

FACULTY OF BUSINESS, MEDIA AND MANAGEMENT
Department of Economics and Business

«APPROVED»

Dean of faculty

_____ Mukhamediyeva A.G.

«_____» _____ 20__

WORKING CURRICULUM OF THE DISCIPLINE
(SYLLABUS)

Course: FIN6716 Introduction to FinTech

code, title

Group of educational programs: B046-Finance, economics, banking and insurance

code, title

Educational program: 6B04105 Financial technologies

code, title

Year: 2 Semester: 4 Number of academic credits: 5 ECTS

Lectures:	15	hours
Practical work:	0	hours
Laboratory work:	30	hours
IWST:	15	hours
IWS:	90	hours
TOTAL:	150	hours
Cycle of discipline:	Major (General education/Basic/Major)	
Form of control:	MCQ (test)	

«IITU» JSC

The working curriculum of the discipline (syllabus) FIN6716 Introduction to FinTech has been developed on the basis of the educational program B046-Finance, economics, banking and insurance.

The working curriculum of the discipline (syllabus) has been reviewed at the meeting of the Economics and Business department.

Minutes №. ____ dated « ____ » 2025

Head of the Department _____ **Shildibekov Ye. Zh., Associate Professor, PhD**
signature *full name*

Author _____ **MSc Nurbek Adambekov, Assistant Professor**
signature *full name, title, degree*

The working curriculum of the discipline (syllabus) was approved at a meeting of the Faculty's Academic Quality Council.

Minutes № 7 dated "25" December 2025

Agreed:

Head of the Department of the Educational and Methodological activities _____ **Ajibayeva A.**

Library _____ **Seksenbayeva N.**

1. General information	
Faculty	Business, Media and Management
Code and name of the educational program (EP)	B046-Finance, economics, banking and insurance
Program level (bachelor's, master's, PhD)	Bachelor
Year, semester	2,4
Name of the discipline	FIN6716 Introduction to FinTech
Cycle of the discipline	Elective
Number of academic credits	5
Prerequisites	Introduction to finance
Postrequisites	Writing diploma thesis
Lecturer	Nurbek Adambekov, MSc, Assistant professor, Office hours: every Wednesday 13:00-14:00, via Microsoft Teams
2. Goals, objectives and learning outcomes of the course	
To equip students with a comprehensive understanding of core finance principles while highlighting the transformative role of technology (Fintech) across all aspects of the financial industry.	
<p>Learning outcomes</p> <p>Upon successful completion of this course, students will be able to:</p> <ul style="list-style-type: none"> • Understand and apply core finance concepts such as time value of money, risk and return, asset classes, financial markets, and financial institutions. • Explain the evolution of Fintech and its impact on various financial sectors, including payments, lending, investment, and insurance. • Analyze investment opportunities using fundamental and technical analysis, incorporating Fintech tools and data sources. • Build and interpret financial models for forecasting, valuation, and decision-making, utilizing technology to streamline processes. • Understand the principles of derivatives and their applications in risk management and hedging strategies. • Evaluate the potential of emerging technologies like blockchain, AI, and big data in transforming the financial industry. • Develop critical thinking and problem-solving skills in the context of financial decision-making in the digital age. • Communicate effectively about financial concepts and Fintech innovations through presentations and written assignments. • Collaborate effectively in teams, leveraging technology to solve financial problems and develop innovative solutions. 	
3. Course description	
This course offers a unique blend of traditional finance topics and the disruptive innovations brought about by Fintech. Students will gain a solid foundation in investment, financial modeling, and derivatives, while exploring how technology is reshaping these areas. The course emphasizes practical application through case studies, hands-on exercises, and the use of Fintech tools and platforms. By the end of the course, students will be well-prepared to navigate the evolving financial landscape and leverage Fintech innovations for their careers	
4. Teaching methods	
In the process of mastering the discipline, a combination of theoretical and practice-oriented approaches is used, aimed at developing students' professional and general competencies.	

1. Theoretical methods

- Lectures with elements of problem-based learning;

2. Practice-oriented methods

- Solving practical and calculation tasks in economics and industrial engineering;
- Case studies from real enterprise practices;

3. Interactive methods

- Individually problem solving interactively with instructor

4. Digital and innovative methods

- Use of multimedia presentations and electronic educational resources;
- Application of digital tools (Excel, SPSS, ERP systems, simulation software);

5. Forms of educational activity organization

- Classroom activities (lectures, practical and seminar sessions);
- Independent student work (literature review, assignments, preparation for assessments);
- Teacher consultations;

5. Course policy

Attendance Policy: If the absence rate is more than 20%, the student will automatically receive an F

Students are forbidden to:

- submit any tasks after the deadline. Late submissions are graded down.
- cheat. Plagiarized papers shall not be graded;
- retake any tests, unless there is a valid reason for missing them;
- use mobile phones in class and exams;

Students are expected to be present in course lectures and practices, prepared for class, and actively engaged as evidenced by critical thinking and meaningful participation. Students are expected to schedule their personal and/or professional obligations and their course registrations so as to maintain continuous and complete participation throughout courses.

Those students who missed a lecture should go through a study material on their own.

Any absence from course activities will impede learning. However, circumstances may arise that cause students to be absent from active course participation on either a preplanned or an emergency basis. Students are to make arrangements in advance of the “absence” with the instructor for submission of assignments.

An emergency “absence” that students do not know about in advance, and often involves situations such as health issues. In this case, students are to notify the instructor as soon as possible and make arrangements for submission of assignments in accordance with specifications communicated in the course syllabus. Students should also remain in contact with their Personal adviser (Kurator) and notify him/her of any situations which are preventing participation in a course.

Class participation is an important indication of daily preparedness. So, students are supposed to come to a class prepared. This means that students have to do a home work given by a lecturer on regular basis.

Policy of academic conduct and ethics

Students enrolled in this course are expected to follow the highest level of ethical and professional behavior at all times. Each student will be expected to maintain legal, ethical and moral principles, practice professionalism and civility throughout this course of study.

The following actions on the part of the student will bring sanction against that student:

1. Dishonest Conduct. Seeking to obtain unfair advantage by stealing, purchasing or receiving copies of course related assignments, projects, examinations. Intentionally preventing others from completing their course related work. The falsifying of records in order to gain admission or in order to complete an academic program of study. The purchase of course related work from any outside or external source;
2. Cheating. The unauthorized use or copying of another's work and reporting or representing it as your own.
3. Plagiarism. Using or copying someone else's words, ideas and/or work without citations and the giving of proper credit (reference).
4. Students are expected to listen to a lecturer carefully. If one of the students missed a point, he or she can rise a hand and ask for a repeating or clarification;
5. The usage of any class notes and electronic devices (mobile phones, tablets, laptops, digital glasses, electronic watches) is not allowed during the mid-term and final exam. Students cheating during mid-term or final exam will score zero-mark and re-take a failed module again

Respect for Differences of Opinion: Every student should respect others for having their own opinion on any case or question, and is not allowed to judge or criticize anyone.

Inclusion and Individual Needs Policy: in case of having such needs, students have to inform the lecturer about them, and find a way to ensure the most effective way for studying individually.

6. Academic Integrity

Policy on Plagiarism and Other Violations:

Students are required to adhere to the principles of academic integrity. Any form of plagiarism, cheating, data falsification, use of prohibited materials during exams or assessments, as well as other violations of academic ethics, are strictly prohibited and will result in disciplinary measures in accordance with the university's internal regulations.

Code of Academic Integrity:

A student must:

- complete all written and oral assignments independently,
- properly format citations and references to the sources used,
- respect the intellectual property and work of others,
- maintain honesty during exams, tests, and project defenses.

Use of Artificial Intelligence (AI):

The use of Artificial Intelligence (AI) in the learning process is permitted **only within the limits defined by the instructor**. The use of AI without the instructor's approval, as well as presenting AI-generated content as one's own work, is considered academic misconduct.

7. Literature

Basic sources:

1. R. Melicher, E. Norton – Introduction to Finance: Markets, Investments, and Financial Management - John Wiley & Sons, Inc., 2020. - 613 p. - ISBN 978-1-119-56117-0;

2. S. F. Mishkin. – Financial Markets and institutions: 9th edition - UK : Pearson Education Limited, 2018. - 688 c. - ISBN 9781292215006

Supplementary resources:

1. Iskakov U.M.; Bokhaev D. T.; Ruzieva E. A. – Financial Markets and Intermediaries: A Textbook
2. Zholamanova M.T. – Money. Credit. Banks. – Eurasian Market Institute, 2011. - 384 p. - ISBN 9965-9672-4-5

Online resources:

1. Official website of the Corporate Fund KMF-Demeu <https://demeufund.kz/>
2. Electronic Government of the Republic of Kazakhstan <https://egov.kz/cms/ru>
3. Association of Financiers of Kazakhstan (AFK) <https://afk.kz/>
4. Party "Amanat" <https://amanatpartiasy.kz/?lang=ru>

8. Forms of control and assessment

№	Type of work	Form of control	Evaluation criteria
1.	Continuous assessment Test 1	MCQ	MCQ
2.	Team project research work 1	Project research work	Correctness of information. Product analysis
3.	Mid-term	MCQ	MCQ
4.	Continuous assessment Test 2	MCQ	MCQ
5.	End-of-term	MCQ	MCQ
6.	Team project research work 1	Project research work	
7.	Final assessment	MCQ	MCQ

9. System for evaluating student performance in a discipline:

Each type of academic work is assessed on a 100-point scale in accordance with the table.

Example

Period	Assignments	Score
1st attestation	Continuous assessment Test 1	100
	Team project research work 1	100
	Mid-term	100
2nd attestation	Continuous assessment Test 2	100
	Team project research work 2	100
	End-of-term	100
	Exam	
TOTAL		0,3*1At+0,3*2At+0,4*Ex.

10. Course schedule

Week/ date	Course topics	References	Lectures (h/w)	Practical sessions (h/w)	Lab. sessions (h/w)	IWST (h/w)	IWS (h/w)
1	Concept, goals and objectives of financial literacy	1-5	1		2	1	6
2	Money, calculations and payments	1-5	1		2	1	6
3-4	Personal finances: income, expenses, budget	1-5	2		4	2	12
5-6	Taxes and taxation of individuals	1-5	2		4	2	12
7-8	Banking services for the population	1-5	2		4	2	12
9	Insurance	1-5	1		2	1	6
10-11	Financial markets and investment basics	1-5	2		4	2	12
12-13	Individual entrepreneurship and startup	1-5	2		4	2	12
14	Bankruptcy of individuals	1-5	1		2	1	6
15	Personal financial security	1-5	1		2	1	6
Total hours: 150			15		30	15	90

11. List of topics/assignments for Laboratory sessions

№	Topic Title	Number of hours	References	Form of reporting	Deadline
1	Concept, goals and objectives of financial literacy	2	1-5	Test	4 week
2	Money, calculations and payments	2	1-5	Test	4 week
3	Personal finances: income, expenses, budget	4	1-5	Test	4 week
4	Taxes and taxation of individuals	4	1-5	Test	7 week
5	Banking services for the population	4	1-5	Test	7 week
6	Insurance	2	1-5	Test	10 week
7	Financial markets and investment basics	4	1-5	Test	10 week
8	Individual entrepreneurship and startup	4	1-5	Test	14-15 week
9	Bankruptcy of individuals	2	1-5	Test	14-15 week
10	Personal financial security	2	1-5	Test	14-15 week

12. List of topics/assignments for student's independent work

Proper organization of students' independent work is the key to the formation of skills in mastering, learning, assimilation and systematization of acquired knowledge, ensuring a high level of academic performance in the learning process.

№	Topic/Assignment title	Number of hours	References	Form of reporting	Deadline
1.	Banking products	10	1-5	Report	October, 10
2.	Insurance products	10	1-5	Report	November, 28

13. Assessment criteria

The point-rating letter system for assessing the educational achievements of students with their interpretation in the traditional grading scale:

Letter system assessment	The digital equivalent of points	Percentage content	Traditional system assessment	General description of grading criteria
A	4,0	95-100	Excellent	The student has knowledge of the subject in the full scope of the curriculum, understands the discipline deeply enough; shows a high level of knowledge that exceeds the volume provided by the syllabus, gives an exhaustive answer
A-	3,67	90-94		The student has knowledge of the subject in the full scope of the curriculum, understands the discipline deeply enough; gives an exhaustive answer
B+	3,33	85-89	Good	The student shows a complete, well-founded knowledge of the subject, but the answers did not always highlight the main idea, rational methods of calculation were not always used; the answers were mostly brief and sometimes unclear.
B	3,0	80-84		
B-	2,67	75-79		
C+	2,33	70-74		
C	2,0	65-69	Satisfactory	The student demonstrates sufficient knowledge of the subject, but without proper depth and justification, the answers are unclear and without proper logical sequence.
C-	1,67	60-64		
D+	1,33	55-59		
D	1,0	50-54		
FX	0,5	25-49	Unsatisfactory	The student demonstrates insufficient knowledge of the subject, positive answers were not given to individual questions.

F	0	0-24		The student demonstrates a very low level of knowledge of the subject.
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14. Assessment and evaluation materials (exam questions)

<question>How many types of entrepreneurship are there and what types are there?

- Corporate entrepreneurship (or intrapreneurship), Family Enterprising, Social Entrepreneurship, Serial Entrepreneurs.
- Traditional entrepreneurship, Partnership entrepreneurship, Financial entrepreneurship, Innovative entrepreneurship
- Corporate entrepreneurship, Individual entrepreneurship, Community entrepreneurship, Market-driven entrepreneurship
- Social Entrepreneurship, Investor Entrepreneurship, Regional Entrepreneurship, Micro-entrepreneurship

<question>The Two Main Perspectives in Entrepreneurship?

- Prediction, Creation.
- Strategy, Execution
- Planning, Action
- Risk-taking, Stability

<question>What is prediction in entrepreneurship?

- This approach relies on using data, trends, and forecasting to make decisions. Entrepreneurs who follow this model seek to predict market needs and prepare solutions that align with known outcomes.
- It is a spontaneous process of trial and error without considering market trends
- It emphasizes intuition and gut feelings over structured data
- It involves launching products without prior research or feedback

<question>What is Creation in entrepreneurship?

- In contrast, creation is about diving into the unknown and shaping new opportunities through experimentation. Entrepreneurs using this approach test ideas in the market with little certainty, learning and evolving based on feedback.
- Creation relies exclusively on past data and trends for decision-making
- Creation is about imitating existing successful businesses
- Creation focuses on avoiding risks rather than experimenting with ideas

<question>The Eight Components of Entrepreneurship Practice?

- Opportunity recognition, Experimentation, Managing resources, Building networks, Scaling ventures, Managing risks, Reflective learning, Grit and perseverance.
- Profit maximization, Employee hiring, Market domination, Cost cutting, Reputation building, Financial modeling, Traditional methods, Static strategies
- Customer acquisition, Competitor analysis, Public relations, Budget optimization, Outsourcing, Leadership building, Operational efficiency, Marketing planning
- Team building, Sales optimization, Fixed decision-making, Conflict resolution, Basic accounting, Knowledge retention, Legal compliance, Internal training

<question>What are the three mindsets in entrepreneurship?

- Fixed Mindset, Growth Mindset, Entrepreneurial mindset.
- Positive mindset, Negative mindset, Business mindset
- Proactive mindset, Risk-averse mindset, Creative mindset
- Analytical mindset, Problem-solving mindset, Leadership mindset

<question>Give an example of Fixed Mindset?

- Why do you want to start up a business? You need accounting skills. You were always terrible at math at school. Are you sure you can do it?
- You can always improve your accounting skills with enough effort
- Starting a business is possible if you focus on learning and growing
- Everyone has strengths; focus on what you're good at to succeed

<question>Give an example of Growth Mindset?

- I might not be any good at accounting at first, but I think I can learn to be good at it if I commit to it and put in the time and effort.
- I'm bad at accounting and can't improve
- Starting a business doesn't require me to learn new skills
- If I'm not good at accounting now, I'll never be good at it

<question>What is needed for an Entrepreneurial mindset?

- The ability to quickly sense, take action, and get organized under uncertain conditions.
- Avoiding risks and relying on routine methods
- Focusing exclusively on financial results without considering flexibility
- Maintaining a strict, unchanging plan in all circumstances

<question>What business models do you know?

- The offering, the customers, the infrastructure, the financial viability.
- The marketing strategy, the competitive analysis, the product design, the pricing structure
- The operational plan, the distribution model, the sales process, the technological advancements
- The leadership style, the organizational hierarchy, the employee benefits, the brand identity

<question>What are stocks?

- They are an equity instrument, meaning you buy a part of a company.
- They are a financial product designed to save and accumulate funds in a bank
- They are bonds that guarantee a fixed income over a specified period
- They are a document confirming the right to receive dividends from state-owned property

<question>Who provides access to the market?

- Broker.
- Bank.
- Investor.
- Company.

<question>What types of securities exist in investments?

- Short-term, medium-term, long-term securities.
- Short-term, high-yield, insurance securities.
- Long-term, savings, one-time securities.
- Medium-term, reserve, guaranteed securities.

<question>What is the main goal of the market?

- To provide people with long-term investment opportunities.
- To ensure immediate access to cash.
- To regulate the prices of goods and services.
- To create conditions for short-term speculation.

<question>What is the main law of the market?

- The law of supply and demand.
- The law of labor value.
- The law of equitable resource distribution.
- The law of maximum profit.

<question>What makes government securities unique?

- They have a minimal reward rate, which means minimal risk.
- They offer high returns with maximum risk.
- They are available only to large investors and banks.
- They are always backed by private company assets.

<question>What are dividends?

- They are a payment of a portion of the company's net profit for the financial year.
- They are mandatory payments made by the company for using borrowed funds.
- They are a tax paid by the company for participating in the stock market.
- They are funds allocated by the company to cover shareholder losses.

<question>Name two types of markets.

- Primary market and secondary market.
- Financial market and commodity market.
- Local market and international market.
- Demand market and supply market.

<question>What is a coupon?

- It is compensation for the use of your money.
- It is a document confirming the right to own stocks.
- It is a tax on investment income.
- It is a fixed fee for participating in trades.

<question>Under what condition a company does not pay dividends?

- When there is a negative profit.
- When the stock price is high.
- When there are debts to banks.
- When production volume increases.

<question>Which bonds are not subject to income tax?

- Municipal bonds.
- Government bonds.
- Corporate bonds.
- <variantright>Tax-Exempt Bonds.

15. Introducing students to the syllabus

I have read and agree with the requirements of the discipline «PFL 6004 Fundamentals of Financial Literacy».

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