Appendix No. 1.5 to the Resolution No. 7/2023
of the Rector of the University of Rzeszów

SYLLABUS

REGARDING THE QUALIFICATION CYCLE FROM 2024 TO 2027
ACADEMIC YEAR 2025/2026

1. BASIC COURSE/MODULE INFORMATION

Course/Module title	Language and Technology
Course/Module code *	P9
Faculty (name of the unit offering the field of study)	College of Humanities
Name of the unit running the course	Institute of Modern Languages
Field of study	Media, Visual and Social Communication
Qualification level	Bachelor's degree
Profile	general academic
Study mode	full-time
Year and semester of studies	Year 2, semester 4
Course type	primary
Language of instruction	English
Coordinator	Dr Robert Oliwa
Course instructor	Dr Robert Oliwa

* - as agreed at the faculty

1.1.Learning format – number of hours and ECTS credits

Semester (no.)	Lectures	Classes	Laboratories	Seminars	Practical classes	Internships	others	**ECTS credits**
4		45						3

1.2. Course delivery methods

- conducted in a traditional way

1.3. Course/Module assessment (exam, pass with a grade, pass without a grade)

PASS WITH A GRADE

2. PREREQUISITES

Completed module: Information Technology

3. OBJECTIVES, LEARNING OUTCOMES, COURSE CONTENT, AND INSTRUCTIONAL METHODS

3.1. Course/Module objectives

O1	To familiarize students with the fundamental concepts and issues concerning the relationship between language and technology, with particular emphasis on artificial intelligence and machine learning in the context of communication and media.
O2	To develop students' practical skills in using modern technological tools, including AI-based systems, in academic, professional, and project work.
O3	To foster a conscious and responsible attitude towards the use of language technologies and AI tools, with consideration of ethical, social, and intellectual property aspects.

3.2. COURSE/MODULE LEARNING OUTCOMES (TO BE COMPLETED BY THE COORDINATOR)

Learning Outcome	The description of the learning outcome defined for the course/module	Relation to the degree programme outcomes
LO_01	The student knows the fundamental concepts and issues related to the relationship between language and technology, including the role of artificial intelligence and digital tools in communication and media.	K_W03, K_W06
LO_02	The student is able to use selected technological tools (including AI tools) to create, analyze, and edit linguistic and media content.	K_U04
LO_03	The student is able to critically evaluate the applications of language technologies, select appropriate tools for specific tasks, and adapt them to the communicative context.	K_U02, K_U04
LO_04	The student understands the importance of ethical and responsible use of language technologies and respects the principles of intellectual property protection and copyright law.	K_K06, K_K07

3.3. Course content (to be completed by the coordinator)

A. Lectures

Content outline

B. Classes, laboratories, seminars, practical classes

Content outline:
Introduction to Language and Technology – Language and technology – basic concepts and definitions. – History of the development of language technologies and digital communication tools.
Artificial Intelligence and Machine Learning in Communication – Fundamental concepts: AI, ML, NLP, neural networks. – Language models and their applications in text analysis and generation. – Applications of AI in media and social communication. – Opportunities and risks of AI in communication.
Digital Tools and AI in Practice – AI-supported generation of linguistic and visual content. – Prompt personalization and the selection of tools for communication tasks. – Distinguishing between human-generated and AI-generated content. – Practical exercises: development of mini-projects using technological tools.
Analysis and Critique of Language Technologies – Limitations and errors of language technologies. – The impact of digital technologies on social communication and culture. – Case studies: disinformation, fake news, deepfakes, content manipulation.
Law, Ethics, and Responsibility – Copyright and intellectual property protection in the context of AI. – Ethical standards in the use of language and multimedia technologies. – Social responsibility of technology users.
Summary and Projects – Student presentations of final projects. – Concluding discussion and reflection on the role of technology in communication.

3.4. Methods of Instruction

Presentation of online materials and moderated discussion
Implementation of a practical mini-project in a digital environment
Teamwork using online tools
Computer workshops with the use of software and online applications
Case study

4. Assessment techniques and criteria

4.1 Methods of evaluating learning outcomes

Learning outcome	Methods of assessment of learning outcomes (e.g. test, oral exam, written exam, project, report, observation during classes)	Learning format (lectures, classes,...)
LO_01	KNOWLEDGE TEST (MULTIPLE-CHOICE QUESTIONS, TRUE/FALSE, OPEN-ENDED QUESTIONS). ANALYSIS OF ONLINE MATERIALS AND MODERATED DISCUSSION.	CLASSES
LO_02	OBSERVATION DURING PRACTICAL CLASSES. IMPLEMENTATION OF MINI-PROJECTS (E.G., ANALYSIS OF LANGUAGE TOOLS, CONTENT CREATION USING AI). WORKSHOP EXERCISES (WORKING WITH DIGITAL AND AI TOOLS).	CLASSES
LO_03	OBSERVATION DURING PRACTICAL CLASSES. IMPLEMENTATION OF MINI-PROJECTS (E.G., ANALYSIS OF LANGUAGE TOOLS, CONTENT CREATION USING AI).	CLASSES

	WORKSHOP EXERCISES (WORKING WITH DIGITAL AND AI TOOLS).	
LO_04	PARTICIPATION IN DISCUSSIONS ON ETHICS AND COPYRIGHT LAW. EVALUATION OF STUDENT REFLECTIONS INCLUDED IN THE PORTFOLIO/FINAL PROJECT. ACTIVITY IN GROUP WORK AND PROBLEM-SOLVING TASKS.	CLASSES

4.2 Course assessment criteria

The final grade is based on the total number of points that students earn in the following areas:

Continuous assessment (40% of the total grade):
• Participation in classes and engagement in discussions, teamwork using online tools (15%)
• Completion of practical exercises during computer workshops (15%)
• Observation of activity during classes (10%)

Practical mini-project (30% of the total grade):
• Completion of an individual or group digital project (development of textual and visual materials, use of AI tools, analysis of ethical and cybersecurity aspects).

Knowledge test (30% of the total grade):
• Final test (multiple-choice, true/false, and open-ended questions) assessing knowledge of information technologies and digital tools.

Grading scale:
60–68% – 3.0 (satisfactory)
69–76% – 3.5 (satisfactory plus)
77–84% – 4.0 (good)
85–92% – 4.5 (good plus)
93–100% – 5.0 (very good)

5. Total student workload needed to achieve the intended learning outcomes – number of hours and ECTS credits

Activity	Number of hours
Course hours	45
Other contact hours involving the teacher (consultation hours, examinations)	5
Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.)	25
Total number of hours	75
Total number of ECTS credits	3

* one ECTS point corresponds to 25-30 hours of total student workload

6. Internships related to the course/module

Number of hours	
Internship regulations and procedures	

7. Instructional materials

Compulsory literature:

BOUSETOUANE, F. (2025). *GENERATIVE AI FOR VISION: A COMPREHENSIVE STUDY OF FRAMEWORKS AND APPLICATIONS* [PREPRINT]. ARXIV. HTTPS://ARXIV.ORG/ABS/2501.18033 ARXIV

WANG, B., CHEN, Q., & WANG, Z. (2024). *DIFFUSION-BASED VISUAL ART CREATION: A SURVEY AND NEW PERSPECTIVES* [PREPRINT]. ARXIV. HTTPS://ARXIV.ORG/ABS/2408.12128

LIU, M.-Y., HUANG, X., YU, J., WANG, T.-C., & MALLYA, A. (2020). *GENERATIVE ADVERSARIAL NETWORKS FOR IMAGE AND VIDEO SYNTHESIS: ALGORITHMS AND APPLICATIONS*. ARXIV PREPRINT.

DAVENPORT, T. H., & MITTAL, N. (2022, NOVEMBER 14). HOW GENERATIVE AI IS CHANGING CREATIVE WORK. *HARVARD BUSINESS REVIEW*. HTTPS://HBR.ORG/2022/11/HOW-GENERATIVE-AI-IS-CHANGING-CREATIVE-WORK

Complementary literature:

Antony, V. N., & Huang, C.-M. (2023). *ID.8: Co-Creating Visual Stories with Generative AI* [Preprint]. arXiv. https://arxiv.org/abs/2309.14228 arXiv

Hartmann, J. (2025). Can generative AI create superhuman visual marketing images? *Journal of Marketing*, *X*(Y), 1-20. (artykuł naukowy) ScienceDirect

Thomson, T. J. (2024). Generative visual AI in news organizations: attitudes and adoption. *Journal of Media Innovations*, *Z*(W), 1-15. Tandfonline

Shepherd, I. (2024, March 27). The top AI tools for content creators in 2024. *Forbes*. https://www.forbes.com/sites/ianshepherd/2024/03/27/the-top-ai-tools-for-content-creators-in-2024/ Forbes

DataForest. (2025, April 24). AI for visual content creation: Top-9 tools & how they work. https://dataforest.ai/blog/ai-for-visual-content-creation dataforest.ai

Davenport, T. H., & Mittal, N. (2022). *How Generative AI Is Changing Creative Work*. Harvard Business Review. (Cytowane także jako pozycja podstawowa) Harvard Business Review

Pretorius, L. (2024, October 8). AI for visual content creation. *Bird Marketing Blog*. https://bird.marketing/blog/digital-marketing/guide/ai-visual-content-creation/ bird.marketing

HOSTPAPA. (2025, JULY 8). HOW TO USE AI FOR CONTENT CREATION [2025 GUIDE]. HTTPS://WWW.HOSTPAPA.COM/BLOG/MARKETING/HOW-TO-USE-AI-FOR-CONTENT-CREATION/

Approved by the Head of the Department or an authorised person