1.2 STUDY PLAN AND SYLLABUS

<table>
<tr><td>Subject</td><td>FINANCIAL TECHNOLOGIES (FINTECH)
<table><tr><th>Type</th><th>Semester</th><th>ECTS</th><th>Code</th></tr><tr><td>OBLIGATORY (O)</td><td>1</td><td>6</td><td>10FT900</td></tr></table></td></tr>
<tr><td>Aims and Objectives</td><td>This course provides advanced knowledge of Financial Technologies (FinTech) and examines their transformative impact on financial institutions, markets, and digital ecosystems. It explores the evolution of fintech innovations, including digital banking, payment systems, blockchain architectures, cryptocurrencies, decentralized finance (DeFi), artificial intelligence (AI), big data analytics, regulatory technologies (RegTech), and cybersecurity frameworks. Emphasis is placed on understanding both the technological foundations and the strategic implications of fintech adoption within financial organizations.
The course integrates technological, managerial, regulatory, and innovation perspectives to equip students with the skills necessary to critically evaluate emerging financial technologies and their business applications. Students will analyze fintech business models, assess regulatory and compliance challenges, interpret complex financial data using AI-driven tools, and examine digital risk management strategies. Through case studies, applied projects, and research-based activities, participants will develop the capacity to design innovative fintech solutions that address real-world financial problems.
By combining theory with practical application, the course prepares graduates to lead digital transformation initiatives, contribute to fintech innovation strategies, and conduct independent research in rapidly evolving financial technology environments.

Course Objectives:

• Provide advanced knowledge of the evolution, structure, and ecosystem of financial technologies and their impact on the global financial system.
• Develop ability to analyze and evaluate blockchain architectures, digital assets, and decentralized financial systems.
• To strengthen analytical competencies in applying artificial intelligence and financial data analytics tools to support financial decision-making.
• Develop critical understanding of regulatory, compliance, ethical, and cybersecurity challenges in digital financial infrastructures.
• Design and develop innovative fintech solutions using agile methodologies, design thinking approaches, and independent research skills.</td></tr>
<tr><td></td><td>Upon successful completion of this course, students will be able to:</td></tr>
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Learning Outcomes (CLO)	1. Analyze and interpret the evolution, structure, and ecosystem of financial technologies and compare their impact on traditional and digital financial systems. (PLO1, PLO4) 2. Evaluate blockchain architectures, cryptocurrencies, and decentralized finance (DeFi) models by critically assessing their technical, economic, and strategic implications. (PLO2, PLO5) 3. Analyze and apply artificial intelligence and financial data analytics tools to interpret complex financial datasets and support evidence-based decision-making. (PLO1, PLO4) *4.* Evaluate regulatory frameworks, compliance mechanisms, and cybersecurity strategies in digital financial infrastructures by judging associated risks and ethical dilemmas. (PLO5, PLO2) 5. Design and formulate innovative fintech solutions using agile methodologies and design thinking approaches to address real-world financial challenges. (PLO1, PLO6) 6. Create and develop a fintech innovation project by integrating technological, strategic, and entrepreneurial principles. (PLO4, PLO6) 7. Conduct independent research, critically evaluate academic and industry sources, and defend evidence-based solutions to contemporary fintech challenges. (PLO4, PL10)
Content	**Weekly Plan** — **Week** Introduction to FinTech and Digital Financial Ecosystems. — 1 Digital Banking and Payment Systems. — 2 Blockchain Foundations and Distributed Ledger Technologies. — 3 Cryptocurrencies and Digital Assets — 4 Decentralized Finance (DeFi) — 5 Artificial Intelligence in Finance. — 6 Group Projects (FinTech Innovation Project) — 7 Big Data and Financial Analytics. — 8 RegTech and Digital Compliance. — 9 Cybersecurity and Digital Risk Management. — 10 FinTech Innovation Strategy and Business Models — 11

	Agile, Design Thinking, and FinTech Entrepreneurship	12
	Future Trends in FinTech	13
	Recapitulation of the subject	14
	Final exam	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	30%
	Seminars (discussion & research debates)	15%
	Laboratory / Practical Workshops (AI tools, fintech demos)	15%
	Case studies	15%
	Role Play / Simulation (RegTech, startup pitching)	10%
	Problem-based learning	10%
	Other (Project mentoring & research supervision)	5%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	10%
	Group Projects (FinTech Innovation Project)	30%
	Individual Assignments (Applied Analysis / Research Paper)	20%
	Final Exam	35%
	Case Study Analysis (Individual or Group)	5%
Assessment Description	Attendance and Class Activity (10%) - This assessment instrument evaluates the dedication, engagement, and active participation of students in lectures, seminars, and practical sessions. Students are expected to contribute to discussions, analyze fintech case studies, interpret regulatory scenarios, and participate in problem-solving exercises. Continuous engagement demonstrates students' analytical and evaluative skills developed during the course. This instrument assesses students' ability to interpret fintech ecosystems, evaluate digital risks, and apply conceptual knowledge in discussions and short in-class tasks. (Addresses CLO1, CLO2, CLO4)	

	Group Project (FinTech Innovation Project) (30%) - The group project is applied throughout the semester and requires students (3-5 members per group) to design and develop an innovative fintech solution addressing a real financial problem. The project includes a written report (2500-3000 words) and a formal presentation. Students must demonstrate market analysis, technological feasibility, regulatory awareness, and innovation strategy. Evaluation is based on originality, analytical depth, practical applicability, financial logic, and presentation quality. (Addresses CLO5, CLO6, CLO1) Individual Assignment (20%) - The individual assignment is research-based (1500–2500 words) and applied during the semester. Students critically evaluate a fintech platform, AI-driven financial model, blockchain application, or regulatory framework. The assignment must include theoretical foundation, analytical evaluation, and evidence-based conclusions. Assessment criteria include analytical rigor, application of fintech concepts, use of academic sources, and clarity of argumentation. (Addresses CLO2, CLO3, CLO7) Final Exam (35%) - Students will be subject to two evaluations: the mid-term (Week 7/8) and the final exam (end of semester). The assessments evaluate students' ability to analyze, evaluate, and apply fintech concepts in practical and analytical scenarios. Exams may include analytical questions, case-based problems, scenario evaluations, and applied fintech tasks. Students will demonstrate their ability to interpret blockchain models, assess regulatory risks, analyze AI applications, and evaluate cybersecurity challenges. The exams measure conceptual understanding, critical evaluation, and applied analytical skills. (Addresses CLO1, CLO2, CLO3, CLO4) Case Study Analysis / Practical Workshop (5%) - Applied throughout the semester in seminar or laboratory format. Students analyze real-world fintech cases, regulatory incidents, cybersecurity breaches, or AI applications in finance. This assessment measures the ability to evaluate risks, interpret data, and propose solutions. Evaluation is based on analytical depth, participation, and problem-solving quality. (Addresses CLO3, CLO4, CLO5)
Course resources	**Resources** — **Number** Classroom (e.g) — 1 IT Lab (e.g) — 1 Moodle — 1 Windows 11, MS Office 2021 — 1 LCD Projector — 1

ECTS Workload	**Activity**	**Total workload**
	Lectures	30
	Seminars	15
	IT Lab / Practical Workshops	15
	Self-learning (reading, research, project work, exam preparation)	87
	Consultations	3
Literature/References	**Primary literature:** 1. Hysa, E. (2021). *Transformimi Digjital në Sektorin Financiar*. Tiranë: Botime Universitare. 2. Banka Qendrore e Republikës së Kosovës (BQK). (2022). *Raport mbi Stabilitetin Financiar dhe Inovacionet Digjitale*, 3. Banka e Shqipërisë. (2023). *Raporti i Stabilitetit Financiar dhe Zhvillimet FinTech* **Secondary literature:** 4. Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services. *Journal of Management Information Systems*, 35(1), 220–265 5. Lee, I., & Shin, Y. J. (2018). FinTech: Ecosystem, business models, investment and challenges. *Business Horizons*, 61(1), 35–46 6. Arner, D. W., Barberis, J., & Buckley, R. P. (2017). FinTech and RegTech: I regulators and banks. *Journal of Banking Regulation*, 19(4), 1–14 7. Schueffel, P. (2016). Taming the Beast: A Scientific Definition of FinTech. *Journal of Innovation Management*, 4(4), 32–54. 8. Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). *Bi Cryptocurrency Technologies*. Princeton University Press 9. Chishti, S., & Barberis, J. (Eds.). (2016). *The FinTech Book*. Wiley. 10. Tapscott, D., & Tapscott, A. (2016). *Blockchain Revolution*. Penguin. 11. Zetzsche, D., Buckley, R., Arner, D., & Barberis, J. (2020). Decentralized *Journal of Financial Regulation*. 12. Video Lecturers in Moode	
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment.	

	Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

Subject	**BLOCKCHAIN AND DIGITAL ASSETS**			
	Type	**Semester**	**ECTS**	**Code**
	OBLIGATORY (O)	1	6	10BDA901
Aims and Objectives	The course Blockchain and Digital Assets addresses advanced concepts of Blockchain technology and its application in digital financial systems. The course examines the architecture of decentralized networks, consensus mechanisms, smart contracts, asset tokenization, Decentralized Finance (DeFi), NFTs, stablecoins, and Central Bank Digital Currencies (CBDCs), as well as the legal, regulatory, and ethical implications within the fintech ecosystem. The course focuses on the critical analysis and evaluation of different Blockchain models (public, private, and consortium), the design of decentralized financial systems, and the development of innovative strategies for integrating digital assets into financial institutions. Students will engage in case studies, technical analysis, architectural modeling, and the conceptual development of blockchain-based fintech solutions. The course directly contributes to the development of competencies related to the implementation of DeFi systems, digital risk management, regulatory analysis, and academic research in the field of financial innovation. Course Objectives • Analyze Blockchain architectures and operational mechanisms. • Evaluate the impact of digital assets on traditional financial systems. • Design decentralized financial models. • Analyze legal and regulatory frameworks related to Blockchain and crypto-assets.			

	• Develop research skills in the field of Blockchain and fintech.
Learning Outcomes (CLO)	Upon successful completion of this course, students will be able to: 1. Analyze different Blockchain architectures and compare consensus mechanisms within the context of financial applications. (PLO1, PLO2) 2. Evaluate the economic and financial impact of digital assets (cryptocurrencies, tokens, NFTs, CBDCs) on global markets. (PLO1, PLO8) 3. Design decentralized financial models (DeFi) by applying smart contract principles. (PLO2, PLO6) 4. Assess cybersecurity risks and security challenges in Blockchain infrastructures. (PLO7, PLO8) 5. Analyze and interpret legal and regulatory frameworks for digital assets across different jurisdictions. (PLO5, PLO8) 6. Formulate innovative strategies for integrating Blockchain solutions into financial organizations. (PLO1, PLO2) 7. Develop an independent research project addressing an advanced issue in Blockchain and digital assets. (PLO5, PLO8)
Content	**Weekly Plan** — **Week** Introduction to Blockchain Technology and Distributed Ledger Systems — 1 Cryptography fundamentals and consensus mechanisms (PoW, PoS, BFT) — 2 Public vs Private Blockchains - Enterprise Applications — 3 Smart Contracts and Ethereum Architecture — 4 Tokenization, Digital Asset Models and DAOs (Decentralized Autonomous Organizations) — 5 Decentralized Finance (DeFi) Ecosystems — 6 Mid-term exam 1 — 7 Stablecoins and Central Bank Digital Currencies (CBDCs) — 8 NFTs and Digital Ownership Models — 9 Blockchain Security and Cyber Risks — 10 Legal and Regulatory Frameworks for Digital Assets — 11 Innovation Strategies and Blockchain Adoption in Financial Institutions — 12 Case Studies (DeFi Platforms, Crypto Exchanges, Tokenized Assets) — 13 Student Project Presentations — 14

	Mid-term exam 2	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	20%
	Seminars/Project	20%
	Laboratory	20%
	Self-study	40%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	10%
	Individual Assignments	20%
	Mid-terms Tests OR Final Exam	70%
Assessment Description	Class Participation and Activity (10%) – During lectures and seminars, students will engage in academic discussions, case study analyses, and problem-solving activities related to Blockchain architecture, DeFi, and regulatory aspects. Assessment focuses on analytical contribution, critical reasoning, and the application of theoretical concepts to practical financial scenarios. (Addresses CLO1, CLO2, CLO5). Individual Project (20%) – Conducted throughout the semester, this component consists of a research paper (approximately 2,000 words) on an advanced topic such as DeFi risk models, CBDC adoption, tokenization strategies, or the analysis of a decentralized financial model. Evaluation is based on analytical depth, academic structure, use of scientific literature, and critical argumentation. (Addresses CLO3, CLO6, CLO7). Tests and Final Examination (70%) Students may choose one of the following assessment options for the 70% component: - Option A: Two tests (35% + 35%) - Option B: One comprehensive final examination (70%) Test 1 (35%) - This assessment covers Blockchain architecture, consensus mechanisms, smart contracts, tokenization models, and the fundamentals of DeFi. The test is conducted in a combined theoretical and practical format in the laboratory environment. It includes analytical questions, short case analyses, and conceptual exercises requiring the application of knowledge within a financial context. The purpose of this test is to evaluate the student's ability to analyze and interpret technological and economic structures of decentralized systems. (Addresses CLO1, CLO2, CLO3).	

<table>
<tr><td></td><td>Test 2 (35%) - This assessment covers stablecoins and CBDCs, NFTs and digital ownership models, cybersecurity and risk management issues, as well as legal frameworks and Blockchain adoption strategies in financial institutions. The evaluation is conducted in a combined theoretical and practical format, involving critical case analysis, regulatory interpretation, and the formulation of conceptual solutions. The assessment aims to measure students' capacity for critical evaluation and strategic judgment. (Addresses CLO4, CLO5, CLO6).

Final Examination (70%) - The final examination covers the entire course content. It is conducted in an integrated theoretical and practical format in the laboratory and includes critical analysis of a complex case, conceptual design of a decentralized financial model, and regulatory interpretation of a real-world scenario. This assessment aims to comprehensively measure students' analytical, evaluative, and creative competencies in alignment with level expectations. (Addresses all Course Learning Outcomes: CLO1 -CLO7).</td></tr>
<tr><td>Course resources</td><td><table><tr><th>Resources</th><th>Number</th></tr><tr><td>Classroom (e.g)</td><td>1</td></tr><tr><td>IT Lab (e.g)</td><td>1</td></tr><tr><td>Moodle</td><td>1</td></tr><tr><td>Windows 11, MS Office 2021</td><td>1</td></tr><tr><td>LCD Projector</td><td>1</td></tr></table></td></tr>
<tr><td>ECTS Workload</td><td><table><tr><th>Activity</th><th>Total workload</th></tr><tr><td>Lectures</td><td>30</td></tr><tr><td>Seminars/Project</td><td>30</td></tr><tr><td>IT Lab</td><td>30</td></tr><tr><td>Self-learning</td><td>55</td></tr><tr><td>Consultations</td><td>5</td></tr></table></td></tr>
<tr><td>Literature/References</td><td>Primary literature:
1. Blockchain: A Practical Guide to Developing Business, Law, and Technology Solutions, Joseph J. Bambara, Paul R. Allen, Kedar Iyer, Rene Madsen, Solomon Lederer, Michael Wuehler. ISBN: 9781260115864, 2018
2. Blockchain Basics: A Non-Technical Introduction in 25 Steps, Daniel Drescher. ISBN: 978-1484226032, 2017</td></tr>
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	3. DeFi and the Future of Finance, Campbell R. Harvey, Ashwin Ramachandran, Joey Santoro, Fred Ehrsam (Foreword by), Vitalik Buterin, ISBN: 978-1-119-83601-8, 2021 4. Token Economy: How the Web3 reinvents the Internet, Shermin Voshmgir, Second Edition, ISBN: 978-3982103815, 2020 5. Mastering Ethereum: Building Smart Contracts and DApps, Andreas Antonopoulos, Gavin Wood Ph.D., 1st edition, ISBN: 978-1491971949, 2018 **Secondary literature:** 13. Blockchain and the Law: The Rule of Code, Primavera De Filippi, Aaron Wrig 978-0674976429, 2018 14. Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Business, and the World, Don Tapscott, Alex Tapscott, ISBN: 978-110198013 15. Blockchain For Dummies, Tiana Laurence, 3rd Edition, ISBN: 978-139415966 16. Digital Asset Revolution: How Blockchain Is Decentralizing Finance and I Wall Street, Alex Tapscott (Editor), ISBN: 978-1988025742, 2022
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

Subject	**INNOVATION AND TECHNOLOGY MANAGEMENT**			
	Type	**Semester**	**ECTS**	**Code**
	OBLIGATORY (O)	1	6	10ITM902

Aims and Objectives	This course aims to develop advanced knowledge and practical competencies in managing innovation and technology within fintech and digital financial ecosystems. It equips candidates with strategic, analytical, and entrepreneurial skills to design, implement, and evaluate innovation initiatives in technology-driven financial organizations. The Innovation and Technology Management course will offer a advanced understanding of the principles, strategies, and practices required for effectively managing innovation and technology in modern organizations. This module is designed to equip candidates with the knowledge and skills necessary to navigate the rapidly evolving landscape of technology driven innovation and capitalize on emerging opportunities. The candidates will also examine the challenges associated with managing innovation, such as intellectual property protection, capability and resource allocation. Course objectives: • Develop an advanced understanding of innovation management principles within financial technology environments; • Analyze how emerging technologies such as digital payments, blockchain, artificial intelligence, and data analytics transform financial services; • Evaluate strategies for managing technological innovation, disruption, and digital transformation in financial institutions; • Apply innovation frameworks to design and implement FinTech solutions that enhance efficiency, security, and customer experience; • Assess regulatory, ethical, and risk considerations related to financial technology innovation; • Strengthen strategic decision-making skills for technology investment, adoption, and commercialization in financial markets; • Foster leadership and collaboration skills to drive innovation in rapidly evolving financial ecosystems; • Conduct independent research and critical analysis of current trends and challenges in FinTech innovation; • Integrate financial, technological, and managerial perspectives to solve complex industry problems; • Prepare candidates for leadership, research, or entrepreneurial roles in FinTech innovation and technology management;
Learning Outcomes (CLO)	By the end of the course, candidates will be able to: 1. Critically analyse innovation theories and technology management frameworks in fintech contexts (PLO3, PLO4) 2. Design innovation strategies aligned with digital transformation in financial organizations (PLO3, PLO1, PLO9) 3. Evaluate emerging technologies (AI, blockchain, digital platforms) and their strategic impact (PLO1, PLO4)

	4. Apply design thinking and agile methodologies in developing fintech solutions (PLO6, PLO9) 5. Assess risks, ethical implications, and regulatory considerations in technology innovation (PLO1, PLO8). 6. Develop and present evidence-based innovation proposals for fintech ventures (PLO3, PLO9).
Content	**Weekly Plan** — **Week** Define Innovation & Technology Management — 1 Innovation Theories and Models (Schumpeter, Open Innovation, Disruptive Innovation) — 2 Digital Transformation in Financial Services — 3 Fintech Ecosystems and Innovation Networks — 4 Technology Strategy and Competitive Advantage — 5 Managing R&D and Technological Change — 6 Case Study Workshop — 7 Blockchain and Emerging Financial Technologies — 8 AI, Big Data and Automation in Finance — 9 Design Thinking and Agile in Fintech Development — 10 Innovation Risk, Regulation and Compliance — 11 Intellectual Property and Technology Commercialization — 12 Scaling Innovation & Managing Growth — 13 Venture Capital and Innovation Financing — 14 Final Project Presentations — 15
Teaching/Learning Methods	**Activities** — **Weight (%)** Lectures — 35 % Case studies — 15 % Group Discussions — 10 % Problem solved — 35 %

	Guest Lectures	5 %
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	10 %
	Case Study Analysis	40 %
	Group Innovation Project and Presentation	50 %
Assessment Description	Attendance and Class activity: Active engagement in discussions and workshops. *(*Addresses CLO1, CLO3); Case Study Analysis: Written strategic evaluation of fintech innovation cases. *(*Addresses CL02, CL04, CL05, CL06) Group Innovation Project: Development of a fintech innovation proposal applying design thinking and strategy tools. *(*Addresses all CLOs) Final Presentation: Professional defense of project findings. *(*Addresses all CLOs)	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	Moodle	1
	LCD Projector	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	30
	Project	60
	Case study analysis	15
	Independent Study	45
Literature/References	**Primary literature:** 6. Schilling, M. (2022). *Strategic Management of Technological Innovation*. McGraw-Hill. 7. Tidd, J., & Bessant, J. (2021). *Managing Innovation*. Wiley. 8. Lewrick, M. (2020). The Design Thinking Toolbox: A Guide to Mastering the Most Popular and Valuable Innovation Methods. John Wiley & Sons. 9. Goffin, K. y Mitchell, R. (2017). Innovation Management: Effective strategy and implementation (Third edition). Macmillan Education. 10. Schilling, M. A., & Shankar, R. (2019). Strategic management of technological innovation. McGraw-Hill Education.	

	11. Prahalad, C. K. y Krishnan, M. S. (2017). The new age of innovation. Editorial McGraw- Hill. **Secondary literature:** 1. Chesbrough, H. (2020). Open Innovation Results. 2. Brown, T., & Katz, B. (2019). Change by design: how design thinking transforms organizations and inspires innovation (Vol. 20091). New York, NY: Harper Business. 3. Linkner, Josh. (2021). Big Little Breakthroughs: How Small, Everyday Innovations Drive Oversized Results. New York: Post Hill Press. 4. Osterwalder, A., Pigneur, Y., Smith, A., & Etiemble, F. (2020). The Invincible Company: How to Constantly Reinvent Your Organization with Inspiration From the World's Best Business Models. John Wiley & Sons. 5. Ridley, M. (2020). How innovation works: And why it flourishes in freedom. New York: Harper. 6. Selected journal articles from *Research Policy*, *Technovation*, *Journal of Product Innovation Management*. 7. Customized material prepared by lecturer, available at Moddle
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

Subject	**RESEARCH METHODS AND ETHICS**			
	Type	**Semester**	**ECTS**	**Code**

	OBLIGATORY (O)	1	6	10RME903
Aims and Objectives	Research Methods and Ethics is an interdisciplinary course that addresses the principles, techniques, and essential methods of research in the social sciences, and especially in economics. The course focuses on the two main research approaches qualitative and quantitative methodologies, with particular emphasis on their practical application and the development of efficient research structures. In the qualitative part, the course examines narrative models and case studies, analyzing the challenges of their implementation in empirical contexts. The quantitative part includes the description of basic statistics and advances to techniques such as multiple regression, focusing on the evaluation and interpretation of numerical data. A central component of the course is the treatment of ethical principles in research, including the protection of confidentiality, academic integrity, the avoidance of methodological bias, and the provision of informed consent of participants. Students learn to identify ethical challenges in the research process and to build projects in accordance with professional ethical standards. The course also provides practical training in the use of econometric software such as STATA, SPSS and EViews, which support data analysis and the development of contemporary research skills. Course objectives: • Develop competencies in the critical analysis of research processes. • Identify and select different methodological approaches in research. • Formulate the basic elements of research design. • Apply analytical tools and ethical standards in the research process.			
Learning Outcomes (CLO)	Upon successful completion of this course, students will be able to: 1. Conduct a critical evaluation of the scope of a simulated research project (PLO10). 2. Distinguish between quantitative and qualitative approaches, and the methods related to these approaches (PLO3, PLO4, PL010). 3. Be able to effectively develop research questions and define hypotheses within the framework of the research (PLO4, PLO10). 4. Recognize and understand the nature of econometric models, as well as how to apply them through programs such as: STATA, SPSS, EViews (PLO4). 5. Be able to choose appropriate econometric methods for collecting and organizing data (PLO4). 6. Prepare a mini-presentation about the simulation of a proposal for a specific research project (PLO9). 7. Prepare and structure a research plan for a specific project topic by applying ethical principles and standards (PLO10).			
Content	**Weekly Plan**			**Week**
	Formulation and Analysis of the Research Topic			1
	Formulation and Analysis of the Research Topic			2

	Critical Literature Review	3
	Critical Literature Review	4
	Formulation of Research Design	5
	Formulation of Research Design	6
	Mid-term exam 1	7
	Data Collection and Analysis	8
	Data Collection and Analysis	9
	Seminar	10
	Data Analysis	11
	Data Analysis	12
	Seminar	13
	Mid-term exam 2	14
	Consultation	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	35%
	Seminars and Exercises	35%
	Laboratory	10%
	Case studies	10%
	Problem-based learning	10%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Mid-term exam 1	30%
	Mid-term exam 1	30%
	Research Project	30%
	Activity and Quizzes	10%
Assessment Description	Test I and Test II - constitute formal mid-term and final assessment instruments. The first test takes place in the seventh week, while the second in the last week of the semester. Both tests include multiple-choice questions designed to measure students'	

	theoretical and practical competencies. The duration of the tests is from 45 to 90 minutes. Their content aims to assess students' skills in critically evaluating research concepts, identifying research methods, econometric analysis, and formulating the basic components of a scientific project. This instrument addresses (CLO: 1, 2, 3, 4, 5). Research Project - the research project is a central component of the assessment and aims to integrate theoretical knowledge with practical applications of research methodology. The project should be between 3000 and 3500 words and is assessed according to three criteria: structure, scientific content, and professional presentation. Through this project, students demonstrate the ability to design a research study, formulate research questions and hypotheses, apply quantitative or qualitative methods, and analyze data through econometric models. The project is mandatory and is a condition for access to the final exam. This instrument addresses (CLO: 1, 2, 3, 4, 5, 6, 7). Activity and Quizzes - Activity during lectures and exercises, together with periodic quizzes, represent formative assessment instruments. Students are assessed for active participation, the ability to contribute to academic discussions, and the competence in solving research problems presented during the course. This instrument helps monitor the continuous progress of students and contributes to the achievement of all expected course outcomes. This instrument addresses (CLO: 1, 2, 3, 4, 5, 6, 7).
Course Resources	**Resources** — **Number** Classroom (e.g) — 1 IT Lab (e.g) — 1 Moodle — 1 Stata/SPSS — 1 Miro/Slido — 1
ECTS Workload	**Activity** — **Total workload** Lectures — 24 Seminars — 12 Exercise — 24 Simulations and Application — 12

	Self-learning 75 Exams 3
Literature/References	**Primary Literature** 1. Research Methods: A Practical Guide for the Social Sciences, Bob Matthews dhe Liz Ross, 2010. ISBN: 978-1405858502. 1. Research Methodology: Methods and Techniques, Chandra Radhakrishnan Kothari, 2019. ISBN: 978-9386649225. 2. Research Methods for Business: A Skill-Building Approach, Uma Sekaran dhe Roger Bougie, 2017. ISBN: 978-1119165552. **3.** Material prepared by the lecturer for the lecture of this course, published on Moodle. **Secondary Literature** 4. Basic Econometrics, Damodar Narain Gujarati, 2012. ISBN: 978-0071333450. 5. Research Methods for Business Students, Mark Saunders, Philip Lewis dh Thornhill, 2009. ISBN: 978-0273716860.
Ethical Standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

Subject	**FINANCIAL REGULATIONS AND COMPLIANCE**

	Type	Semester	ECTS	Code
	OBLIGATORY (O)	1	6	10FRC904
Aims and Objectives	The course Financial Regulation and Compliance provides an in-depth and critical analysis of the legal, regulatory, and institutional framework governing the traditional financial system and the modern FinTech ecosystem. In the context of the digital transformation of financial services, where technologies such as blockchain, artificial intelligence, and big data are reshaping international markets, financial regulation plays a crucial role in ensuring financial stability, consumer protection, market integrity, and data security. The course also integrates the ethical dimension of financial innovation, addressing challenges such as "black box decision-making" in credit algorithms, algorithmic bias, transparency, and corporate accountability. In this context, it emphasizes balancing technological innovation with the need to protect the public interest. Course objectives: • Understand the role and function of financial regulation in ensuring financial stability, consumer protection, and market integrity in the digital era. • Expand knowledge of national, European, and international regulatory frameworks, including the roles of institutions such as the European Central Bank and European Banking Authority in market supervision. • Assess the impact of financial legislation on the development of FinTech innovation, balancing stability requirements with the need for innovation and competition. • Develop practical skills for implementing compliance standards, including AML/KYC requirements and data protection under the General Data Protection Regulation (GDPR). • Identify and manage regulatory, operational, and reputational risks in digital financial organizations.			
Learning Outcomes (CLO)	Upon successful completion of this course, students will be able to: 1. Analyze national, European, and international financial regulatory architectures, explaining the role of supervisory institutions such as the European Central Bank and the European Banking Authority. (PLO1, PLO5) 2. Evaluate the impact of financial legislation and regulatory policies on financial stability, consumer protection, and the development of FinTech innovation. (PLO5, PLO8) 3. Apply compliance standards, including AML/KYC requirements and data protection obligations under the General Data Protection Regulation, within digital financial institutions. (PLO5, PLO7) 4. Critically assess regulatory frameworks governing Open Banking, payment institutions, electronic money institutions (EMIs), and crypto-assets under the Markets in Crypto-Assets Regulation. (PLO5, PLO8, PLO2) 5. Identify and manage regulatory, operational, and reputational risks in FinTech organizations by proposing effective governance and internal control mechanisms. (PLO7, PLO8)			

	6. Evaluate the legal and ethical implications of AI, algorithmic credit scoring, and blockchain technologies in finance, including challenges related to "black-box decision-making." (PLO1, PLO8) 7. Design an integrated compliance and risk management framework for a financial institution or FinTech startup, demonstrating advanced analytical, critical thinking, and practical skills. (PLO1, PLO2)
Content	**Weekly Plan** — **Week** Introduction to financial regulation - Objectives, principles, and regulatory theories — 1 Global architecture of financial supervision. — 2 International banking regulation and standards. — 3 Open Banking - Transforming the payments market in the EU. — 4 Regulation of payment institutions and EMIs. — 5 GDPR and data protection in FinTech. — 6 Blockchain and crypto-asset regulation (MiCA). — 7 Consumer protection in digital financial services. — 8 Ethics, AI, and "black box decision-making" in finance. — 9 Regulatory risk management and governance in FinTech. — 10 RegTech and SupTech - Technology in regulatory compliance and supervisio — 11 Cybersecurity regulation and operational resilience in digital finance (DORA framework) — 12 AI, automation, and "black-box decision-making" in finance — 13 Project presentations and final discussions — 14 Final exam. — 15
	Activities — **Weight (%)** Interactive lectures — 30% Structured discussions on current legislation — 20%

Teaching/Learning Methods	Compliance process simulations	20%
	Case studies	10%
	Individual research and presentations	10%
	Problem-based learning	10%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	30%
	Case Studies	20%
	Group Projects	20%
	Final Exam	30%
Assessment Description	Attendance and Class Activity (30%) - Students are assessed based on active participation in discussions, analytical exercises, and engagement with weekly regulatory topics. Emphasis is placed on critical thinking and the ability to connect theory with practical regulatory developments. *(*Addresses CLO1, CLO2, CLO5) Case Studies (20%) - Students analyze practical regulatory scenarios related to AML/KYC, GDPR, Open Banking, MiCA, and consumer protection. Assessment focuses on regulatory accuracy, risk identification, and practical compliance solutions. *(*Addresses CLO2, CLO3, CLO4, CLO5) Group Project (20%) - Students design an integrated compliance and risk management framework for a FinTech institution, including governance, AML/KYC, GDPR, and regulatory mapping. The project evaluates analytical depth and practical implementation skills. *(*Addresses CLO3, CLO5, CLO6, CLO7) Final Exam (30%) - The final exam assesses comprehensive understanding of financial regulatory frameworks, supervisory institutions, digital finance regulation, and risk governance. Students are evaluated on analytical reasoning and applied regulatory knowledge. *(*Addresses CLO1, CLO2, CLO4, CLO5, CLO 6)	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1
	Windows 11, MS Office 2021	1

	LCD Projector	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	30
	Seminars	30
	Self-learning	87
	Consultations	3
Literature/References	**Primary literature** 1. Coyle, B. (2021). Financial Regulation and Compliance. Oxford University Press. 2. Arner, D., Barberis, J., Buckley, R. (2020). FinTech, RegTech and the Reconceptualization of Financial Regulation. Cambridge University Press. 3. Madir, J. (2024). FinTech: Law and Regulation. 4. Dill, A. (2021). Anti-Money Laundering Regulation and Compliance. Edward Elgar Publishing. **Secondary literature** 5. Arner, D., Barberis, J., Buckley, R. - Articles on FinTech & RegTech 6. Literature on AML/CFT and risk management 7. Official European and international regulatory documents 8. Scientific articles from Journal of Financial Regulation, European Business Organization Law Review	
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.	

<table>
<tr><td>Subject</td><td colspan="4">DATA ANALYTICS AND ARTIFICIAL INTELEGENCE IN FINANCE</td></tr>
<tr><td></td><td>Type</td><td>Semester</td><td>ECTS</td><td>Code</td></tr>
<tr><td></td><td>OBLIGATORY (O)</td><td>2</td><td>6</td><td>10DAAIF926</td></tr>
<tr><td>Aims and Objectives</td><td colspan="4">The course covers the application of advanced data analysis and artificial intelligence methods in the financial sector. The course focuses on financial data analysis, risk management, credit scoring, fraud detection, portfolio performance analysis, and building dashboards for strategic decision-making.
The course integrates analytical theory, statistical modeling, and practical implementation through Python and Power BI. Students will work with real financial datasets and develop analytical models and interactive visualizations to support decision-making in banking and fintech.
Applications of Artificial Intelligence in finance are also covered, including machine learning for credit, anomaly detection, and the use of AI in automating financial processes, while also analyzing regulatory and ethical aspects.

Course objectives:
• Deepen your knowledge of data analysis in the financial sector.
• Develop skills in analyzing financial datasets with Python.
• Apply statistical and predictive models in risk and credit.
• Develop skills in professional financial visualization with Power BI.
• Analyze AI applications in finance and regulatory implications.</td></tr>
<tr><td>Learning Outcomes (CLO)</td><td colspan="4">Upon successful completion of this course, students will be able to:
1. Analyze financial datasets using structured analytical methodologies. (PLO4)
2. Evaluate financial risk and performance of analytical models. (PLO4, PLO8)
3. Develop predictive models for credit scoring, risk assessment or performance analysis. (PLO4, PLO1)
4. Interpret financial time series and risk indicators. (PLO4, PLO8)
5. Judge the ethical and regulatory implications of using analytics and AI in finance. (PLO5, PLO8)
6. Design interactive financial dashboards for strategic decision-making. (PLO4, PLO9)
7. Conduct applied analytical research using financial datasets and communicate evidence-based insights. (PLO4, PLO10)</td></tr>
<tr><td>Content</td><td colspan="3">Weekly Plan</td><td>Week</td></tr>
</table>

	Financial Data Ecosystem & Analytics Framework	1
	CRISP-DM Applied to Finance	2
	Financial Data Structures & Sources	3
	Python for Financial Data Analysis	4
	Financial Data Preparation & Cleaning	5
	Risk Metrics & Financial KPIs	6
	Mid-term exam 1	7
	Credit Scoring Models (Regression & Classification)	8
	Fraud Detection & Anomaly Detection	9
	Financial Time Series Analysis	10
	Introduction to Power BI for Financial Reporting	11
	Advanced Financial Dashboards & KPI Monitoring	12
	Artificial Intelligence in Finance I (Machine Learning in Banking & FinTech)	13
	Artificial Intelligence in Finance II & Regulatory/Ethical Aspects	14
	Project Presentation & Final Evaluation	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	30%
	Laboratory	30%
	Case studies	15%
	Problem-based learning	10%
	Group Work	15%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class Activity	10%
	Mid-Terms	30%

	Project	25%
	Final Exam	35%
Assessment Description	Participation and Activity - Assesses analytical reasoning, financial interpretation, and engagement in practical lab exercises. (Addresses CLO1, CLO2) Project - Students analyze a real-world financial data set (e.g., credit data set, transaction data set) using Python and design a financial dashboard in Power BI. (Addresses CLO3, CLO4, CLO6) Mid-Semester Exams - Practical and theoretical assessments that assess financial data analysis techniques. (Addresses CLO1–CLO4) Final Exam - Integrated theoretical and applied assessment covering all course competencies. (Addresses all CLOs)	
Course resources	**Resources**	**Number**
	Classroom	1
	IT Lab	1
	Moodle	1
	Windows 11, MS Office 2021	1
	LCD Projector	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	15
	Simulation and Group Work	15
	Self-learning	117
	Consultations	3
Literature/References	**Primary literature:** 1. Wes McKinney - Python for Data Analysis (3rd Edition, 2022) 2. Alberto Ferrari & Marco Russo - *Analyzing Data with Power BI and Power Pivot* **Secondary literature:** 3. Foster Provost & Tom Fawcett - *Data Science for Business* (2019 edition) 4. Materials prepared by the lecturer (Moodle).	

Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

Subject	**DIGITAL BANKING AND PAYMENT SYSTEMS**			
	Type	**Semester**	**ECTS**	**Code**
	OBLIGATORY (O)	2	6	10DBPS927
Aims and Objectives	This course fosters advanced, critical engagement with digital banking models and payment system infrastructures in the context of rapid fintech evolution. Students will synthesize knowledge of the transition from legacy banking architectures to digitally integrated financial platforms, emphasizing the strategic implications of real-time payments, open banking frameworks, APIs, and emerging technologies. Learners will deconstruct and critically assess the operational structures and strategic roles of modern payment rails, including RTGS systems, ACH networks, card schemes, and instant payment infrastructures. The course challenges students to examine and appraise the innovation drivers shaping the digital finance landscape, such as embedded finance, digital wallets, blockchain-based payments, and Central Bank Digital Currencies (CBDCs).			

	Through rigorous analysis and evaluation, students will interrogate regulatory frameworks, cybersecurity threats, fraud risk management, and compliance complexities in digital financial services. Strategic innovation is emphasized, requiring students to design and justify AI-driven analytics and data-based decision-making processes within digital banking. By integrating technological, regulatory, and risk management perspectives, students will be empowered to analyze, evaluate, and create robust digital banking and payment solutions that align with contemporary innovation management principles and uphold financial system stability. Course objectives • To analyze digital banking architectures and payment infrastructures within modern financial ecosystems • To evaluate the performance and operational mechanisms of contemporary payment systems • To assess regulatory and compliance frameworks governing digital financial services • To design innovation-driven digital banking and payment solutions • To formulate risk mitigation approaches addressing cybersecurity and operational threats in digital payment ecosystems
Learning Outcomes (CLO)	Upon successful completion of this course, students will be able to: 1. Critically analyze and synthesize the operational structures and interdependencies of contemporary digital banking systems and payment networks, drawing on advanced theoretical frameworks. (PLO1, PLO3) 2. Systematically evaluate and compare traditional and emerging payment systems, including instant payments, card networks, and blockchain-based mechanisms, using advanced evaluation criteria. (PLO1, PLO2) 3. Evaluate regulatory frameworks and compliance requirements for digital banking and payment services at a strategic level. (PLO5, PLO8) 4. Design and formulate innovative digital banking or payment solutions aligned with current and emerging fintech trends, substantiating choices with scholarly research. (PLO1, PLO3) 5. Critically assess and propose mitigation strategies for security vulnerabilities and fraud risks in digital banking environments. (PLO7, PLO8)

	6. Develop and justify strategic responses to fintech-driven disruptions in banking and payment systems, integrating multidisciplinary perspectives. (PLO1, PLO3) 7. Synthesize and critically evaluate the transformative impact of emerging infrastructures, such as CBDCs and open banking ecosystems, on future financial systems, supported by in-depth research. (PLO1, PLO2)
Content	**Weekly Plan** — **Week** Introduction to Digital Banking and Payment Systems — 1 Theoretical Foundations of Digital Banking — 2 Structure and Operations of Modern Payment Networks — 3 Instant Payments and Real-Time Settlement Systems — 4 Card Networks-Architecture and Processes — 5 Blockchain, Cryptocurrencies, and Distributed Ledgers — 6 Regulatory Frameworks in Digital Banking — 7 Compliance and Risk Management in Payment Systems — 8 Midterm Test — 9 Digital Identity and Authentication in Finance — 10 Fintech Innovations and Disruptive Technologies — 11 Emerging Infrastructure - CBDCs and Open Banking — 12 Strategic Management in Digital Banking — 13 Final Test — 14 Course Closure, Project Presentations, and Reflections — 15
	Activities — **Weight (%)** Interactive Lectures: Delivery of advanced theories and facilitation of critical questioning to build foundational and analytical skills. — 20%

Teaching/Learning Methods	Case Studies and Real-World Scenarios: Analysis and evaluation of practical examples in digital banking and fintech to develop problem-solving and evaluative skills.	20%
	Seminars and Student-Led Discussions: Student presentations, debates, and collaborative exploration to encourage synthesis, reflection, and higher-order thinking.	15%
	Problem-Based Learning: Group-based investigation and solution of complex, real-world problems, emphasizing innovation and creation.	15%
	Research Projects and Presentations: Independent or group research focused on synthesis and innovative solutions, culminating in formal presentations.	20%
	Simulations, Role-Playing, and Peer Learning: Experiential exercises, peer teaching, and collaborative tasks to apply theory, foster teamwork, and deepen practical understanding.	7%
	Reflective Journals and Assessments: Regular reflective writing and structured assessments (quizzes, midterm, and final exam) aimed at fostering critical reflection and monitoring students' progress.	3%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	1. Attendance and Class Activity: Participation, engagement in discussions, and contribution to class activities.	20%
	2. Test 1&2: Written assessment focusing on analysis, application, and evaluation of course content.	50%
	4. Group Projects: Collaborative assignments such as case studies, problem-based projects, or research presentations, emphasizing teamwork, synthesis, and creation.	15%
	5. Individual Assignments: Written case analyses, reflective journals, or term papers assessing critical thinking, analytical, and evaluative skills	15%
Assessment Description	Attendance and Class Activity - instrument that evaluates the analytical engagement and active participation of students in discussions related to digital banking models and payment system infrastructures. During lectures, students will be encouraged to interpret concepts, critically evaluate digital financial case examples, and contribute to discussions on regulatory and technological developments in digital finance. (Addresses CLO1, CLO3)	

	Group Projects - applied throughout the semester and accumulates 15% of the overall assessment. Students will work collaboratively to synthesize course knowledge and design innovation-driven digital banking or payment solutions addressing real-world fintech challenges. (Addresses CLO4, CLO6) Individual Assignment - applied throughout the semester and accumulates 15% of the overall assessment. Students will conduct analytical evaluations of digital banking or payment system cases, demonstrating their ability to assess operational mechanisms, risks, and compliance implications. (Addresses CLO2, CLO5) Test 1 & Test 2 - Students will be subject to two written evaluations during the semester. The first assessment is conducted in week 7, while the second is conducted in week 14. These assessments evaluate students' ability to analyze digital banking architectures, apply conceptual knowledge to payment system scenarios, and evaluate regulatory and technological frameworks influencing digital financial services. (Addresses CLO1, CLO2, CLO3)
Course resources	**Resources** — **Number** Classroom — 1 IT Lab — 1 Moodle Platform — 1 Financial Databases / Digital Payment Case Materials — 1 FinTech Simulation Tools 1 — 1 LCD Projector — 1
ECTS Workload	**Activity** — **Total workload** Lectures — 30 Seminars (analytical discussions) — 8 IT Lab (application & system analysis) — 10 Practice in industry — 10 Self-learning (research & design work) — 89 Consultations — 3
Literature/References	**Primary literature:** 5. *FinTech: Finance, Technology and Regulation*, Douglas W. Arner, Janos Barberis, Ross P. Buckley. Cambridge University Press, 2023. ISBN: 9781108831871. *2. The PAYTECH Book: The Payment Technology Handbook for Investors, Entrepreneurs and FinTech Visionaries*, Susanne Chishti, Janos Barberis. Wiley, 2020. ISBN: 9781119551911.

	3. *Handbook of Blockchain, Digital Finance, and Inclusion: Volume 1: Cryptocurrency, FinTech, InsurTech, and Regulation*, David Lee Kuo Chuen & Robert Deng (Editors). Academic Press, 2018. ISBN: 9780128122997 **Secondary literature:** 1. *Zetzsche, D. A., Buckley, R. P., Arner, D. W., & Barberis, J. N. (2020). "Decentralized Finance (DeFi): Transforming Financial Systems." Journal of Financial Regulation, 6(2), 172–203.* 2. *Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). "On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services." Journal of Management Information Systems, 35(1), 220–265.* 3. *Basel Committee on Banking Supervision. (2023). Digitalisation of Finance and Banking: Implications for Supervision and Regulation* 4. *McKinsey & Company. Global Payments Report (Annual).* 5. *World Bank. Digital Financial Services: Challenges and Opportunities.* 6. *Bank for International Settlements (BIS). Innovation in Payments and Settlement (Recent Reports).* 7. *Lectures materials* 8. *Central bank of Kosovo annual report*
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

<table>
<tr><td>Subject</td><td>FINTECH STARTUPS AND VENTURE CAPITAL
<table><tr><th>Type</th><th>Semester</th><th>ECTS</th><th>Code</th></tr><tr><td>OBLIGATORY (O)</td><td>2</td><td>6</td><td>10FSVC928</td></tr></table></td></tr>
<tr><td>Aims and Objectives</td><td>Venture Capital Analysts play a vital role in connecting with startups, identifying investment opportunities, and delivering value. Fintech Startups and Venture Capital course equips participants with advanced knowledge and skills for this field. This course aims to develop advanced analytical, strategic, and decision-making competencies in the areas of fintech entrepreneurship and venture capital, to equip participants with the knowledge, analytical skills, and practical experience required to work as Venture Capital Analysts and to develop, evaluate, and support high-potential startups, particularly within the financial services and fintech sectors. The course prepares students to identify investment opportunities, conduct due diligence, understand venture capital fund dynamics, and build viable new ventures through applied, team-based learning.

Objectives:

• Critically Analyze Venture Capital Structures
• Conduct Market & Industry Analysis
• Evaluate and Perform Due Diligence on Startups
• Design and Develop Fintech Ventures addressing real market gaps
• Integrate Multidisciplinary Perspectives
• Strengthening Professional and Communication Skills</td></tr>
<tr><td>Learning Outcomes (CLO)</td><td>Upon successful completion of this course, students will be able to:

1. Explain and analyze the structure and functioning of venture capital funds, including the roles of General and Limited Partners. (PLO3, PLO9)
2. Analyze fintech market trends, technological developments, and regulatory factors influencing financial innovation. (PLO3, PLO4)
3. Apply appropriate tools to evaluate startup business models, financial projections, and growth potential. (PLO4, PLO6)
4. Conduct structured due diligence to assess risks and opportunities in early-stage ventures. (PLO8)
5. Develop a feasible fintech venture concept supported by a clear value proposition and basic financial planning. (PLO6, PLO9)
6. Present and justify investment or venture decisions using logical arguments and relevant data. (PLO4, PLO9)</td></tr>
<tr><td>Content</td><td>Weekly Plan Week</td></tr>
</table>

	Core FinTech Fundamentals	1
	The Fintech Ecosystem	2
	Startup Management & Entrepreneurship.	3
	Venture Capital Fundamentals	4
	Startup Business Models in Fintech	5
	Market & Competitive Analysis	6
	Due Diligence I: Commercial & Strategic - Midterm Progress Submission	7
	Due Diligence II: Financial & Legal	8
	Venture Capital Valuation & Deal Structuring	9
	Building a Fintech Venture	10
	Financial Planning & Funding Strategy	11
	Scaling & Growth Challenges in Fintech	12
	Venture Pitch Presentations	13
	Investment Committee Simulation & Course Wrap-Up	14
	Final Test	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	35%
	Seminars	15%
	Laboratory	5%
	Case studies	15%
	Role play	10%
	Problem-based learning	20%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	10%
	Midterm Project Submission	20%

	Team Business Plan & Financial Model	30%
	Final Exam	20%
	Pitch Presentation	20%
Assessment Description	Attendance and class activity - instrument which evaluates the dedication and engagement of students in the topics covered during lectures and exercises. During the lectures, students will be encouraged to demonstrate through their activities the skills acquired from Fintech Ventures tools to solve various problems. This evaluation instrument will include all expected results within the course. (CLO 1-6) The Midterm Project Submission - is a team-based progress report that presents the initial development of the proposed fintech venture. It includes the problem definition, market analysis, target customer segment, competitive positioning, and preliminary business model. This submission allows students to receive formative feedback on the strategic direction and feasibility of their venture before moving into financial planning and investment evaluation. (CLO 2-4) Team Business Plan & Financial Model - The Team Business Plan & Financial Model is a comprehensive written report (Word Format) outlining the full fintech venture concept. It includes the value proposition, market opportunity, competitive analysis, operational strategy, regulatory considerations, and a 3–5-year financial forecast. The financial model should demonstrate revenue logic, cost structure, funding needs, and projected growth, reflecting both entrepreneurial viability and investment attractiveness. (CLO 3-5) The Pitch Presentation - The teams present their fintech venture to a simulated venture capital panel. Students must clearly communicate the problem, solution, market opportunities, business model, financial projections, and funding requirements. The presentation assesses clarity, strategic thinking, persuasiveness, and the ability to respond effectively to critical questions. Final exam - Students will be subject to one evaluation, the final exam. The test will take place in the end of the course; it contains 10-15 questions to evaluate the theoretical part of the subject and the duration is from 45 minutes to 60 minutes.	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1
	Windows 11, MS Office 2021	1

	LCD Projector	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	30
	Seminars & discussions	15
	Case studies & simulations	15
	Team project work (business plan, memo, pitch)	40
	Self-learning	30
	Final test preparation	20
Literature/References	**Primary literature:** 1. "The Business of Venture Capital: Insights from Leading Practitioners on the Art of Raising a Fund, Deal Structuring, Value Creation, and Exit Strategies" Mahendra Ramsinghani, 4th Edition, 2021 2. "Venture Deals: Be Smarter Than Your Lawyer and Venture Capitalist" Brad Feld & Jason Mendelson, 5th Edition, 2021 **Secondary literature:** 3. FinTech Startups: Driving Innovation in Financial Services Kindle Edition, Alfonso Cahero Tatto, 2025 4. The Role of Venture Capital in Fintech Startup Growth: A Comparative Study of China and the U.S. Markets and Cultures, Xiaowen Guo, Frontiers in Business Economics and Management 17(3):386-392, December 2024 *5.* Fintech and Start-ups: A Systematic Literature Review *Jhon Wilder Sánchez-Obando et.al Apuntes del Cenes, 42 (76). Pags. 173 - 198. https://doi.org/10.19053/01203053.v42.n76.2023.15964, 2023*	
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies.	

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Subject	**CYBERSECURITY IN FINANCIAL SERVICES**			
	Type	**Semester**	**ECTS**	**Code**
	OBLIGATORY (O)	2	6	10CFS929
Aims and Objectives	Cybersecurity in Financial Services is a specialized course designed to equip graduate students with advanced knowledge and practical competencies necessary to secure modern digital financial ecosystems. The course examines cybersecurity threats, vulnerabilities, and risk management strategies specific to financial institutions, including banks, fintech startups, payment processors, blockchain platforms, and digital financial infrastructures. The course emphasizes the protection of financial data, digital assets, and transaction systems against cyber threats such as fraud, ransomware, insider threats, advanced persistent threats (APTs), and attacks targeting digital banking platforms, blockchain systems, and payment networks. Students will analyze cybersecurity architectures, regulatory frameworks (including GDPR, PCI DSS, PSD2, NIS2, and DORA), and risk management strategies essential for maintaining trust, operational resilience, and regulatory compliance in financial services. The course integrates technical, strategic, regulatory, and governance perspectives. Students will explore secure system design, threat modeling, identity and access management, cryptographic protection of financial transactions, incident response, and cyber resilience strategies. Special emphasis is placed on emerging risks associated with AI in finance, digital assets, open banking, and decentralized finance (DeFi). Course objectives: • Understand cybersecurity principles and threat landscapes specific to financial services. • Analyze risks affecting digital financial infrastructures and fintech platforms. • Evaluate cybersecurity controls, standards, and regulatory frameworks applicable to financial institutions. • Design cybersecurity architectures and risk mitigation strategies for financial systems.			

	• Develop incident response and cyber resilience strategies aligned with financial risk management.
Learning Outcomes (CLO)	Upon successful completion of this course, students will be able to: 1. Analyze cybersecurity threats, attack vectors, and vulnerabilities affecting financial systems and fintech infrastructures. (PLO7, PLO8) 2. Evaluate cybersecurity frameworks, standards, and regulatory requirements relevant to financial services (e.g., PCI DSS, PSD2, GDPR, NIS2, DORA). (PLO5, PLO7) 3. Design secure architectures for financial applications, including digital banking systems, payment systems, and blockchain platforms. (PLO1, PLO2) 4. Assess cybersecurity risks and develop risk management strategies to protect financial data and digital assets. (PLO7, PLO8) 5. Formulate incident response and cyber resilience strategies for financial institutions. (PLO7, PLO8) 6. Evaluate emerging cybersecurity challenges related to fintech innovations, AI-driven finance, and decentralized financial systems. (PLO1, PLO2) 7. Develop cybersecurity governance and compliance strategies aligned with financial regulations and organizational risk management. (PLO5, PLO8)
Content	**Weekly Plan** — **Week** Introduction to Cybersecurity in Financial Services — 1 Cyber Threat Landscape in Financial Services — 2 Security Architecture of Financial Systems — 3 Cryptography in Financial Systems — 4 Identity and Access Management (IAM) in Financial Systems — 5 Blockchain Security and Cryptocurrency Risks — 6 7 Risk Management in Financial Services. — 8 Cybersecurity Regulations and Compliance — 9 Secure Software Development for Fintech — 10 Incident Response and Cyber Resilience — 11 AI, Fintech, and Emerging Cybersecurity Threats — 12 Case Studies in Financial Cybersecurity — 13

	Cybersecurity Governance in Financial Institutions	14
	Final Exam and Course Recapitulation	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	30%
	Seminars	15%
	Laboratory	15%
	Case studies	15%
	Role play	15%
	Problem-based learning	10%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	10%
	Group Projects	20%
	Individual Assignments	20%
	Final Exam	50%
Assessment Description	Attendance and Participation (10%) - Evaluates student engagement, discussion participation, and understanding of cybersecurity concepts. (Addresses: CLO1, CLO2) Group Project (20%) - Students conduct a cybersecurity risk assessment of a financial system and propose mitigation strategies. (Addresses: CLO3, CLO4, CLO7) Individual Assignment (20%) - Students analyze cybersecurity risks or incidents affecting financial institutions. (Addresses: CLO1, CLO5, CLO6) Final Exam (50%) - Comprehensive assessment covering cybersecurity architecture, risk management, and governance. (Addresses: All CLOs)	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1
	Windows 11, MS Office 2021	1
	LCD Projector	1

ECTS Workload	**Activity**	**Total workload**
	Lectures	30
	Seminars	15
	IT Lab	15
	Self-learning	87
	Consultations	3
Literature/References	**Primary Literature (last 10 years)** 1. Stallings, W. & Brown, L. (2018). Computer Security: Principles and Practice. Pearson. 2. Chishti, S. & Barberis, J. (2019). The FinTech Book. Wiley. 3. Singh, J. & Lin, S. (2021). Cybersecurity in Finance: Getting the Basics Right. Palgrave. **Secondary Literature** 4. NIST Cybersecurity Framework (latest version) 5. ENISA Financial Cybersecurity Reports 6. PCI DSS Standard Documentation 7. European Central Bank Cybersecurity Guidelines 8. Customized materials prepared by lecturer	
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website	

<table>
<tr><td>Subject</td><td>FINANCIAL INNOVATION STRATEGY
<table><tr><th>Type</th><th>Semester</th><th>ECTS</th><th>Code</th></tr><tr><td>OBLIGATORY (O)</td><td>3</td><td>6</td><td>10FIS951</td></tr></table></td></tr>
<tr><td>Aims and Objectives</td><td>This course provides an advanced understanding of financial innovation strategies in technology-driven financial environments. It explores how FinTech innovations, digital platforms, data analytics, and emerging technologies reshape business models, competitive dynamics, and strategic decision-making in financial institutions and FinTech firms. Students will analyze how innovation strategies are designed, implemented, and governed under conditions of uncertainty, regulation, and rapid technological change.
The course integrates strategic management theory with practical FinTech applications, focusing on digital banking, platform-based ecosystems, open finance, Blockchain-enabled services, and AI-driven financial products. Emphasis is placed on evaluating innovation trade-offs, managing digital risks, aligning innovation with regulatory frameworks, and fostering sustainable competitive advantage.
Through case studies, project-based learning, and applied analysis, students develop the ability to critically assess innovation strategies and design strategic solutions tailored to financial organizations. The course prepares students to operate as innovation leaders, strategists, or analysts capable of driving transformation in modern financial systems.

Course objectives:
Develop strategic thinking in financial innovation and FinTech ecosystems
Analyze innovation-driven business models and competitive strategies in financial services
Evaluate risks, regulations, and ethical challenges related to FinTech innovation
Design innovation strategies aligned with organizational and market dynamics
Enhance analytical and research-based decision-making skills in FinTech strategy</td></tr>
<tr><td>Learning Outcomes (CLO)</td><td>Upon successful completion of this course, students will be able to:
Analyze financial innovation ecosystems and digital business models in FinTech and banking. (PLO1, PLO3)
Evaluate strategic opportunities and risks associated with emerging financial technologies. (PLO3, PLO8)
Assess regulatory and compliance constraints affecting financial innovation strategies. (PLO5, PLO8)</td></tr>
</table>

	4. Design innovation strategies for technology-driven financial organizations. (PLO3, PLO9) 5. Interpret market and firm-level data to support strategic innovation decisions. (PLO3, PLO4) 6. Formulate evidence-based strategic recommendations through applied research and case analysis. (PLO4, PLO9)
Content	**Weekly Plan** — **Week** Financial Innovation: Concepts, Drivers, and Strategic Perspectives — 1 FinTech Ecosystems and Digital Business Models — 2 Platform Strategy, Open Banking, and Open Finance — 3 Blockchain, Digital Assets, and Strategic Implications — 4 Strategic Use of AI and Data Analytics in Financial Innovation — 5 Mid-term exam 1 — 6 Innovation Strategy in Digital Banking — 7 Managing Innovation Risks and Cybersecurity — 8 Regulation, Compliance, and Innovation Governance — 9 Innovation Strategy for FinTech Startups — 10 Corporate Innovation and Intrapreneurship in Finance — 11 Ethical Challenges and Sustainable Innovation — 12 Mid-term Exam 2 / Project Presentations — 13 Strategic Case Studies in Financial Innovation — 14 Course Recap and Final Exam — 15
Teaching/Learning Methods	**Activities** — **Weight (%)** Lectures — 40% Case studies — 25% Problem-based learning — 20% Project Work — 15%

Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	10%
	Group Projects	25%
	Individual Assignments	15%
	Final Exam	50%
Assessment Description	Attendance and Class Activity (10%) - Evaluates student engagement, participation in discussions, and analytical contribution during lectures and seminars. (Addresses CLO1, CLO2) Individual Assignment (15%) - Critical analysis of a financial innovation strategy using academic literature and market data. (Addresses CLO2, CLO5) Group Project (25%) - Applied strategic project analyzing or designing a FinTech innovation, including presentation and written report. (Addresses CLO3, CLO4, CLO6) Final Exam (50%) - Comprehensive assessment covering theoretical frameworks, case analysis, and strategic application. (Addresses all CLOs)	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1
	Windows 11, MS Office 2021	1
	LCD Projector	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	30
	Assignments & Projects	27
	Self-learning	90
	Consultations	3

Literature/References	**Primary literature:** 1. Iansiti, M. & Lakhani, K. R. (2020). Competing in the Age of AI: Strategy and Leadership When Algorithms and Networks Run the World. Harvard Business School Press. 2. Shrier, D. L. & Pentland, A. (eds.) (2022). *Global FinTech: Financial Innovation in the Connected World*. The MIT Press. 3. Buckley, R. P., Arner, D. W. & Zetzsche, D. A. (2023). *FinTech: Finance, Technology and Regulation.* Cambridge University Press. **Secondary literature:** 4. Rogers, D. L. (2016). The Digital Transformation Playbook: Rethink Your Business for the Digital Age. Columbia Business School Publishing. 5. Chishti, S., Craddock, T. & Courtneidge, R. (2020). *The PAYTECH Book: The Payment Technology Handbook for Investors, Entrepreneurs, and FinTech Visionaries*. John Wiley & Sons. 6. Customized material prepared by lecturer, available at Moodle 7. Video Lecturers in Moodle
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

<table>
<tr><td>Subject</td><td colspan="4">BUSINESS INTELLIGENCE AND CLOUD COMPUTING</td></tr>
<tr><td></td><td>Type</td><td>Semester</td><td>ECTS</td><td>Code</td></tr>
<tr><td></td><td>OBLIGATORY (O)</td><td>3</td><td>6</td><td>10BICC952</td></tr>
<tr><td>Aims and Objectives</td><td colspan="4">This course provides a managerial and technical foundation in Business Intelligence (BI) and Cloud Computing for modern, data-driven organizations, with special emphasis on FinTech and innovation-led decision-making. Students will learn how to collect, integrate, store, govern, and analyze organizational data using contemporary BI architectures (data warehouses, data lakes, and analytics pipelines), and how cloud platforms enable scalable, secure, and cost-effective analytics services. Through hands-on labs and case studies, students will design dimensional data models, implement ETL/ELT processes, build interactive dashboards, and deploy analytics workloads on cloud-native infrastructure (containers, serverless, managed databases). The course also covers data governance, security, privacy, and regulatory considerations relevant to digital finance. By the end of the course, students will be able to evaluate BI and cloud architecture options, justify technology choices, and deliver evidence-based insights that support innovation and strategic decisions.

Course objectives:
Develop an end-to-end view of BI and cloud analytics architectures and their role in organizational performance.
Apply sound data modeling and integration practices to build trustworthy analytical datasets.
Create meaningful visual analytics products (dashboards, KPIs, narratives) for decision-making.
Evaluate cloud deployment options and select services based on performance, cost, and compliance constraints.
Apply governance, security, and ethical principles to protect data and manage digital risks in analytics systems.</td></tr>
<tr><td>Learning Outcomes (CLO)</td><td colspan="4">Upon successful completion of this course, students will be able to:
Analyze BI architectures (data warehouse, lakehouse, semantic layer) and justify an appropriate design for a FinTech/innovation context. (PLO3, PLO4)
Design dimensional data models and implement ETL/ELT pipelines that transform raw data into analytics-ready datasets. (PLO4, PLO6)
Create dashboards and analytical reports that communicate insights using appropriate KPIs, visual encodings, and data storytelling principles. (PLO4, PLO3)
Evaluate cloud service models and deployment strategies (IaaS/PaaS/SaaS, containers, serverless) and select solutions based on scalability, reliability, and cost. (PLO6)
Assess and apply data governance, cybersecurity, and privacy controls for cloud-based analytics in regulated environments. (PLO5, PLO7)</td></tr>
</table>

	6. Conduct an applied analytics mini-research/project, interpret results critically, and defend evidence-based recommendations. (PLO3, PLO4)
Content	**Weekly Plan** — **Week** BI lifecycle; cloud computing fundamentals for analytics; FinTech & innovation-driven decision-making. — 1 Data sources and data quality; data profiling; principles of trustworthy data for analytics. — 2 Data warehousing vs. data lakes vs. lakehouse; analytical requirements; reference architectures. — 3 Dimensional modeling (star/snowflake); facts and dimensions; slowly changing dimensions; KPI definition. — 4 ETL/ELT pipelines; orchestration; data integration patterns; metadata and lineage. — 5 Analytical processing and semantic layers; OLAP concepts; performance considerations. — 6 Mid-term I — 7 Cloud service models (IaaS/PaaS/SaaS); deployment models; shared responsibility; cost fundamentals. — 8 Cloud storage and databases (object storage, managed SQL/NoSQL, data lake storage); backup and DR. — 9 Cloud-native analytics (managed warehouses, Spark/stream processing); serverless analytics patterns. — 10 Containers and Kubernetes for data/analytics workloads; CI/CD and Infrastructure as Code concepts. — 11 Mid-term II — 12 Applied FinTech analytics use cases: fraud detection, credit/risk analytics, personalization; model monitoring and drift; responsible AI considerations. — 13 Capstone project workshop: BI-on-Cloud solution architecture review, dashboard critique, data governance checklist; peer feedback and iteration planning. — 14 Consultations — 15
Teaching/Learning Methods	**Activities** — **Weight (%)** Lectures — 25% Seminars — 15% Laboratory — 30% Case studies — 15% Problem-based learning — 10%

	Other (Guest speaker / industry talk)	5%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and class activity	10%
	Individual assignments	10%
	Group project	25%
	Mid-term exams (I&II)	30%
	Final exam	25%
Assessment Description	Attendance and class activity (10%): Evaluates continuous engagement and contribution quality in discussions, case analyses, and lab tasks. (Addresses CLO3, CLO4, CLO5, CLO6.) Individual assignments (10%): short practical tasks and write-ups (e.g., data profiling, dimensional modelling exercise, ETL/ELT task, dashboard critique). (Addresses CLO2, CLO3, CLO5.) Group project (25%): team-based capstone BI-on-Cloud solution for a FinTech/innovation use case (architecture + data model + pipeline + dashboard + governance/security checklist). Includes written report and presentation/defense. (Addresses CLO1- CLO6.) Mid-term I (15%): assesses foundational BI concepts and applied analytics (data quality, core BI metrics/KPIs, basic dimensional modelling, interpretation of descriptive/diagnostic analytics). (Addresses CLO2, CLO3, CLO4.) Mid-term II (15%): assesses cloud-oriented BI architecture and engineering decisions (pipeline design, security/governance basics, cost/performance trade-offs, deployment considerations). (Addresses CLO1, CLO3, CLO5, CLO6.) Final exam (25%): integrative case-based exam combining conceptual questions and applied tasks (architecture evaluation, risk/compliance reasoning, interpretation of analytics outputs). (Addresses CLO1–CLO6.)	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1
	Windows 11, MS Office 2021	1
	LCD Projector	1
	Data management and analytics software/tools (as required by the course)	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	30

	Seminars	15
	IT Lab	15
	Industry-engaged practice	12
	Self-learning	75
	Consultations	3
Literature/References	**Primary literature:** 1. Sharda, R., Dursun, D., & Efraim, T. (2024). *Business intelligence, analytics, data science, and AI: A managerial perspective* (5th ed.). Pearson. 2. Erl, Th., & Monroy, E. (2023). *Cloud computing: Concepts, technology, security, and architecture* (2nd ed.). Pearson. 3. Kleppmann, M., & Riccomini, Ch. (2026). *Designing data-intensive applications* (2nd ed.). O'Reilly Media, Inc. **Secondary literature:** 4. Comer, D. (2021). *The cloud computing book: The future of computing explained* (1st ed.). Chapman and Hall/CRC. 5. Surianarayanan, Ch, & Chelliah, P. R. (2023). *Essentials of cloud computing: A holistic, cloud-native perspective* (2nd ed.). Springer. https://doi.org/10.1007/978-3-031-32044-6 6. Kingsley, M. S. (2024). *Cloud technologies and services: Theoretical concepts and practical applications* (1st ed.). Springer International Publishing. 7. Selected industry documentation (AWS/Azure/GCP) and curated academic articles provided by the lecturer.	
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.	

<table>
<tr><td>Subject</td><td>RISK MANAGEMENT IN TECH-DRIVEN FINANCE
<table><tr><th>Type</th><th>Semester</th><th>ECTS</th><th>Code</th></tr><tr><td>OBLIGATORY (O)</td><td>3</td><td>6</td><td>10RMTDF953</td></tr></table></td></tr>
<tr><td>Aims and Objectives</td><td>This course provides an advanced understanding of risk management in technology-driven financial systems. The course focuses on identifying, analyzing, and managing risks emerging from fintech innovations, including digital banking, artificial intelligence, blockchain technologies, and decentralized finance systems. Students will explore operational, financial, cybersecurity, regulatory, and ethical risks in modern digital financial environments. The course emphasizes practical risk management frameworks and real-world case studies, enabling students to evaluate risk exposure in fintech systems, design risk mitigation strategies, and implement effective digital risk governance models. Through lectures, case studies, and project-based learning, students will develop the competencies required to apply modern risk management techniques in digital financial institutions and fintech startups and to design resilient fintech solutions that support sustainable innovation and regulatory compliance.

Course objectives
Identify and analyze risks arising from fintech innovations, including digital banking, AI-based finance, blockchain, and decentralized finance.
Evaluate operational, financial, cybersecurity, regulatory, and ethical risks in technology-driven financial systems.
Apply practical risk management frameworks to assess risk exposure in fintech environments.
Design appropriate risk mitigation strategies and digital risk governance models for innovative financial institutions.
Apply modern risk management techniques to real-world fintech case studies and innovation-driven financial services.</td></tr>
<tr><td>Learning Outcomes (CLO)</td><td>Upon successful completion of this course, students will be able to:
Analyze the structure and sources of financial, operational, technological, and regulatory risks in technology-driven financial systems and fintech platforms. (PLO1, PLO8)
Evaluate risk management frameworks and regulatory compliance requirements applicable to digital financial services and fintech institutions. (PLO5, PLO8)
Analyze and interpret complex financial and technological risk data using analytical tools and digital risk indicators. (PLO4, PLO8)
Evaluate cybersecurity threats and data protection challenges in digital financial infrastructures and propose appropriate control mechanisms. (PLO7, PLO5)</td></tr>
</table>

	5. Design effective risk mitigation strategies for fintech services including digital banking, blockchain-based systems, and AI-driven financial applications. (PLO1, PLO8) 6. Formulate integrated risk governance frameworks for managing digital risks and ethical challenges in innovative financial environments. (PLO5, PLO8) 7. Develop and justify evidence-based risk management solutions for real-world fintech cases through independent research and critical evaluation. (PLO4, PLO8)
Content	**Weekly Plan** — **Week** Integrated Risk Management in Tech-Driven Finance: Digital financial infrastructures and fintech risk environment — 1 Risk Identification in Digital Financial Systems and Fintech Platforms. — 2 Quantitative Risk Measurement and Risk Analytics in Fintech — 3 Risk Management Frameworks in Fintech: Enterprise Risk Management (ERM) and digital risk governance — 4 Regulatory Risk and Compliance in Fintech: Digital regulations, compliance challenges and RegTech — 5 Cybersecurity and Data Protection Risk in Financial Services — 6 Mid-term exam 1 — 7 Risk Management in Blockchain, Digital Asset Systems and DeFi Systems — 8 Artificial Intelligence and Algorithmic Risk in Finance — 9 Risk Management in Digital Banking and Payment Systems — 10 Innovation Risk and Startup Risk in Fintech Ventures — 11 Stress Testing and Scenario Analysis in Digital Finance — 12 Risk Mitigation Strategies and Digital Risk Control Systems — 13 Fintech Risk Case Studies and Risk Framework Design — 14

	Mid-term exam 2	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	35 %
	Seminars	15 %
	Case studies	20 %
	Role play	5 %
	Problem-based learning	15 %
	Project-based learning	10 %
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	10 %
	Group Projects	25 %
	Individual Assignments	15 %
	Mid - term Exam 1	25%
	Mid - term Exam 2	25 %
Assessment Description	Attendance and Class Activity - Instrument which evaluates the dedication and engagement of students in the topics covered during lectures and seminars. During the lectures and case study discussions, students will be encouraged to demonstrate their understanding of fintech risk management concepts by participating in discussions, analyzing risk scenarios, and proposing risk mitigation solutions. This evaluation instrument measures students' ability to analyze and evaluate risks in technology-driven financial systems. (Addresses CLO1, CLO2 and CLO5) Group Projects - Applied throughout the semester and accumulates 25% of the overall assessment. Students will work in groups of 3- 4 members to analyze a fintech company or digital financial service and develop a comprehensive risk management framework. The project will include risk identification, risk analysis, and proposed mitigation strategies. The written report is expected to be approximately 2500- 3000 words and will be presented in class. (Addresses CLO3, CLO5 and CLO6) Individual Assignment – Applied throughout the semester and accumulates 15% of the overall assessment. Students will prepare an individual research paper (1500-2000 words) analyzing a selected topic related to risk management in technology-driven finance such as blockchain risk, AI risk, cybersecurity risk or regulatory risk. The assignment will evaluate students' analytical and critical thinking skills. (Addresses CLO1, CLO4 and CLO7)	

	Mid-Term Exams (Exam 1 and Exam 2) - Students will be subject to two written evaluations, Mid-Term Exam 1 and Mid-Term Exam 2. The first assessment will be conducted in week 7, while the second assessment will be conducted in week 15. The exams will evaluate students' knowledge of risk management in technology-driven finance, including risk identification, risk measurement, regulatory risk, cybersecurity risk, blockchain risk, artificial intelligence risk and risk mitigation strategies. The exams will include theoretical and analytical questions as well as case-based problem-solving tasks designed to evaluate students' understanding of digital financial risks. (Addresses all CLOs**)**
Course resources	**Resources** — **Number** Classroom (e.g) — 1 IT Lab (e.g) — 1 Moodle — 1 Statistical and Analytical Software (Excel, Python or similar) — 1 LCD Projector — 1
ECTS Workload	**Activity** — **Total workload** Lectures — 30 Seminars — 15 Self-learning — 100 Consultations — 5
Literature/References	**Primary literature** 1. Hull, John C. (2023). Risk Management and Financial Institutions (6th Edition). Wiley. 2. Nicoletti, Bernardo (2017). The Future of FinTech. Palgrave Macmillan. 3. Anagnostopoulos, Ioannis (2018). Fintech and RegTech. Palgrave Macmillan. 4. Bessis, Joel (2015). Risk Management in Banking. Wiley. 5. Kou, Gang & Xu, Yue (2021). Artificial Intelligence and FinTech. Springer **Secondary literature:** 6. Arner, Douglas, Barberis, Janos & Buckley, Ross (2019). 7. FinTech and RegTech: Impact on Regulators and Banks. 8. BIS (Bank for International Settlements) Reports on Fintech Risk and Digital Finance. 9.Academic articles and case studies provided by the lecturer (Moodle).

	10. Lecture materials and presentations prepared by the lecturer (Moodle).
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

<table>
<tr><td>Subject</td><td>INTERNSHIP
<table><tr><th>Type</th><th>Semester</th><th>ECTS</th><th>Code</th></tr><tr><td>OBLIGATORY (O)</td><td>3</td><td>6</td><td>10INT954</td></tr></table></td></tr>
<tr><td>Aims and Objectives</td><td>Internship is designed to provide Master-level students in FinTech and Innovation Management with the opportunity to apply advanced theoretical knowledge and analytical skills in a professional environment operating within financial technologies, digital finance, innovation management, or technology-driven enterprises.

Objectives:

• Enable students to apply FinTech, digital transformation, and innovation strategy concepts in real organizational settings.
• Strengthen analytical and strategic decision-making competences in financial and innovation ecosystems.
• Provide exposure to regulatory, technological, cybersecurity, and operational aspects of FinTech industries.
• Support professional networking and career development within the digital finance and innovation sectors.

At the end of the internship, students must submit a Internship Report (10 - 15 pages) and complete a final presentation.</td></tr>
<tr><td>Learning Outcomes (CLO)</td><td>After completing this internship, the student will be able to:

1. Apply advanced FinTech and innovation management theories in a professional work environment. (PLO1, PLO3)
2. Analyze digital financial processes, innovation strategies, and technology-driven business models. (PLO3, PLO4)
3. Evaluate regulatory, compliance, and risk management practices within FinTech organizations. (PLO5)
4. Contribute to real-world projects involving digital transformation, financial technologies, or innovation initiatives. (PLO1, PLO6)
5. Demonstrate professional communication and collaboration skills in multidisciplinary teams. (PLO9)
6. Reflect critically on organizational practices and propose improvement strategies. (PLO3, PLO9)
7. Prepare and present a structured analytical internship report at Master level. (PLO10)</td></tr>
</table>

<table>
<tr><td>Content</td><td>The Internship course is structured in three integrated phases throughout the semester, ensuring systematic academic supervision and professional engagement within the FinTech and Innovation Management field.

1. Orientation and Introduction, students participate in an introductory session with the faculty supervisor where the objectives, expectations, structure, and assessment criteria of the internship are explained in detail. The faculty supervisor evaluates and approves the proposed internship placement to ensure that the host organization operates within relevant areas such as financial technologies, digital finance, innovation management, banking, regulatory institutions, technology-driven enterprises, or startup ecosystems. Administrative procedures are clarified, and students define their internship objectives in alignment with the learning outcomes of the Master program. This phase also includes familiarization with the host organization, its business model, digital infrastructure, innovation processes, and operational framework.

2. Supervision and Professional Engagement, represents the core of the internship experience. Students are assigned a faculty supervisor at UBT and an industry supervisor within the host organization. During this period, students actively engage in professional tasks that may include participation in digital transformation initiatives, financial technology operations, data analysis, regulatory compliance processes, product development, innovation strategy implementation, or other activities relevant to FinTech and Innovation Management. Continuous communication with the faculty supervisor ensures academic monitoring of progress, reflection on learning, and alignment between theoretical knowledge and professional practice. This phase emphasizes analytical thinking, professional conduct, teamwork, and strategic understanding of organizational processes.

3. Reporting and Presentation, requires students to prepare a comprehensive internship report demonstrating critical reflection and analytical depth at Master level. The report includes a detailed description of the host organization, the tasks performed, the competencies developed, and the connection between academic knowledge and real-world application. Students are expected to evaluate challenges encountered during the internship and, where appropriate, propose strategic or operational improvements. The course concludes with a formal presentation in which students summarize their professional experience, key insights, and strategic observations before the faculty supervisor.</td></tr>
<tr><td>Teaching/Learning Methods</td><td><table><tr><th>Activities</th><th>Weight (%)</th></tr><tr><td>Practice in the industry</td><td>60%</td></tr><tr><td>Independent work</td><td>40%</td></tr></table></td></tr>
<tr><td>Assessment Methods</td><td><table><tr><th>Assessment Activity</th><th>Weight (%)</th></tr><tr><td>Internship Performance in the Industry</td><td>40%</td></tr></table></td></tr>
</table>

	Written Internship Report	40%
	Final Presentation	20%
Assessment Description	Internship Performance in the Industry (40%) - The student will complete the internship in an organization operating within the fields of FinTech, digital finance, banking, financial innovation, regulatory institutions, consulting, or technology-driven enterprises. The internship enables students to apply advanced theoretical knowledge to real-world business and innovation challenges. Throughout the internship period, the student is supervised by an Industry Supervisor who evaluates professional conduct, level of engagement, responsibilities undertaken, analytical contribution, and overall performance. At the end of the internship, the host organization issues an official certificate confirming the duration of the internship, tasks performed, and performance evaluation. This certificate is submitted to the Faculty Supervisor and constitutes the basis for grading this component. (Covers CLO1-6) Written Internship Report (40%) - After completing the internship, the student must submit a structured written report in Word format, consisting of 10–15 pages. The report must include a detailed description of the host organization, the department of placement, tasks and responsibilities performed, analytical reflection on the experience, integration of theoretical knowledge with practical application, identification of challenges encountered, and, where appropriate, strategic recommendations. The report must demonstrate Master-level analytical depth, critical thinking, and professional academic writing standards. It is evaluated by the Faculty Supervisor. (Covers CLO1, CLO2, CLO3, CLO6, CLO7) Final Presentation (20%) - The student must prepare a PowerPoint presentation of up to 10-12 slides summarizing the internship experience. The presentation should clearly explain the organization's profile, responsibilities undertaken, competencies developed, key insights gained, and professional conclusions. The presentation is evaluated by the Faculty Supervisor based on clarity, structure, analytical insight, and professional communication skills. (Covers CLO2, CLO5, CLO6, CLO7) Supervisory and Evaluation Structure - Each student is assigned two supervisors: one Faculty Supervisor from the FinTech and Innovation Management program and one Industry Supervisor from the host organization. The Industry Supervisor evaluates professional performance, while the Faculty Supervisor evaluates the written report and presentation and determines the final grade based on all assessment components.	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1

	LCD Projector	1
ECTS Workload	**Activity**	**Total workload**
	Introductory lecture and administrative briefing	4
	Internship practice in industry	90
	Consultations with Faculty Supervisor	6
	Preparation of internship report (research, analysis, writing)	40
	Preparation of final presentation	10
Literature/References	Materials collected by undertaking practical work in the Institution.	
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.	

<table>
<tr><td>Subject</td><td>APPLIED PROJECT
<table><tr><th>Type</th><th>Semester</th><th>ECTS</th><th>Code</th></tr><tr><td>OBLIGATORY (O)</td><td>3</td><td>6</td><td>10AP955</td></tr></table></td></tr>
<tr><td>Aims and Objectives</td><td>The aim of applied project is to provide students with the opportunity to apply advanced knowledge and analytical skills acquired during the FinTech and Innovation Management MSc program in solving real-world business and technological challenges. The course focuses on the development and implementation of applied projects related to financial technologies, digital innovation, data-driven financial services, and technology-based business models.

Through this course, students will design and implement an applied project that integrates theoretical knowledge with practical industry needs, encouraging critical thinking, innovation, and problem-solving skills within the fintech ecosystem.

Objectives:

• Apply advanced concepts of financial technologies and innovation management to practical business challenges.
• Analyze fintech business models, digital financial services, and innovation strategies in technology-driven organizations.
• Design and develop applied project solutions addressing real-world problems in fintech or digital finance.
• Integrate data analytics, digital technologies, and innovation frameworks in project development.
• Evaluate regulatory, ethical, and risk considerations related to fintech innovations.
• Develop teamwork, communication, and project management skills in multidisciplinary environments.
• Prepare a professional project report and presentation demonstrating analytical and practical competencies at Master level.</td></tr>
<tr><td>Learning Outcomes</td><td>After completing this course, students will be able to:

1. Apply advanced FinTech concepts and innovation management frameworks to real-world business problems. (PLO3)
2. Analyze digital financial systems, fintech business models, and innovation ecosystems using analytical tools. (PLO3, PLO4)
3. Evaluate regulatory, ethical, and risk considerations related to fintech innovation and digital financial services. (PLO5)
4. Design and develop applied solutions or project proposals addressing practical fintech challenges. (PLO3, PLO6)
5. Work collaboratively in multidisciplinary teams to develop and implement applied fintech projects. (PLO9)
6. Integrate data analysis, digital technologies, and innovation strategies in project development. (PLO4, PLO6)</td></tr>
</table>

	7. Prepare and present a professional project report and presentation based on analytical and evidence-based findings. (PLO10)	
Content	**Weekly Plan**	**Week**
	Introduction to Applied Projects in FinTech and Innovation Management	1
	Project topic selection and project proposal development	2
	FinTech innovation ecosystems and industry trends	3
	Digital financial business models	4
	Problem definition and project design	5
	Data sources, financial analytics, and technology tools	6
	Agile project management and design thinking in fintech projects	7
	Regulatory and risk considerations in fintech innovation	8
	Project development workshop	9
	Financial feasibility and value creation analysis	10
	Project implementation and testing of solutions	11
	Industry insights / guest lecture / case analysis	12
	Group consultations and project development	13
	Project presentations	14
	Final project submission and discussion	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	20%
	Case studies	20%
	Workshops / project development	40%
	Group discussions and presentations	20%
Assessment Methods	**Assessment Activity**	**Weight (%)**

	Participation and project proposal	10 %
	Applied project (written report)	60 %
	Final project presentation	30 %
Assessment Description	Class Participation and Project Proposal - Through this assessment instrument, students will be evaluated based on their active participation in lectures, workshops, and discussions, as well as the preparation of a project proposal outlining the project idea, objectives, methodology, and expected outcomes. This component encourages students to demonstrate critical thinking and the ability to define and structure a practical fintech-related problem. (Addresses CLO1, CLO 2, CLO 4) Applied Project (Written Report) - Students are required to prepare a comprehensive applied project report addressing a real-world fintech or innovation management challenge. The report should include a clear problem definition, literature background, methodology, data or case analysis, proposed solutions, and practical recommendations. The project report should demonstrate analytical depth, integration of theoretical knowledge, and the application of fintech or innovation frameworks in practical scenarios. (Addresses CLO1, CLO2, CLO3, CLO4, CLO6, CLO7) Final Project Presentation - Students will present their applied project and defend their findings in front of the instructor and fellow students. The evaluation will focus on the clarity of presentation, analytical reasoning, practical relevance of the proposed solution, and the ability to respond to questions and feedback. (Addresses CLO5, CLO7)	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	Moodle	1
	LCD Projector	1
	Windows 11, MS Office 2021	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	24
	Consultations and discussions	12
	Project development	75
	Independent study	36
	Final presentation	3

Literature/References	**Primary Literature** 1. Gomber, P., Koch, J., & Siering, M. (2017). *Digital Finance and FinTech: Current Research and Future Research Directions.* 2. Lee, I., & Shin, Y. J. (2018). *Fintech: Ecosystem, business models, investment decisions, and challenges.* **Secondary literature:** 3. Blank, S., & Dorf, B. (2020). *The Startup Owner's Manual.* 4. Ries, E. (2017). *The Lean Startup.* 5. Selected academic articles from fintech and innovation management journals.
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

<table>
<tr><td>Subject</td><td>QUANTITATIVE METHODS IN FINANCE
<table><tr><th>Type</th><th>Semester</th><th>ECTS</th><th>Code</th></tr><tr><td>OBLIGATORY (O)</td><td>3</td><td>6</td><td>10QMF956</td></tr></table></td></tr>
<tr><td>Aims and Objectives</td><td>The Quantitative Methods in Finance course aims to provide students with a deep theoretical and practical understanding of the main quantitative techniques used in modern financial analysis, with a special focus on FinTech applications. The course begins with an introduction to quantitative finance, emphasizing the role of mathematical and statistical models in asset valuation and financial decision-making. It then addresses probabilistic distributions, which serve as a basis for modeling uncertainty and market prices. Students will delve into the theory of the time value of money, as well as the use of linear regression (OLS) for empirical analysis, economic interpretation, and hypothesis testing. The course continues with the study of the CAPM model and multifactor models, as well as the main concepts of portfolio optimization. The practical part is enriched with Monte Carlo simulation for stock prices and risk assessment. The semester also includes the topics of risk management, financial econometrics, and the use of machine learning in finance. Finally, students explore the role of FinTech and data analytics in contemporary asset pricing models, preparing applied projects that are presented before the end of the course.

Course objectives:
Basic concepts of quantitative finance and mathematical models in financial decision-making
The theory of the value of money in the evaluation of financial instruments and investment projects.
Econometric models and empirical analysis.
The CAPM model, and Monte Carlo simulations for the evaluation of stock prices and other financial instruments.</td></tr>
<tr><td>Learning Outcomes (CLO)</td><td>Upon successful completion of this course, students will be able to:
Analyze mathematical and statistical models used in quantitative finance, interpreting their role in asset valuation, market uncertainties and the financial decision-making process (PLO1, PLO4)
Analyze and compare probabilistic distributions, regression models (OLS, Fixed and Random Effects), CAPM and multifactor models, organizing and demonstrating their use in different financial contexts (PLO3, PLO4)
Evaluate the effectiveness of risk management methods and portfolio optimization techniques, judging, experimenting and selecting the most appropriate approaches for different market situations (PLO3, PLO8)
Evaluate the use of Monte Carlo simulation, financial econometrics and machine learning methods for time series analysis and the pricing of financial</td></tr>
</table>

	instruments, critiquing the limitations and strengths of each method (PLO2, PLO4) 5. Creates advanced financial models by designing, formulating and projecting quantitative analyses using FinTech, based on programs (Stata/SPSS/Python/R) and real data, to develop innovative solutions and applied projects in finance (PLO1, PLO10)
Content	**Weekly Plan** — **Week** Introduction to Quantitative Finance: The role of quantitative methods in finance — 1 Probabilistic Distributions in Finance — 2 Time Value of Money Theory — 3 Linear Regression in Finance: OLS, Economic Interpretation, Hypothesis Testing — 4 CAPM Model and Multi-Factor Models — 5 Portfolio Optimization — 6 Mid-term exam 1 — 7 Monte Carlo Simulation: Random Number Generation, Stock Price Simulations — 8 Risk Management — 9 Financial Econometrics — 10 Machine Learning in Finance — 11 FinTech and Data Analytics — 12 Asset Pricing Models in the Capital Market — 13 Project Presentation — 14 Mid-term exam 2 — 15
Teaching/Learning Methods	**Activities** — **Weight (%)** Lectures — 35% Seminars and Exercises — 35% Laboratory IT — 10%

	Case studies	10%
	Problem-based learning	10%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Activity and Quizzes	10%
	Test 1	35%
	Individual Project	20%
	Test 2	35%
Assessment Description	Test I and Test II- Includes a mid-term assessment instrument. And is applied through the first test which takes place in the seventh week, as well as the second test in the last week. These tests contain a variety of questions that include the practical part and the theoretical part. Their duration is from 45 to 90 minutes. (CLO1-CLO5). Individual Project- Through the individual project, students will harmonize the theoretical part with the practical part. The volume of the project will be from 4000 to 4500 words. The assessment of the project includes three main pillars: structure, content, and presentation. Through this assessment instrument we will aim to achieve the expected results 2,3, 4,5, and 6 set in the Syllabus of the course. The research project is mandatory and a condition for the final exam. (CLO1, CLO2, CLO4, CLO5). Activities and Quizzes - Through activities and quizzes, students will be assessed during discussions and study problems raised in lectures and exercises throughout the semester. This instrument will include all expected outcomes within the course. (CLO1–CLO5).	
Course Resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1
	Slido/Miro	1
	LCD Projector	1
	Software Stata/ Python/R	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	24

	Seminars	12
	Exercise	12
	Self-learning	87
	Consultations	12
	Exams	3
Literature/References	**Primary Literature** 1. Probability Distributions in Finance: Normal, Lognormal & Fat Tails, Michael Brenndoerfer. 2025 2. An Introduction to Quantitative Finance, Stephen Blyth. Oxford University Press, 2013. ISBN: 9780199666591. **3.** Risk Management and Financial Institutions (6th Edition), John C. Hull. Wiley, 2018. ISBN: 9781119448112. 4. The Econometrics of Financial Markets, John Y. Campbell, Andrew W. Lo, A. Craig MacKinlay. ISBN: 9780691043012. 5. An Introduction to Financial Option Valuation: Mathematics, Stochastic Processes and Models, Desmond J. Higham. Cambridge University Press, 2004. ISBN: 9780521547574. **Secondary Literature** 6. Investments, Zvi Bodie, Alex Kane & Alan J. Marcus. McGraw-Hill/Irwin, ed.). ISBN: 9780077261450. 7. The Economics of Money, Banking, and Financial Markets, Frederic S. M Apostolos Serletis. Pearson, 2020 (7th Canadian ed.). ISBN: 9780136647292. 8. Customized material prepared by lecturer, available at Moddle 9. Basic Econometrics, Damodar N. Gujarati. McGraw-Hill Education (India Limited, Chennai, 2012. ISBN: 9780073375847.	
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and	

	consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

Subject	**DESIGN THINKING FOR FINANCIAL SERVICES**			
	Type	**Semester**	**ECTS**	**Code**
	ELECTIVE (E)	2	6	10DTFS930
Aims and Objectives	This course introduces design thinking as a human-centred innovation approach applied to digital financial services and fintech environments. It explores how financial institutions and fintech firms design customer-oriented financial products and services under conditions of rapid technological change and regulatory complexity. Students learn to identify user needs, analyse customer journey pain points, and transform financial service challenges into structured innovation opportunities using the iterative design thinking process (Empathize–Define–Ideate–Prototype–Test). The course integrates service design, innovation management, and fintech perspectives while considering sector-specific constraints such as regulation, risk management, cybersecurity, data privacy, and ethics. Through case studies, workshops, and applied project work, students develop practical competencies in ideation, prototyping, testing, and evaluation of digital financial solutions addressing real-world financial service challenges. Course objectives: • Develop competencies in user research and insight synthesis in financial services • Apply ideation and concept evaluation methods to fintech innovation challenges • Design and iteratively prototype digital financial services • Integrate regulatory, risk, cybersecurity, and ethical considerations into design decisions • Communicate fintech innovation solutions using structured analysis and professional presentation			
Learning Outcomes (CLO)	Upon successful completion of this course, students will be able to: 1. Analyse customer needs and customer journey behaviours in digital financial services using human-centred design approaches. (PLO1, PLO6)			

	2. Evaluate financial service challenges using design thinking frameworks. (PLO3, PLO6) 3. Design innovative fintech products and digital financial service solutions responding to user and market needs. (PLO3, PLO9) 4. Develop and test prototypes of digital financial solutions using iterative innovation approaches. (PLO6, PLO1) 5. Assess ethical, regulatory, and risk implications in fintech innovation. (PLO5, PLO8) 6. Formulate innovation strategies for fintech organizations. (PLO3, PLO9) 7. Conduct and defend evidence-based fintech innovation projects. (PLO9, PLO6)
Content	**Weekly Plan** — **Week** Introduction to FinTech landscape and design thinking — 1 Human-centered design and trust in financial services: customer experience and trust — 2 User research methods and data privacy — 3 Insight synthesis, personas, empathy maps — 4 Customer journey mapping in digital financial services — 5 Service blueprinting and compliance touchpoints — 6 Problem statements and value hypotheses — 7 Ideation techniques for fintech solutions — 8 Concept evaluation and value proposition design — 9 Prototyping strategies and tools — 10 Iterative design sprints — 11 Usability testing and iterative improvement — 12 Risk management, compliance, and cybersecurity-by-design — 13 Innovation strategy and business model logic — 14 Project presentations and course recap — 15
	Activities — **Weight (%)** Lectures — 25%

Teaching/Learning Methods	Seminars	15%
	Laboratory/design lab	15%
	Case studies	20%
	Role play/simulation	5%
	Problem-based learning	20 %
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	10 %
	Group Project	40 %
	Individual Assignment	20 %
	Final Exam	30 %
Assessment Description	Attendance and Class Activity - Assessment of active participation in lectures, workshops, discussions, and design activities throughout the semester. (Addresses: all CLOs) Individual Assignment - Students individually analyze a digital financial service using design thinking tools to identify user needs, innovation opportunities, and regulatory or ethical considerations. (Addresses: CLO1, CLO2, CLO5) Group Project - Student teams design and develop an innovative digital financial service solution following the design thinking process, including problem framing, ideation, prototyping, and testing. (Addresses: CLO3, CLO4, CLO6, CLO7) Final Exam - evaluates students' analytical understanding of design thinking methodologies, fintech innovation processes, and financial sector constraints through applied and case-based questions. (Addresses: all CLOs)	
Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1
	Windows 11, MS Office 2021	1
	LCD Projector	1
ECTS Workload	**Activity**	**Total workload**

	Lectures	30
	Seminars	15
	IT Lab	15
	Self-learning	85
	Consultations	5
Literature/References	**Primary literature:** 1. Lewrick, M., Link, P., & Leifer, L. (2020). *The Design Thinking Toolbox.* Wiley. 2. Stickdorn, M., Hormess, M., Lawrence, A., & Schneider, J. (2018). *This Is Service Design Doing.* O'Reilly. 3. Osterwalder, A., Pigneur, Y., Bernarda, G., & Smith, A. (2014). *Value Proposition Design.* How to Create Products and Services Customers Want Wiley. **4.** Ries, E. (2011). *The Lean Startup.* How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses**.** Crown Business. **Secondary literature:** ***5.*** Brown, T. (2009). *Change by Design. How Design Thinking Transforms Organizations and Inspires Innovation.* Harper Business. 6. Nicoletti, B. (2017). *The Future of FinTech. Integrating Finance and Technology in Financial Services.* Palgrave Macmillan. **7.** Gomber, P., Koch, J., & Siering, M. (2017). Digital Finance and FinTech: current research and future research directions. *Journal of Business Economics.* 8. Gozman, D., Liebenau, J., & Mangan, J. (2018). Innovation mechanisms of fintech start-ups: insights from SWIFT Innotribe competition. *Journal of Management Information Systems.* 9. Bank for International Settlements (2021). *FinTech and the Digital Transformation of Financial Services: implications for market structure and public policy*	
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment.	

	Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

Subject	**BEHAVIORAL FINANCE**			
	Type	**Semester**	**ECTS**	**Code**
	ELECTIVE (E)	2	6	10BF931
Aims and Objectives	The course Behavioral Finance examines the influence of psychological and emotional factors on the financial decision-making of individuals and institutions, challenging the assumption of full rationality that characterizes traditional financial theory. It integrates concepts from economics and psychology to explain why investors and markets often deviate from rational behavior. This course analyzes key concepts such as heuristics and cognitive biases, prospect theory, overconfidence, anchoring effect, loss aversion, and herd behavior. Special attention is given to market anomalies, the formation of financial bubbles, and the role of emotions in price fluctuations. Through theoretical discussions, case analyses, and practical applications, students will develop the ability to understand the psychological mechanisms influencing investment, saving, and financial decision-making, linking theory with the realities of contemporary financial markets. Course objectives: • Demonstrate in-depth knowledge of the fundamental concepts of behavioral finance and distinguish between traditional financial theory and the behavior-based approach. • Analyze and evaluate the impact of heuristics and cognitive biases on the financial decision-making process.			

	• Explain and apply the concepts of prospect theory, loss aversion, and overconfidence in real financial situations. • Assess the role of emotions and collective behavior in the functioning of financial markets. • Interpret market anomalies and analyze the causes of financial bubble formation. • Apply theoretical concepts to practical analyses, case studies, and investment decision-making.
Learning Outcomes (CLO)	Upon successful completion of this course, students will be able to: 1. Analyze the impact of psychological factors and cognitive biases on the adoption of financial technologies and the behavior of users of digital financial services. (PLO3, PLO9). 2. Interpret and compare traditional financial models with behavioral finance approaches in the context of fintech, blockchain, and decentralized systems. (PLO3, PLO4). 3. Evaluate the influence of emotions, herd behavior, and overconfidence in digital markets, cryptocurrencies, and virtual assets. (PLO4, PLO9). 4. Critically assess ethical risks and decision-making biases in fintech environments, judging their implications for regulation and risk management. (PLO5, PLO3). 5. Formulate innovative strategies that integrate behavioral finance insights into the design of digital financial products and platforms. (PLO3, PLO9). 6. Design and conduct empirical analyses or mini-research projects that test behavioral factors in fintech usage and the performance of digital financial products. (PLO4, PLO10).
Content	**Weekly Plan** — **Week** Introduction to Behavioral Finance. — 1 Psychology of Financial Decision-Making. — 2 Prospect Theory — 3 Overconfidence and the Illusion of Control — 4 Herd Behavior and Market Dynamics — 5 Financial Market Anomalies — 6

	Mid-term exam 1	7
	Behavioral Finance in the Digital Environment	8
	Behavioral Finance and Cryptocurrencies	9
	Artificial Intelligence and Behavioral Models	10
	Risk, Ethics, and Decision-Making in Digital Finance	11
	Designing Financial Products with a Behavioral Approach	12
	Innovative Strategies and Future Perspectives	13
	Recapitulation of the subject	14
	Mid-term exam 2	15
Teaching/Learning Methods	**Activities**	**Weight (%)**
	Lectures	20 %
	Projects-seminars	20 %
	Case studies	20 %
	Role play	20 %
	Problem-based learning	20 %
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class activity	20 %
	Group Projects	20 %
	Individual Assignments	10 %
	Final Exam	50 %
Assessment Description	**Class Participation and Activity** This component assesses students' commitment, engagement, and active contribution during lectures and discussions. Students will be encouraged to analyze real-life cases, engage in critical discussions, and demonstrate acquired skills by applying behavioral finance concepts to real financial and digital situations. (Addresses: CLO3, CLO4) **Group Project** Conducted throughout the semester, this project involves the analysis of a practical case or a fintech platform from a behavioral finance perspective. Students will evaluate	

<table>
<tr><td></td><td>psychological factors and propose improvement strategies. Includes structured presentations and discussions. (Addresses: CLO1, CLO5)

Individual Assignment
Completed during the semester, this assignment requires a critical analysis or mini-study on the impact of behavioral factors in digital markets or cryptocurrencies. (Addresses: CLO2, CLO6)

Midterm and Final Exam
Students will undergo two assessments: a midterm exam (week 7) and a final exam. The evaluation includes analytical questions, case studies, and applied tasks that measure the ability to analyze, evaluate, and develop solutions in the context of behavioral finance. (Addresses: All CLOs)</td></tr>
<tr><td>Course resources</td><td><table><tr><th>Resources</th><th>Number</th></tr><tr><td>Classroom</td><td>1</td></tr><tr><td>PowePoint</td><td>1</td></tr><tr><td>Moodle</td><td>1</td></tr><tr><td>Excel, SPSS or STATA</td><td>1</td></tr><tr><td>LCD Projector</td><td>1</td></tr></table></td></tr>
<tr><td>ECTS Workload</td><td><table><tr><th>Activity</th><th>Total workload</th></tr><tr><td>Lectures</td><td>30</td></tr><tr><td>Group project</td><td>30</td></tr><tr><td>Individual assignment</td><td>15</td></tr><tr><td>Self-learning</td><td>72</td></tr><tr><td>Consultations</td><td>3</td></tr></table></td></tr>
<tr><td>Literature/References</td><td>Primary literature:
1. Statman, M. (2019). Behavioral Finance: The Second Generation.
2. Elżbieta Kubińska, Magdalena Adamczyk-Kowalczuk, Anna Macko (2024). Behavioral Finance in the Digital Era: Saving and Investment Decisions.
3. Phillip Toews (2025). The Behavioral Portfolio: Managing Portfolios and Investor Behavior in a Complex Economy.
4. Thaler, R. H. (2015). Misbehaving: The Making of Behavioral Economics.
5. Kahneman, D. (2011). Thinking, Fast and Slow.
6. Ackert, L., & Deaves, R. (2009). Behavioral Finance: Psychology, Decision-Making, and Markets</td></tr>
</table>

	Secondary literature: 7. Scientific articles from international journals in the fields of behavioral finance, fintech, and digital markets. 8. Reports from Central Banks, the International Monetary Fund, and int organizations on financial markets and digital innovation.
Ethical standards	All students in this course are required to adhere to the highest standards of academic integrity as outlined by UBT College's Code of Ethics. This includes the submission of original work for assignments, projects, quizzes, and exams. Acts of plagiarism, cheating, and using another person's work without proper citation are strictly prohibited. This also includes the use of unauthorized materials during exams, quizzes, or any other form of assessment, as well as submitting group projects with the work of others without proper acknowledgment. Written assignments will be checked using Turnitin anti-plagiarism software. For Bachelor's level, the similarity index must be below 15%, and for Master's level, below 10% (excluding references, quotes, and small sources). Violations such as plagiarism, cheating during exams or quizzes, or any form of dishonest academic conduct will lead to penalties, including a failing grade for the assignment or course, and may result in further disciplinary actions as outlined by UBT College policies. Students are expected to maintain integrity in all academic activities and to respect the intellectual property of others. For more information on ethical standards and consequences for violations, please refer to the UBT Code of Ethics, accessible through the student handbook or the college website.

Subject	**SUSTAINABILITY AND ESG IN FINTECH**			
	Type	**Semester**	**ECTS**	**Code**
	ELECTIVE (E)	2	6	10SEF932
Aims and Objectives	This course aims to equip students with a comprehensive understanding of how sustainability principles and Environmental, Social, and Governance (ESG) frameworks intersect with financial technology innovation. As digital finance reshapes global markets, FinTech firms are uniquely positioned to drive inclusive growth, climate action, and responsible governance through data-driven solutions, blockchain transparency, green finance platforms, and impact measurement tools. The course explores how ESG criteria influence investment decisions, regulatory compliance, risk management, product design, and corporate strategy within FinTech ecosystems. Students will critically examine global sustainability frameworks such as the United Nations Sustainable Development Goals (SDGs), the Task Force on Climate-related Financial Disclosures (TCFD), and the Global Reporting Initiative (GRI), assessing their relevance to digital financial services. The course emphasizes innovation			

	management approaches that integrate ESG metrics into scalable business models while balancing profitability and societal impact. Through case studies, regulatory analysis, and applied projects, students will develop the strategic capabilities needed to design sustainable FinTech solutions, evaluate ESG risks, and lead responsible digital transformation initiatives in financial institutions and startups. Course objectives: • Analyze the role of ESG frameworks in shaping FinTech strategies and innovation models. • Evaluate sustainability risks and opportunities in digital financial services. • Apply ESG metrics and reporting standards to FinTech business cases. • Design FinTech solutions that promote financial inclusion and environmental sustainability. • Assess regulatory and governance challenges related to sustainable digital finance.
Learning Outcomes	Upon successful completion of this course, students will be able to: 1. Analyze and compare major ESG frameworks and sustainability standards applicable to FinTech firms, organizing their requirements and interpreting their strategic implications for digital financial services. (PLO1, PLO3) 2. Analyze and interpret ESG-related risks and opportunities in FinTech business models by examining regulatory developments, climate risk disclosures, and data governance structures. (PLO1, PLO4) 3. Evaluate the effectiveness of sustainable FinTech solutions in promoting financial inclusion, environmental impact reduction, and responsible governance, judging trade-offs between profitability and societal value. (PLO2, PLO3) 4. Critically assess ESG data quality, impact measurement methodologies, and reporting transparency in digital finance platforms, selecting appropriate metrics for decision-making. (PLO2, PLO5) 5. Evaluate and experiment with sustainability assessment tools and evaluate regulatory compliance strategies for FinTech startups and financial institutions operating in different jurisdictions. (PLO2, PLO4) 6. Create an innovative FinTech solution or business model that integrates ESG principles, formulates measurable sustainability objectives, and demonstrates scalability. (PLO3, PLO5) 7. Create and produce a strategic ESG integration roadmap for a FinTech organization, projecting long-term impact, governance alignment, and competitive advantage. (PLO3, PLO4)
Content	**Weekly Plan** **Week**

	Introduction to Sustainability, ESG concepts, and their relevance in FinTech	1
	Global sustainability frameworks (SDGs, ESG pillars, stakeholder capitalism)	2
	ESG standards and reporting frameworks (GRI, TCFD, SASB, ISSB)	3
	Sustainable finance and green financial instruments (green bonds, impact investing, climate finance)	4
	Role of FinTech in promoting sustainability: blockchain, AI, big data, RegTech	5
	ESG risk management and regulatory landscape in digital finance	6
	Mid-Term Exam 1	7
	ESG data analytics and impact measurement in FinTech platforms	8
	Financial inclusion, digital banking, and social sustainability	9
	Climate risk, carbon accounting, and sustainable digital lending models	10
	Governance, ethical AI, data privacy, and cybersecurity in sustainable FinTech	11
	Innovation management strategies for ESG-driven FinTech startups	12
	ESG investment platforms, crowdfunding, and tokenization for impact	13
	Recapitulation of the subject and student project presentations	14
	Mid-Term Exam 2 / Final Assessment	15

	Activities	**Weight (%)**
	Lectures	30%

Teaching/Learning Methods	Seminars	15%
	Laboratory (ESG data analytics / FinTech tools)	15%
	Case Studies	20%
	Role Play (ESG simulations & governance scenarios)	5%
	Problem-Based Learning (PBL)	15%
Assessment Methods	**Assessment Activity**	**Weight (%)**
	Attendance and Class Activity	10%
	Group Projects	30%
	Individual Assignments	15%
	Midterm Exam	15%
	Final Exam	20%
	Case Study Analysis Report	10%
Assessment Description	Attendance and Class Activity (10%) evaluates students' engagement, active participation in discussions, ESG scenario analysis, and in-class problem-solving tasks throughout the semester. (Addresses CLO 3 and CLO 4). Group Project (20%) requires students to collaboratively design a sustainable FinTech solution or ESG integration strategy, including business model development, ESG risk analysis, and measurable impact indicators. (Addresses CLO 1, CLO 6, and CLO 7). Individual Assignment (15%) involves critical analysis of ESG frameworks, sustainability reports, or regulatory developments in FinTech, demonstrating independent research and evaluative skills. (Addresses CLO 2 and CLO 5). Mid-Term Exam (15%), conducted in Week 7, assesses students' analytical and evaluative understanding of ESG concepts, sustainable finance principles, and their application in FinTech contexts. (Addresses CLO 1, CLO 2, and CLO 3). Final Exam (20%), held in Week 15, evaluates comprehensive knowledge of the course through applied and case-based questions covering sustainability, ESG integration, governance, and innovation management. (Addresses all CLOs). Case Study & ESG Data Lab Assessment (10%) measures students' ability to interpret ESG data, evaluate sustainability performance metrics, and provide evidence-based recommendations using digital tools. (Addresses CLO 4, CLO 5, and CLO 6).	

Course resources	**Resources**	**Number**
	Classroom (e.g)	1
	IT Lab (e.g)	1
	Moodle	1
	Windows 11, MS Office 2021	1
	LCD Projector	1
ECTS Workload	**Activity**	**Total workload**
	Lectures	30
	Seminars	30
	IT Lab	20
	Practice in industry	10
	Self-learning	56
	Consultations	4
Literature/References	**Primary literature:** 1. Gaganis C, Pasiouras F, Tasiou M, Zopounidis C. Sustainable Finance and ESG: Risk, Management, Regulations, and Implications for Financial Institutions. Palgrave Macmillan, 2023. 2. Bril H, Kell G (eds). Sustainability, Technology, and Finance: Rethinking How Markets Integrate ESG. Taylor & Francis, 2022. 3. Khan PA, Johl SK (eds). Finance, Technology, and Sustainability for Sustainable Innovation. IGI Global, 2026. **Secondary literature:** 4. Galeone, G.: ESG and FinTech: Are They Connected? Research in International Business and Finance. (2024). 5. Huang, X.: FinTech and Corporate ESG Performance: An Empirical Study. Sustainability. (2025). 6. Selected case studies and reports on sustainable finance and digital innovation (latest editions). 7. Lecturer-prepared materials and Moodle-based learning resources. 8. Selected video lectures and digital learning content.	

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Subject	**MASTER THESIS**			
	Type	**Semester**	**ECTS**	**Code**
	OBLIGATORY (O)	4	30	10MTH999
Description of the thesis	The Master Thesis represents an independent scientific research project through which the student demonstrates advanced analytical, research, and practical competencies in the field of FinTech and Innovation Management. The thesis must address a contemporary issue related to financial technologies, digital innovation, regulatory frameworks, risk management, digital transformation, AI in finance, blockchain, or innovation strategy. The student is expected to formulate a clear research problem, define research objectives and questions, apply appropriate research methodology, and conduct empirical and/or theoretical analysis at an advanced level. The thesis must demonstrate originality, critical thinking, and the ability to integrate academic theory with practical business implications. The thesis is conducted under the supervision of an appointed mentor. The topic and mentor may be proposed by the student, subject to approval by the Faculty. Regular			

	consultations between mentor and student are mandatory and agreed upon at the beginning of the thesis process. he thesis must include: Title page, Abstract, Table of contents, Introduction, Literature review, Methodology, Data analysis and results, Discussion, Conclusions and recommendations, Bibliography, Declaration of originality All procedures related to thesis submission and graduation must follow the official guidelines of the Faculty and be published on Moodle.
Learning Outcomes	Upon successful completion of the Master Thesis, the student will be able to: 1. Demonstrate advanced and specialized knowledge in a selected area of FinTech and Innovation Management. (PLO1, PLO2, PLO3) 2. Formulate clear research questions and objectives addressing complex business or technological challenges. (PLO3, PLO10) 3. Conduct an advanced critical literature review using scientific journals and academic sources. (PLO10) 4. Design and implement appropriate qualitative, quantitative, or mixed research methodologies (PLO4, PLO10) 5. Apply advanced analytical tools, statistical methods, and IT systems for data analysis. (PLO4, PLO2) 6. Critically interpret research findings and derive strategic and managerial implications. (PLO3, PLO8) 7. Propose innovative, practical, and evidence-based recommendations relevant to digital financial markets (PLO1, PLO3, PLO9) 8. Demonstrate academic writing standards and research ethics at Master level. (PLO8, PLO10)
Assessment Methods	The Master Thesis is evaluated by a three-member academic committee, which includes the thesis mentor. The evaluation process consists of the assessment of the written thesis and the public defense. Initially, the committee reviews the submitted manuscript to determine whether it meets the required academic, methodological, and technical standards. The evaluation considers the depth and relevance of the literature review, the clarity of the research questions and objectives, the appropriateness of the research methodology, the quality of data analysis, the critical interpretation of results, and the academic structure and writing quality. Only theses that fulfill the minimum criteria are approved to proceed to the defense stage. Following the approval of the written thesis, the candidate presents and defends the research before the committee. During the defense, the student is assessed on their understanding of the research topic, analytical and critical thinking abilities, justification of methodological choices, clarity of presentation, and ability to respond to questions. The final grade is determined by the committee based on the overall quality of the written thesis and the performance during the oral defense.

ECTS Workload	**Activity**	**Total workload**
	Consultations	72
	Independent study and research	378
	Thesis writing and preparation	300
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