

# course booklet

MCI Winter Program 2024



## COURSES

<u>course name</u>	<u>ECTS</u>
<u>on campus classes:</u>	
Leadership Development	3 ECTS
Innovation & Start Up	3 ECTS
Basics of Embedded Systems	3 ECTS
Introduction to Artificial Intelligence	3 ECTS
<u>online classes:</u>	
Digital Marketing - An Introduction	3,5 ECTS
Digital Entrepreneurship	3 ECTS
Business Ethics	3 ECTS
Algorithmic Thinking	5 ECTS

# course description

International Relations Winter & Summer Schools

## GENERAL DATA

Course Unit Title	Winter School: Leadership Development		
Module			
Course Unit Code	IFLV6626	Type of Course Unit	ILV
Level of Course Unit	Bachelor	Year of Study	1
Semester	Fall 2023	ECTS Credits allocated	3.000

## SPECIAL INFORMATION

Name of Lecturer	Dr. phil. John Tichenor, Ph.D.
Objective of the Course (Learning Outcomes)	<ul style="list-style-type: none"><li>• Students will examine various theories, current research, and issues relevant to leadership development.</li><li>• Students will analyze how theoretical approaches impact leadership practices.</li><li>• Students will investigate cross-cultural leadership styles and issues, including historical and contemporary leaders.</li><li>• Through experiential exercises and class discussions, students will identify their strengths and refine their leadership styles.</li></ul>
Mode of Delivery	face-to-face
Course Contents	Whether it is in a work, family, school, or social setting, everyone is called upon to be a leader at some point. This course is designed to expose students to various leadership theories, current research, and issues relevant to leadership development. Students will also analyze how theoretical approaches impact leadership practices. Further, this course exposes students to cross-cultural leadership styles, including historical and contemporary leaders. The course will be very interactive with many classroom activities designed to further students' understanding of what it means to be a leader. By participating in the course, students will reflect upon their leadership style to become better leaders.
Recommended Reading	Will be provided via Sakai.
Planned Learning Activities and Teaching Methods	The course will consist of a combination of mini-lectures, discussions, classroom activities, and a group project.
Assessment Methods and Criteria	Grading will be based on online quizzes, short writing assignments, course participation, and a culminating group project.

# course description

Winter & Summer Schools

## GENERAL DATA

Course Unit Title	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 2023	ECTS Credits allocated	3.000

## SPECIAL INFORMATION

Name of Lecturer	Professor Enrico Baraldi
Objective of the Course (Learning Outcomes)	<p>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 come 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 a 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.</p>
Mode of Delivery	face-to-face
Course Contents	<p>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 &amp; 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 &amp; 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"</p>

	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)
<b>Recommended Reading</b>	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.
<b>Planned Learning Activities and Teaching Methods</b>	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.
<b>Assessment Methods and Criteria</b>	Exam Exam Course assessed by continuous evaluation

# course description

Winter & Summer Schools

## GENERAL DATA

Course Unit Title Introduction to Artificial Intelligence

Module

Course Unit Code IFLV6596 Type of Course Unit ILV

Level of Course Unit Bachelor Year of Study 1

Semester Fall 2023 ECTS Credits allocated 3.000

## SPECIAL INFORMATION

Name of Lecturer FH-Prof. Dr. Stephan Schlögl

Objective of the Course (Learning Outcomes)

- Students understand the key principles of Artificial Intelligence (AI)
- Students know about the History of AI and can thus identify potential future routes of development
- Students are familiar with the concept of an Intelligent Agent as the underlying principle of all AI systems
- Students are familiar with the benefits and limitations of using AI in different business settings

Mode of Delivery

Course Contents - Introduction to Artificial Intelligence - History of Artificial Intelligence - Intelligent Agents - Problem Formulation and Basic Algorithmic Analysis - AI Fields of Application

Recommended Reading - Russel S. Norvig P. (2021): Artificial Intelligence: A Modern Approach (4th ed). Prentice Hall.

Planned Learning Activities and Teaching Methods A mix of lectures, group work and hands-on experiences

Assessment Methods and Criteria Group work incl. final presentation

# course description

Winter & Summer Schools

GENERAL DATA			
Course Unit Title	Basics of Embedded Systems		
Module			
Course Unit Code	IFLV6595	Type of Course Unit	ILV
Level of Course Unit	Bachelor	Year of Study	1
Semester	Fall 2023	ECTS Credits allocated	3
SPECIAL INFORMATION			
Name of Lecturer	Dipl.-Ing. (FH) Mathias Gfall		
Objective of the Course (Learning Outcomes)	<p>A pre-assembled PCB (printed circuit board) includes a microcontroller (ATmega328P). This controller will be coded in C / C++. There are plenty of functions which will be used, for example: Interrupts, Timer, PWM, ADC, I2C, SPI, UART, etc.</p> <p>With those functions different projects can be put into practice: stopwatch, RGB LEDs, IR controller, control circuits, display, relais, students will control circuits of other students remotely and wireless, etc. ...</p> <p>The circuit will be explained in a way that participants are able to understand basic principals of electronic.</p> <p>After the lecture everybody can keep his device in order to have the ability to develop additional skills at home.</p>		
Mode of Delivery	face-to-face		
Course Contents	The course is based on a practical assignment with focus on the programming of an electronic device: Students receive the opportunity to code many different applications. The skills will be taught by the lecturer and afterwards they can be used in small groups to develop own functionality.		
Recommended Reading	<ul style="list-style-type: none"><li>• Noergaard, T.: Embedded Systems Architecture, Elsevier</li><li>• Britton, C., Nye, P.: IT Architectures and Middleware, Pearson</li><li>• Hammerschall, U.: Verteilte Systeme und Anwendungen, Pearson</li></ul> Fachzeitschriften: <ul style="list-style-type: none"><li>• Embedded Design, TeDo-Verlag GmbH</li><li>• Elektronik, WEKA Fachmedien GmbH</li></ul>		
Planned Learning Activities and Teaching Methods	The course comprises an interactive mix of lectures, discussions and individual and group work.		
Assessment Methods and Criteria	Collaboration and a short report.		
Language of Instruction	English		

# course description

Winter & Summer Schools

## GENERAL DATA

Course Unit Title	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 2023	ECTS Credits allocated	3.500

## SPECIAL INFORMATION

Name of Lecturer	Christiane Aufschnaiter, Bakk. Phil. PhD
Objective of the Course (Learning Outcomes)	<p>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.</p> <p>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.</p> <p>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.</p>
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	null

# course description

Winter & Summer Schools

## GENERAL DATA

Course Unit Title	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 2023	ECTS Credits allocated	3.000

## SPECIAL INFORMATION

Name of Lecturer	Thomas Key, PhD
Objective of the Course (Learning Outcomes)	<p>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.</p> <p>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.</p> <p>LEARNING OUTCOMES:</p> <ul style="list-style-type: none"><li>- The ability to develop a strategic plan for digital startups</li><li>- Understand the foundation of online innovation, value creation and delivery.</li><li>- Identify and classify digital business models.</li><li>- Understand and identify different growth strategies for digital ventures.</li><li>- Continuous improvement by staying up to date on tools and techniques, trends and technology</li></ul>
Mode of Delivery	distance learning/e-learning
Course Contents	<ul style="list-style-type: none"><li>• The ability to develop a strategic plan for digital startups</li><li>• Understand the foundation of online innovation, value creation and delivery.</li><li>• Identify and classify digital business models.</li><li>• Understand and identify different growth strategies for digital ventures.</li><li>• Continuous improvement by staying up to date on tools and techniques, trends and technology</li></ul>
Recommended Reading	
Planned Learning Activities and Teaching Methods	
Assessment Methods and Criteria	<p>Class Activities 60 points Digital Startup Project 40 points Total 100 points</p>
Language of Instruction	English



# course description

Winter & Summer Schools

GENERAL DATA			
Course Unit Title	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 2023	ECTS Credits allocated	3.000
SPECIAL INFORMATION			
Name of Lecturer	Dr. Jürgen-Matthias Seeler, Liezl Groenewald, PhD		
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	<ul style="list-style-type: none"> <li>• Basics of Business Ethics</li> <li>• Ethics Theories</li> <li>• Context of Business Ethics in Western Societies</li> <li>• Ethical Issues in Organizations</li> <li>• Theoretical Concepts for Ethics Implementation in Organizations</li> <li>• Integration of Ethics in Business Operations</li> </ul> <p><b>Dr. Jürgen-Matthias Seeler:</b> 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</p>		
Recommended Reading	<p>Bowie, R. E. (ed.): The Blackwell Guide to Business Ethics. Blackwell-Wiley, Malden, Oxford</p> <p>Frederick, R. E. (ed.): A Companion to Business Ethics. Blackwell, Malden, Oxford</p> <p>Freeman, R. E. (1984): Strategic Management: A Stakeholder Approach. Prentice Hall, Boston</p> <p>Kant, I. (1785): Grounding for the Metaphysics of Moral. Translated by James W. Ellington, 3rd ed., 1993, Hackett, Indianapolis</p> <p>King Report on Corporate Governance 2009. (URL: <a href="http://www.library.up.ac.za/law/docs/king111report.pdf">http://www.library.up.ac.za/law/docs/king111report.pdf</a>)</p> <p>Public Law 107-204, Sarbanes-Oxley-Act, 2002; (URL: <a href="http://www.sec.gov/about/laws/soa2002.pdf">http://www.sec.gov/about/laws/soa2002.pdf</a>)</p> <p>Rossouw, D./van Vuuren, L. (2010): Business Ethics. Cape Town, Oxford University Press (4th ed.)</p> <p>Shaw, W. H./Barry, V. (2006): Moral Issues in Business. 10th ed., Wadsworth Publishing, Belmont, USA</p>		
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	<p>Presentation</p> <p>Group presentation (75 % of overall grade) and Multiple Choice Test (25 % of overall grade)</p>		

# course description

Winter & Summer Schools

## GENERAL DATA

Course Unit Title	Winter School: Algorithmic Thinking		
Module			
Course Unit Code	IFLV6597	Type of Course Unit	ILV
Level of Course Unit	Bachelor	Year of Study	1
Semester	Fall 2023	ECTS Credits allocated	5.000

## SPECIAL INFORMATION

Name of Lecturer	Andrea Corradini, PhD
Objective of the Course (Learning Outcomes)	<p>The main objective of the course is to introduce students to problem solving with a procedural approach using a high-level programming language as a resource for developing software solutions.</p> <p>Upon successful completion of the course, the students will be able to:</p> <ul style="list-style-type: none"><li>• discuss the importance of algorithms in the problem-solving process</li><li>• create algorithms for solving simple problems using procedural and possibly very basic object-oriented techniques</li><li>• decompose a problem into smaller pieces and/or sub-problems</li><li>• identify the main properties and drawback of algorithms</li><li>• decide on the appropriate control flow and data structure for a given problem</li><li>• basic programming tools</li></ul>
Mode of Delivery	distance learning/e-learning
Course Contents	<p>Programming and problem solving are essential skills for all students enrolled in any education program that requires a minimum amount of IT skills. Understanding how a computer is instructed to accomplish tasks and learning how to solve problems using a structured programming language provides a strong foundation of many concepts and ideas for these students. This course introduces, among others, the concept of algorithm, data types, data structures, control structures along with their use in and the use of programming tools.</p>
Recommended Reading	Y. Daniel Liang, "Introduction to Java Programming and Data Structures", 12th edition, Pearson, 2020
Planned Learning Activities and Teaching Methods	Frontal classes and exercises
Assessment Methods and Criteria	Practical exercises