

ERASMUS+ COURSE SYLLABUS

Kazimierz Wielki University in Bydgoszcz

1. General Information

Course title	AI Applications in Finance
Field of study / Faculty	Business, Administration and Law / Faculty of Law and Economics
Academic year	2026/2027
Semester	Winter / Summer
Course type	Lectures and practical classes (exercises)
Number of contact hours	30 hours: 15 hours of lectures and 15 hours of practical classes (exercises)
ECTS credits	4 ECTS = 100 hours of total student workload: Participation in classes: 30 h (15 h lectures + 15 h exercises) Studying literature and course materials: 20 h Preparation of the project and presentation: 25 h Individual work and homework assignments: 15 h Preparation for the final written exam: 10 h
Language of instruction	English
Prerequisites	No programming knowledge required.
Assessment methods	Class activity, individual assignments and a practical project.

2. Course Content

- Artificial intelligence, machine learning and generative AI: capabilities, limitations and human judgement.
- Financial applications: banking, credit assessment, fraud detection, reporting and investment analysis.
- Source-grounded prompting: task definition, context, constraints, structured outputs and comparison.
- AI-assisted company-report analysis: extracting figures, calculating ratios and verifying source data.
- Financial text and sentiment analysis: news, company disclosures, factual information and opinion.
- AI-supported spreadsheet work: data cleaning, formulas, visualisation, reproducibility and forecast limits.
- Responsible AI use: fabricated outputs, bias, privacy, confidentiality, copyright and human verification.
- Practical financial report: documenting AI assistance, prompts, source checks, errors and corrections.

3. Learning Outcomes

- Students distinguish major types of AI and explain selected financial applications, their limitations and the need for human oversight.
- Students design structured, source-grounded prompts and use AI tools to support financial document, text and data analysis.
- Students independently verify sources, figures and calculations, identify unreliable outputs and document corrections in a financial report.
- Students evaluate ethical and operational risks, protect confidential information and transparently disclose AI assistance and their own contribution.

4. Teaching Methods

- Lectures introducing AI concepts and financial applications.
- Practical classes (exercises) with AI tools and financial case materials.
- Guided workshops on prompting, document analysis and spreadsheet tasks.
- Comparative exercises checking AI outputs against source documents.
- Group discussions of reliability, ethics and human responsibility.
- Individual project work, verification logs and a short presentation.

Exercises use public or synthetic data. Confidential data must not be entered into AI tools; AI assistance must be disclosed.

5. Assessment Criteria

The written exam covers AI concepts, financial applications and critical evaluation of outputs. Practical assessment includes individual exercises and an AI-assisted financial report with a verification log and short presentation. Class activity includes identifying and explaining errors.

Grade	Criteria
3.0	Basic understanding; completes simple tasks and identifies obvious errors.
3.5	Satisfactory tool use, with partial verification and limited risk analysis.
4.0	Appropriate prompts, reliable source checks and a clear, balanced report.
4.5	Very good analysis, systematic verification and transparent documentation.
5.0	Excellent independent analysis; tests outputs and defends verified conclusions.

6. Lecturer Information

Name of lecturer	Paweł Błoński
Academic title	PhD
Faculty / Institute	Faculty of Law and Economics
E-mail address	blonski.pawel@ukw.edu.pl

7. Literature

Selected chapters and excerpts will be specified by the lecturer.

Required literature:

- OECD (2023). *Generative Artificial Intelligence in Finance*. OECD Artificial Intelligence Papers, No. 9. OECD Publishing. DOI: 10.1787/ac7149cc-en.
- Mollick, E. (2024). *Co-Intelligence: Living and Working with AI*. Portfolio.
- Financial Stability Board (2024). *The Financial Stability Implications of Artificial Intelligence*. FSB.

Additional literature:

- Autio, C., et al. (2024). *Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile*. NIST AI 600-1. DOI: 10.6028/NIST.AI.600-1.
- Bank for International Settlements (2024). *Artificial Intelligence and the Economy: Implications for Central Banks*. Annual Economic Report, Chapter III. BIS.
- Financial Stability Board (2025). *Monitoring Adoption of Artificial Intelligence and Related Vulnerabilities in the Financial Sector*. FSB.