AI TOOLS FOR LEARNING AND INNOVATION

COURSE OUTLINE

1. GENERAL			
SCHOOL	School of Engineering		
ACADEMIC UNIT	Department of Electronic Engineering		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	8000.1.205.0	**SEMESTER**	2nd
COURSE TITLE	AI tools for learning and innovation		

INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course	**WEEKLY TEACHING HOURS**	**CREDITS**
	2	4
Total	**2**	**4**

COURSE TYPE general background, special background, specialised general knowledge, skills development	Theoretical & Practical
PREREQUISITE COURSES	There are no prerequisites for this course. It also applies to any semester.
LANGUAGE OF INSTRUCTION and EXAMINATIONS	English
OFFERED TO ERASMUS STUDENTS	Yes (in English)
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning outcomes

- Explain the fundamental concepts, capabilities, and limitations of generative AI and large language models.
- Identify and compare AI tools used for learning, research, communication, content creation, employability, and innovation.
- Apply appropriate AI tools to academic and professional tasks, including research, writing, presentations, brainstorming, and project development.
- Evaluate the accuracy, reliability, bias, and suitability of AI-generated outputs critically.
- Apply ethical principles related to academic integrity, transparency, privacy, copyright, and responsible AI use.
- Design and develop digital content using AI-supported tools, including presentations, websites, images, videos, and customized chatbots.
- Formulate effective prompts and refine interactions with AI systems to produce relevant and context-appropriate results.
- Collaborate effectively in multicultural and international virtual teams using digital communication and project-management platforms.
- Plan and organize an international online or hybrid academic event using appropriate project-management methods and digital tools.

General Competences

- Understanding the principles, capabilities and limitations of generative AI and large language models.
- Selecting and comparing AI tools according to specific academic, professional and creative needs.
- Critically evaluating AI-generated content for accuracy, reliability, bias, relevance and quality.
- Applying ethical, transparent and responsible practices when using AI, particularly regarding academic integrity, privacy and copyright.
- Using AI tools effectively for research, writing, learning, communication, employability and problem-solving.
- Designing effective prompts and refining interactions with AI systems to achieve appropriate outcomes.
- Creating AI-supported digital outputs, including presentations, websites, images, videos and customized chatbots.

3. SYLLABUS

- AI Fundamentals.
- How to think about using AI - the concept of fusion skills.
- Learn how to prompt.
- AI responsible use.
- AI tools for presentation purposes.
- AI tools for research communication.
- AI tools for career development purposes.
- AI as an evaluator of your work.
- AI tools for vibe coding.
- How to create your chatbot.

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	- Synchronous lecture sessions and attention of seminars in a hybrid format.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students	• Use of the Learning Management System (e-class) to access, download the lecture notes, and upload assignments. • Use of the Zoom platform as a teleconference tool. • Use of Mentimeter as a polling platform. • Use Kahoot as an assessment platform to evaluate students' understanding.
TEACHING METHODS The manner and methods of teaching are described in detail.	
STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure	The enrolled students should register for all of the following assessment stages: • Active Participation in the sessions - 50% • Homwework/Assignments - 20% • Final Exam - 30%

Activity	**Semester workload**
Lectures	25
Attending Seminars / Colloquial Talks	10
Homework / Assignments (Collaborative Work)	75
Course total	**110**

5. ATTACHED BIBLIOGRAPHY

- Distributed Lecture Notes