Written report, presentation, product (if app.)</p>



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