Syllabus

Course Description

Course Title	Creating with artificial intelligence: web pages, automation, and solutions to everyday problems
Course Code	89202
Course Title Additional	
Scientific-Disciplinary Sector	INFO-01/A
Language	German
Degree Course	Studium Generale - basic course
Other Degree Courses (Loaned)	
Lecturers	Prof. Dr. Andrea Alexander Janes, Andrea.Janes@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/2237
Teaching Assistant	
Semester	First semester
Course Year/s	1
CP	3
Teaching Hours	18
Lab Hours	0
Individual Study Hours	0
Planned Office Hours	
Contents Summary	Part 1: AI for productivity and everyday life Part 2: Building with AI Part 3: Trust, Ethics, Copyright and Risks
Course Topics	Part 1: AI for productivity and everyday life Participants will learn how to formulate effective prompts and use AI as a personal assistant. Using practical examples, they will utilise AI for planning projects, trips and events, for summarising and analysing documents, as well as for communication, learning,

	creativity and decision-making. Part 2: Building with AI Participants will learn to develop practical digital solutions with the support of AI. These include simple websites, online resources, forms, information systems and automated workflows. No prior programming knowledge is required. Part 3: Trust, Ethics, Copyright and Risks Participants will explore errors and hallucinations, the critical evaluation of AI-generated information, data protection, copyright, bias and discrimination, as well as the social and environmental impacts of AI. They will develop criteria for safe, reflective and responsible use.
Keywords	
Recommended Prerequisites	No programming skills or specific prior technical knowledge are required to take part. Participants are only expected to have basic digital skills, such as the ability to use a computer, a web browser and common online services. Participants should: • bring their own laptop, • have internet access and a personal email address, • be prepared to try out various AI tools in practice, • be interested in developing their own ideas and use cases. A paid subscription to an AI tool is not required. The applications used in the course are selected so that they are available free of charge or in a free version wherever possible. No confidential, personal or sensitive data should be entered into the AI services used.
Propaedeutic Courses	
Teaching Format	The course combines short, interactive lecture sessions with practical exercises and an accompanying project.
Mandatory Attendance	
Specific Educational	Knowledge and understanding

Objectives and Learning Outcomes	Upon completion of the course, participants will be able to: • describe the basic functioning, capabilities and limitations of modern AI systems; • explain key areas of application for generative AI in both professional and private life; • explain the importance of prompts, context and iterative collaboration with AI systems; • identify typical sources of error such as hallucinations, distortions and unreliable information; • explain fundamental aspects of data protection, copyright, intellectual property, ethics, and the social and environmental impacts of AI. Applying Knowledge and Understanding Participants will be able to: • formulate clear and effective prompts for different tasks and refine them step by step; • use AI for research, planning, text editing, summarising, presentations, spreadsheets and communication; • structure and analyse documents and information using AI; • develop simple digital solutions such as websites, forms and information systems; • identify recurring workflows and partially automate them using suitable AI tools; • turn their own idea into a working prototype. Evaluation Participants can: • critically assess the quality, plausibility and reliability of AI-generated content; • verify key statements using appropriate and reliable sources; • weigh up the opportunities, limitations and risks of using AI in specific situations; • take into account potential implications for data protection, copyright, fairness and the individuals concerned; • make informed decisions about when AI can be used appropriately and when human expertise and oversight are required.

	Communication Participants will be able to: • formulate tasks, objectives and requirements for an AI system clearly and precisely; • revise AI-generated content to suit the target audience, situation and medium; • present the functioning, benefits and limitations of their own AI-supported solution in an understandable manner; • justify decisions regarding the use of AI in a way that is transparent and comprehensible; • present and discuss results and experiences within the group, and provide constructive feedback. Learning strategies Participants will be able to: • independently explore new AI tools and assess their suitability for specific tasks; • break down complex tasks into manageable steps and work on them iteratively using AI; • derive improvement strategies from incorrect or inadequate results; • critically reflect on their own use of AI and continuously adapt their working methods; • independently keep themselves informed about new developments, potential applications and risks in the field of artificial intelligence .
Specific Educational Objectives and Learning Outcomes (additional info.)	The course is primarily aimed at equipping participants with specific professional and practical skills in working with generative artificial intelligence. In addition, it covers general methods for the critical evaluation of information, as well as fundamental knowledge of data protection, copyright, ethics and the societal implications of AI. Upon completion of the course, participants will be able to: • understand the capabilities and limitations of modern AI tools and identify suitable areas of application; • formulate effective prompts and specifically improve results

	through iterative dialogue with AI systems; • to use AI for planning, creating and editing texts, presentations, spreadsheets, reports and other work materials; • to design and create prototypes of simple digital solutions such as websites, forms, information systems and automated workflows; • to make recurring tasks in professional and private life more efficient with the help of AI; • to critically evaluate AI-generated content, identify errors and hallucinations, and verify important information using reliable sources; • to protect personal, confidential and sensitive data appropriately when using AI; • to consider fundamental issues relating to copyright, intellectual property, bias, discrimination and the social and environmental impacts of AI; • to decide independently when the use of AI is appropriate and when human expertise, oversight and responsibility remain essential; • to transform their own idea into a practical, responsibly designed AI-supported solution.
Assessment	Learning outcomes are assessed through the development of a practical AI-supported solution, as well as through its presentation and an oral reflection. Participants, working individually or in small groups, develop a simple AI-supported solution for a specific professional or personal use case, such as a planning assistant, a website, a form, a tracker, an information system or an automated workflow. In group work, the individual contribution of each participant must be clearly identifiable. Participants present their project and answer questions relating to understanding and application. In doing so, they explain: • the basic functioning and potential benefits of the AI tools used; • the decisions made during development; • the quality and reliability of the results achieved; • potential risks and opportunities for improvement; • the transferability of the chosen approach to other use cases.

	Alignment with the Dublin Descriptors • Knowledge and understanding: Assessed through the explanation of the AI concepts used, their potential, limitations and risks in the project documentation and during the examination interview. • Application of knowledge and understanding: Assessed through the practical development and demonstration of a fully functional AI-supported solution. • Evaluation: Assessed on the basis of the justified selection of tools, the critical review of the results and reflection on data protection, copyright, bias and reliability. • Communication: Assessed through the structured presentation of the project, the clear presentation of the results and the answers to oral questions. • Learning strategies: Are demonstrated through the documentation of the iterative process, the handling of unsatisfactory results and the independent further development of the solution.
Evaluation Criteria	Admission to the oral examination is conditional upon the project assignment being submitted by the deadline. The final mark is composed of the project assignment (70 per cent) and the oral examination, including the project presentation (30 per cent). Both parts of the examination must be passed with a minimum of 18 out of 30 marks. An unsatisfactory result in one part of the examination cannot therefore be offset by a particularly good result in the other part. The final mark is calculated as the weighted average of the two passed parts of the examination. The project may be carried out individually or in small groups. In the case of group work, the overall quality of the project is assessed. The individual contribution and the individual understanding of each participant are assessed during the presentation and the oral examination. In the project, the following aspects in particular are assessed: • the clear definition of the problem, the target group and the intended benefit;

	• the appropriate selection and application of AI tools; • the functionality and practical usability of the developed solution; • the quality and transparency of the prompts and work steps used; • creativity and the ability to translate an idea into a prototype; • the critical review of AI-generated results; • consideration of data protection, copyright, reliability, bias and other risks; • the quality and clarity of the documentation. During the oral examination and project presentation, the clarity, structure and comprehensibility of the presentation, knowledge and understanding of the concepts covered, and the ability to provide a clear rationale for the decisions made in the project will be assessed. In addition, the following are taken into account: critical judgement regarding the possibilities, limitations and risks of AI; answers to comprehension and application questions; the ability to establish links between the project and the course content; the ability to synthesise information; and the appropriate use of the language of instruction.
Required Readings	
Supplementary Readings	• Mollick, Ethan (2025): *Co-Intelligenz: Leben und Arbeiten mit künstlicher Intelligenz*. Redline Verlag. • Meckel, Miriam; Steinacker, Léa (2024): *Alles überall auf einmal: Wie Künstliche Intelligenz unsere Welt verändert und was wir dabei gewinnen können*. Rowohlt Verlag. • Lenzen, Manuela: *Künstliche Intelligenz: Was sie kann & was uns erwartet*. C.H.Beck. Crawford, Kate (2024): *Atlas der KI: Die materielle Wahrheit hinter den neuen Datenimperien*. C.H.Beck.
Further Information	
Sustainable Development Goals (SDGs)	