MANAGEMENT CENTER INNSBRUCK

WINTER PRORGRAM
COURSE DESCRIPTION 2022

Courses

- Business Ethics
- New Product Development
- Renewable Energy
- Strategic Management & Sustainability
- Digital Entrepreneurship
- Digital Marketing: An introduction
- Innovation & Start Up
- Social Justice and Sustainable Development
- Basics of Embedded Systems
- Artificial Intelligence

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MANAGEMENT CENTER INNSBRUCK

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Winter School: Business Ethics		
Module			
Course Unit Code	IFLV6540	**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2022	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	Dr. Jürgen-Matthias Seeler
Objective of the course (Learning Outcomes)	This course aims at developing students understanding of ethical issues in the workplace. It moves from broader ethical theories to practical ethics challenges in organizations. More specifically, it equips students with a thorough understanding of identifying moral problem issues and considering appropriate measures to counter them.
Mode of delivery	-
Course contents	• Basics of Business Ethics • Ethics Theories • Context of Business Ethics in Western Societies • Ethical Issues in Organizations • Theoretical Concepts for Ethics Implementation in Organizations • Integration of Ethics in Business Operations **Dr. Jürgen-Matthias Seeler**: Additionally, up to four presentations (cases) will be held on the following topics - Moving Codes from words on paper to actions in the workplace - Ethics in Finance - Corruption in Africa - First Hand Experiences from Malawi - Microfinance in Brazil - Ethical Implications and Challenges
Recommended reading	Bowie, R. E. (ed.): The Blackwell Guide to Business Ethics. Blackwell-Wiley, Malden, Oxford Frederick, R. E. (ed.): A Companion to Business Ethics. Blackwell, Malden, Oxford Freeman, R. E. (1984): Strategic Management: A Stakeholder Approach. Prentice Hall, Boston Kant, I. (1785): Grounding for the Metaphysics of Moral. Translated by James W. Ellington, 3rd ed., 1993, Hackett, Indianapolis King Report on Corporate Governance 2009. (URL: http://www.library.up.ac.za/law/docs/king111report.pdf) Public Law 107–204, Sarbanes-Oxley-Act, 2002; (URL: http://www.sec.gov/about/laws/soa2002.pdf) Rossouw, D./van Vuuren, L. (2010): Business Ethics. Cape Town, Oxford University Press (4th ed.) Shaw, W. H./Barry, V. (2006): Moral Issues in Business. 10th ed., Wadsworth Publishing, Belmont, USA
Planned learning activities and teaching methods	Teaching will be a blend of classroom and online facilitation. In addition, group work on case studies will complement the overall teaching load to enable students applying theory to professional practice.
Assessment methods and criteria	Presentation Group presentation (75 % of overall grade) and Multiple Choice Test (25 % of overall grade)

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	New Product Development		
Module			
Course Unit Code	IFLV6577	**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2021	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	Professor Gordon Krauss, Ph.D.

Objective of the course (Learning Outcomes)	Students in this course will explore the new product development process through four phases. Each phase will include four topics with learning objectives: Need Discovery, Phase One. Students will: - Generate a Mind Map for a topic area of interest, identify an area of opportunity for a new product, and develop questions to learn about the area and develop user empathy using a discussion guide and interviews. - Describe user and stakeholder perspectives with an empathy map and two-by-two plots. - Refine and improve the discussion guide to better understand user needs and create a survey to broadly capture feedback from the stakeholders of interest. - Generate a novel Value Proposition describing the full set of user jobs, pains, and gains with proposed means independent products/services, pain relievers, and gain creators. Need Definition, Phase Two. Students will: - Decompose their selected value proposition (the specific set of pain relivers, gain creators, and means independent products/services chosen to address their customer segment) into their lowest level functions with appropriate units of performance. - Identify and quantify the constraints and identify the objectives with associated metrics for their selected value proposition. - Generate saturation curves for a set of critical functions for their value proposition including relevant thresholds and plateaus. - Quantify the relative importance in functional performance using ordinal (Pairwise Comparison Chart) and ratio (Analytical Hierarchy Process) methods. Value Proposition Development, Phase Three. Students will: - Use creativity tools to generate many potential solutions for their most important functions. - Create ranked morphological tables using evidence-based design comparisons and competitive analysis. - Generate multiple diverse design alternatives that satisfy the value proposition for the customer segment of interest and iteratively improve the design alternative options. - Select the best design alternative using a ratio evaluation system (Analytical Hierarchy Process). Business Considerations, Phase Four. Students will: 1. Improve the proposed design alternative using the Design for Environmental Sustainability (DfES) approach. 2. Generate multiple Business Canvas Models through which their Value Propositions could be centered. 3. Describe their Business Competitive level and identify how to advance to a higher level. 4. Explain how patents work with respect to intellectual property, IP ownership, licensing, and invention.
Mode of delivery	distance learning/e-learning

Course contents	This course will teach students to identify market needs through a deep understanding of users and stakeholders. Students will develop value propositions from the needs by categorizing needs according to type (pains, gains, and tasks) and selecting those for which they are best positioned to create valuable solutions through a new product. Students will design their new product by applying a design process. Specifically, a new product concept will be developed by applying functional decomposition, creating value-performance trade curves, creatively generating solutions, and ranking and combining solutions into fully-capable design alternatives. Students will develop multiple business canvases for their value proposition to identify the top potential solutions within the markets of interest and will include impact on society and environment in their analysis.
Recommended reading	
Planned learning activities and teaching methods	The course comprises an interactive mix of lectures, discussions and individual and group work.
Assessment methods and criteria	Quiz, Reports, Final Report
Language of instruction	English

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Renewable Energy		
Module			
Course Unit Code	IFLV6557	**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2021	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	FH-Prof. Dr. techn. Angela Hofmann, Sabrina Dumfort, BSc MSc, Nina Viktoria Schaaf, B.Eng. MSc, Lucas Schuchter, BSc MSc
Objective of the course (Learning Outcomes)	Students are able to roughly layout decentralised biomass-based energy generation processes and evaluate their operation. They know the concepts of implemented plants and are able to evaluate them. Students are particularly able to estimate potentials beforehand and estimate the economic efficiency of operation. Students also know the fundamental legal aspects and how to apply them to technical problems. Besides, they are theoretically and practically able to treat and purify different types of water (drinking water, sewage water etc.). They know important measures and procedures, e.g. for disinfection of drinking water and treatment of municipal sewage water.
Mode of delivery	face-to-face
Course contents	• Biomass: classification • Combustion: processes/plant types/CHP • Pyrolysis/ gasification: fundamental concept, process, implemented plants • Biomethane obtained from fermentation: fundamental concept, process, implemented plants • Biodiesel/bioethanol: fundamental concept, process, implemented plants • Field trip **FH-Prof. Dr. techn. Angela Hofmann**: The "International Renewable Energy Students Conference - IRESC-20" will be held in the framework of this course. Therefore, students will contribute the conference with presentations in the context of four special topic days. Students have also to submit an abstract (one page), all the abstracts are summed up in the Conference Proceedings. Each conference day starts with a key note from the lecturer and deals with general information on the day's topic, students presentations will show actual developments in research and implementation of technologies.

Recommended reading	Karl, J.: Dezentrale Energiesysteme, Oldenburg Wissenschaftsverlag GmbH, 2004 Boyle, G., Renewable Energy, Oxford university press, 2004 V. Quaschning, Regenerative Energiesysteme, Hanser Verlag München, 2008, ISBN 978-3-446-40973-6 Kaltschmitt,M.,Streicher,W. Regenerative Energien in Österreich, Vieweg&Teubner, GWV Fachverlage GmbH, Wiesbaden 2009, ISBN 978-3-8348-0839-4 Zahoransky, R.A., Energietechnik, Vieweg&Teubner, 2009 Unger, J.: Alternative Energietechnik, Teubner Verlag , 1993. Bank, M.: Basiswissen Umwelttechnik, Vogel, 2007. Schwister, K.: Taschenbuch der Umwelttechnik, Hanser Fachbuchverlag, 2003. Hammer, M. J.: Water and Wastewater Technology, Pearson Prentice Hall, 2008. Relevant specialised publications Additionally we recommend any specialised literature. Data bases: Science Direct, SciFinder, esp@cenet, NIST-Database
Planned learning activities and teaching methods	The course comprises an interactive mix of lectures, discussions and individual and group work.
Assessment methods and criteria	

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Strategic Management & Sustainability		
Module			
Course Unit Code	IFLV6581	**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2021	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	Dr. Daniel Degischer
Objective of the course (Learning Outcomes)	The course Strategic Management & Sustainability is an introductory level course on the broad topic of strategic management. While in traditional views on strategic management, the term sustainability often refers to “sustainable competitive advantage”, this course expands the notion of sustainability to a contemporary view beyond merely financial measures and specifically emphasizes the evaluation of the impact of strategy in the broader context of economy, society, and environment. Students acquire a basic understanding of strategic management, especially strategy analysis, strategy process, content, and context. They acquire the competencies to distinguish different strategic approaches, concepts, and models. Moreover, they establish the ability to develop, plan and implement strategies to effectively consider environmental trends and explore opportunities. Accordingly, they acquire the ability to evaluate the impact of strategy on the broader organizational context by critically reflecting on established concepts and acknowledging the paradigm shift towards sustainability.
Mode of delivery	distance learning/e-learning
Course contents	Fundamentals of strategic management and situation analysis: • Key concepts and strategic architecture • External analysis, and strategic context • Sustainability paradigms • Internal Analysis: Sustainability practices for competitive advantage Strategy formulation and implementation: • Corporate/ business-level strategy for sustainability • Strategic action: Sustainable strategy implementation
Recommended reading	• Johnson, G., Whittington, R., Scholes, K., Angwin, D., & Regner, P. (2020). Fundamentals of Strategy (5th ed.). Pearson. • Additional readings will be provided
Planned learning activities and teaching methods	The course comprises an interactive mix of synchronous and asynchronous lectures, discussions, and individual and group work.
Assessment methods and criteria	
Language of instruction	English

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Winter School: Digital Entrepreneurship		
Module			
Course Unit Code	IFLV6614	**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2022	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	Thomas Key, PhD
Objective of the course (Learning Outcomes)	We live in a new era of business practice, value creation and delivery. Understanding the changes relevant in the research, design, and execution of new ventures in the digital business landscape is only becoming more important. This Digital Entrepreneurship course introduces students to frameworks for the creation and delivery of innovative value through digital technology. The course is intended for students who want to understand and become familiar with the tools and concepts used to create a digital native business. Students choose a digital business model, revenue (price) structure, define their marketplace, create a target market persona, create a digital marketing plan, finance and growth plan, and by the end of the class pitch their concept for investment funding. LEARNING OUTCOMES: - The ability to develop a strategic plan for digital startups - Understand the foundation of online innovation, value creation and delivery. - Identify and classify digital business models. - Understand and identify different growth strategies for digital ventures. - Continuous improvement by staying up to date on tools and techniques, trends and technology
Mode of delivery	distance learning/e-learning
Course contents	• The ability to develop a strategic plan for digital startups • Understand the foundation of online innovation, value creation and delivery. • Identify and classify digital business models. • Understand and identify different growth strategies for digital ventures. • Continuous improvement by staying up to date on tools and techniques, trends and technology
Recommended reading	
Planned learning activities and teaching methods	
Assessment methods and criteria	Class Activities 60 points Digital Startup Project 40 points Total 100 points
Language of instruction	English

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Winter School: Digital Marketing - An Introduction		
Module			
Course Unit Code	IFLV0087	**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2022	**ECTS credits allocated**	3.500

SPECIAL INFORMATION

Name of lecturer(s)	Dr. Peter Schwazer, Mag. Christiane Aufschnaiter, Bakk. Phil., Johannes Jobst, Florian Juen, MA
Objective of the course (Learning Outcomes)	This introduction to Digital Marketing (exclusively online and self-paced) explores how to harness the power of digital within the context of a marketing strategy. You will gain a fundamental understanding of the core principles of digital marketing, and be able to distinguish between traditional and digital techniques. In this course we will provide you various microlectures to gain an understanding of creating and implementing effective digital marketing campaigns. It also introduces the fundamental aspects of digital marketing and covers areas including search, digital display, email and social media marketing, as well as analytics. After attending this course, participants will understand the basics of digital marketing. In addition, the participant will know how to conduct ongoing analysis and measurement in order to manage and evaluate digital marketing efforts. The online seminar contains different teaching methods, such as microlectures, quizzes, online forum discussions, case studies, etc.
Mode of delivery	-
Course contents	• The Foundations of digital marketing • SEO and paid search strategies • Social Media Marketing • E-Mail-Marketing • Web Analytics
Recommended reading	
Planned learning activities and teaching methods	Microlectures, online forum discussion, case studies, quizzes
Assessment methods and criteria	

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Winter School: Innovation & Start Up		
Module			
Course Unit Code	IFLV6613	**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2022	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	Professor Enrico Baraldi
Objective of the course (Learning Outcomes)	Business success and competitive advantage are increasingly based on innovation, rather than merely price competition and cost efficiency. Innovating includes also identifying, creating and seizing new commercial opportunities, especially through the creation of start-ups and new ventures. Therefore, managers at all levels and entrepreneurs need to understand the dynamics and mechanisms of innovation. This includes being able to handle the following issues: where do innovative ideas comes from? how can they be transformed into successful products launched on the market? which barriers and opportunities emerge during the innovation process? how can the creativity, uncertainty and risk in this process be managed? how can start-ups and innovations be developed in a socially responsible and sustainable way? The course addresses the issues above in both theory and practice. The relevant models and concepts are first introduced by the teacher and then applied by students to a series of practical cases, discussed either in pair or by the whole class. Participants will also train in developing and defending their own start-up ideas in front of panel of peers during an “entrepreneur-venture capitalist” roleplay. To successfully complete the course, participants will have to prepare, analyse and deliver to the teacher an own case of innovation or start-up process.
Mode of delivery	face-to-face

Course contents	1. New products as innovations connecting technology and marketing (Day 1) 1.1 NPD strategy: combining Marketing and Technology strategy: 1.2 User value. Identifying customer needs 1.3 Innovation: adoption and use. Key factors behind product innovation 2. The innovation process and its sources (Day 1) 2.1 The sources that stimulate innovations 2.2. Lead users (von Hippel) 2.3 New Product Development as an innovation process: the “Innovation Journey” 2.4 BIG Idea case classroom discussion (pre-reading required) 3. The business network surrounding product development (Day 1) 3.1 The interaction model and business relationships. 3.2 The ARA model. 3.3 Markets-as-Networks 3.4 Product development in business networks 4. Presentations of students’ own innovation cases (Day 1 & Day 2) 5. Combining resources for product development (Day 2) 5.2 Resource interactions around the product 5.2 The 4Rs model 5.3 Furniture cases: Edsbyn’s El-Table, IKEA’s Lack table and Billy bookshelf 5.4 Classroom discussion of the three furniture cases 6. Exploiting innovations in a network (Day 2) 7. Disruptive technologies and new ventures (Day 2) 7.1 The “innovator’s dilemma” (Christensen) 7.2 Mechanisms of disruption 7.3 The “innovator’s solution” as new corporate ventures 8. Entrepreneurship as starting up new businesses (Day 3) 8.1 Identifying business opportunities (Kirzner’s alertness) 8.2 Creating business opportunities (Schumpeter’s creativity) 9. New-technology based firms (Day 3) 9.1 Spin-offs & start-ups 9.2 Starting up in networks 9.3 Challenges of science-based firms: the ParAllele case 9.4 Classroom discussion of the ParAllele case 10. Planning a start-up (Day 3) 10.1 Modelling a new business with “Business Model Canvas” 10.2 Value creation, “Unique Selling Proposition” (UPS) and protection via IPRs (Intellectual Property) 10.3 Market and financial forecasts: estimating profitability (Net Present Value, NPV analysis) 10.4 Interacting with Venture Capitalists 11. Role play venture capitalists Vs entrepreneurs with own business ideas (Day 3 & Day 4) 12. Responsible entrepreneurship (Day 4) 12.1 From profit vs sustainability to profits AND sustainability 12.2 Environmental and social responsibility 12.3 Embracing external stakeholders and Building & sharing values internally 12.4 Classroom discussion of the Body Shop International case (pre-reading required)
Recommended reading	Next to the two cases required for pre-reading (BIG Idea and Body Shop), selected r articles and book chapters will be provided upon course start.
Planned learning activities and teaching methods	Face-to face teaching. In addition, group work and class assignments will complement the overall teaching load to enable students to apply theory to professional practice. Class assignments include individual and pairwise case discussions, presentation of own example/mini-cases and role-plays.
Assessment methods and criteria	Exam Exam Course assessed by continuous evaluation

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Social Justice & Sustainable Development in the business world		
Module			
Course Unit Code	IFLV6580	**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2021	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	Dr. phil. John Tichenor, Ph.D.
Objective of the course (Learning Outcomes)	In contrast to the predominate linear economic system characterized by converting natural resources into products designed to become waste and be replaced, the concept of a circular economy is one in which products are designed to be reused, repaired, and/or recycled. Such a circular system reflects the biological system of a forest or other natural ecosystems rather than the current human-produced, “take-make-dispose” system that characterizes our current polluted and endangered world. In this course, we will study the basic concepts of the circular economy and challenge our own values by asking questions such as: - Can a circular economy operate independently from how we view the world OR is a circular economy dependent on a shift in how we view the world? - What are the roles of various stakeholders in solving global sustainability challenges?
Mode of delivery	distance learning/e-learning
Course contents	
Recommended reading	
Planned learning activities and teaching methods	This highly interactive course will include a combination of required synchronous online sessions and asynchronous online activities.
Assessment methods and criteria	Grading will be based on online quizzes, short writing assignments, course participation, and a culminating group project.

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Basics of Embedded Systems		
Module			
Course Unit Code		**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2022	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	Dipl.-Ing. (FH) Mathias Gfall
Objective of the course (Learning Outcomes)	Students know after finishing this course programme the usual microcontroller. They can control the outputs of the microcontroller and can read the inputs of the microcontroller. Additioally they are able to programe simple softwares. Students understand the basic idea behind microcontroller and understand the field of the usage.
Mode of delivery	on campus - practical sessions (hands-on part)
Course contents	Fundamentals of microcontroller; Fundamentals of programming;
Recommended reading	
Planned learning activities and teaching methods	
Assessment methods and criteria	
Language of instruction	English

COURSE DESCRIPTION

GENERAL DATA

Course Unit Titel	Artificial Intelligence		
Module			
Course Unit Code		**Type of Course Unit**	ILV
Level of Course Unit	Bachelor	**Year of Study**	1
Semester	Fall 2022	**ECTS credits allocated**	3.000

SPECIAL INFORMATION

Name of lecturer(s)	Ing. Tomáš Pevný PhD
Objective of the course (Learning Outcomes)	Students get basic overview of the differnet types of Artificial Intelligence. They are able to understand the basic idea behind the artificial intelligence. Practical usage of artificial intelligence and use cases is also part of the course so that students can understand the funcationalities of articial intelligence.
Mode of delivery	on campus
Course contents	
Recommended reading	
Planned learning activities and teaching methods	
Assessment methods and criteria	
Language of instruction	English