

**The Government of the Russian Federation  
Federal State Autonomous Institution for Higher Professional  
Education National Research University Higher School of Economics  
St. Petersburg Branch  
St. Petersburg School of Economics and Management**

**Course Syllabus  
Financial Technology**

Area of Studies: 38.04.08 “Finance and Credit”

Level: Master

Master Programme “Finance”

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Recommended by the Head of the Students’ Office for Master in Finance Master Programme

Neklyudova M.A. \_\_\_\_\_ “\_\_\_” \_\_\_\_\_ 20\_\_

Approved by the Academic Council of Master in Finance Master Programme

On 30th August 2018 # 1-2018/19

Academic director: Rogova E.M. \_\_\_\_\_ “\_\_\_” \_\_\_\_\_ 20\_\_

St. Petersburg, 2018

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## Course Syllabus

Title of the course	Financial Technology				
Title of the Academic Programme	All Master Programmes				
Type of the course	Elective				
Prerequisites	-				
ECTS workload	3				
Total indicative study hours	Directed Study	Self-directed study	Total		
	32	76	108		
Course Overview	The discipline is focused on substance and different models of FinTech functioning. Students will gain knowledge on what types of FinTech are identified, developed, organized and implemented in the world and Russian organization. The course includes topics covering different aspects of not only FinTech's efficiency evaluation, but, as well as, the different aspects of their integration. The discipline aims to provide students with the understanding how to generate, maintain, and develop FinTech in organizations. Thus discipline also introduces students to the specifics of FinTech’s risks for traditional financial organizations.				
Intended Learning Outcomes (ILO)	Know basic models of FinTech, the role of FinTech in a company’s functioning. Understand the principles of FinTech’s implementation. Analyse the influence of Fintech on world market of financial services. Able to evaluate risks of FinTech’s implementation. Understand perspectives and problems of using FinTech.				
Teaching and Learning Methods	The course consists of lectures (12 hours) and tutorials (20 hours). The tutorials involve student presentations (in small groups), problems solving, case analysis and the individual assignment (project).				
Content and Structure of the Course					
№	Topic / Course Chapter	Total	Directed Study		Self-directed Study
			Lectures	Tutorials	
1	Nature of FinTech <ul style="list-style-type: none"><li>- Nature of FinTech</li><li>- Evolution of FinTech</li><li>- Why did FinTech emerge</li><li>- Classification of FinTech</li><li>- Advantages and risks</li></ul>	16	2	2	12
2	Technological Basis of FinTech <ul style="list-style-type: none"><li>- Authentication</li><li>- P2P-technologies</li><li>- Blockchain</li><li>- Robotization</li></ul>	16	2	2	12
3	Cryptocurrencies <ul style="list-style-type: none"><li>- Mining market</li><li>- Legal regulation</li></ul>	18	2	4	12

	- Local cryptocurrencies				
4	FinTech Market Players <ul style="list-style-type: none"><li>- Traditional financial companies</li><li>- Non-traditional financial companies</li><li>- Non-financial traditional companies</li><li>- Non-financial non-traditional companies</li></ul>	18	2	4	12
5	FinTech: Traditional & non-Traditional Institutions <ul style="list-style-type: none"><li>- What is the future of the financial industry?</li><li>- Evolution's ways of financial industry</li><li>- Possible models of coexistence</li><li>- Legal regulation and self-regulation</li></ul>	20	2	4	14
6	Prospects for Using Innovative Financial Technologies in Different Countries	20	2	4	14
Total study hours		108	12	20	76
Indicative Assessment Methods and Strategy		Students' progress will be measured by students' activities in making team's project (50%) and a final exam. The final exam will take the form of defending projects that amounts to 50% of the final grade. <b>Assessment</b>			
		Type of testing	Form of testing	Parameters	
		Current (50%)	Homework	Presentation the research's results by home task	
		Final (50%)	Exam	Final presentation of student teams' project	
		<b>Tasks to seminars:</b> <ul style="list-style-type: none"><li>1. Describing and explaining why did you choose such country based on the first lecture materials</li><li>2. Analysis of countries' technological situation</li><li>3. Analysis of countries' situation in the field of cryptocurrencies</li><li>4. Analysis of countries' situation in the field of different players of FinTech market</li><li>5. Analysis of countries' situation in the field of co-existence of different traditional and FinTech institutions and describing possible risks for both types of actors</li><li>6. Describing and explaining of what FinTech development's direction will be the most important for different countries and why (based on the all seminars materials).</li></ul>			
Readings / Indicative Learning Resources		Main textbook			

	<p>Banking Beyond Banks and Money. A Guide to Banking Services in the Twenty-First Century. Tasca, P., Aste, T., Pelizzon, L., Perony, N. (Eds.). N. Y.: Springer, 2016.</p> <p><b>Additional readings</b></p> <p>Long Chen (2016) From Fintech to Finlife: the case of Fintech Development in China, China Economic Journal, 9:3, 225-239.</p> <p>Daniela Gabor &amp; Sally Brooks (2016): The digital revolution in financial inclusion: international development in the fintech era, New Political Economy.</p> <p>Henning Kehr, Graham Tonkin, Reiner Bihler. The Unbanked Don't Need More Brick and Mortar Banks. In: Shaping the Digital Enterprise. Trends and Use Cases in Digital Innovation and Transformation. Editors: Gerhard Oswald, Michael Kleinemeier. N. Y.: Springer, 2017.</p> <p>Erik Maier. (2016). Supply and demand on crowdlending platforms: connecting small and medium-sized enterprise borrowers and consumer investors. Journal of Retailing and Consumer Services, 33: 143-153.</p> <p>Samer Takieddine, Jun Sun (2015). Internet banking diffusion: A country-level analysis. Electronic Commerce Research and Applications, 14: 361-371.</p> <p>HM Treasury, EY. UK Fintech. On the cutting edge. An evaluation of the international FinTech sector, 2015.</p> <p>KPMG. The Pulse of Fintech, Q1 2016.Global Analysis of Fintech Venture Funding.</p>
Academic Support for the Course	For achieving targets of discipline teachers need to be integrated into an interconnected set of content of lectures, seminars and independent work of masters. The aim of the discipline, as mentioned earlier, is the formation of universal and professional competences in the field of FinTech's development of companies.
Facilities, Equipment and Software	For the successful development of the discipline, the student uses the following software: Microsoft Office package (Word, Excel, PowerPoint), Acrobat Reader.LCD projector
Course Instructors	Ivan Kotliarov Vitalii Lipatnikov

### Intended Learning Outcomes (ILO) Delivering

Programme ILO	Course ILO	Teaching and Learning Methods for delivering ILO	Indicative Assessment Methods of Delivered ILO
ILO8 Take the responsibility and persuade the audience in the efficiency and reasonability of the decisions	To set of theoretical knowledge necessary to understand the nature of FinTech and to	Individual projects Group projects and discussions Real-life tasks Cases	Reports on projects Individual assignments Exam

	effectively manage FinTech companies and FinTech projects. To develop skills of using the analytical apparatus necessary for the purposes of FinTech management and preparing presentations about FinTech projects.		
ILO10 Demonstrate an innovative, open and ethical mindset	To understand main innovative features of FinTech and to know ethical values that are central in FinTech revolution. To be able to find new opportunities on FinTech market	Group discussions Real life tasks Cases	Individual assignments Exam

## Course Content

### **Topic 1. Nature of FinTech**

Nature of FinTech. Predecessors of FinTech. Stages of Evolution of FinTech. Why did FinTech emerge.

Different types of FinTech.

Advantages and risks of FinTech for main stakeholders.

### **Topic 2. Technological Basis of FinTech**

Authentication. Virtual cards. P2P-technologies. Blockchain and smart contracts. Robotization and automation.

### **Topic 3. Cryptocurrencies**

Nature of cryptocurrencies. Mining. Forging. Legal regulation. Local cryptocurrencies. Initial Coin Offering (ICO). Regulation of ICO.

### **Topic 4. FinTech Market Players**

Main types of FinTech market players. Non-financial institutions entering financial market. Business strategies of different types of FinTech market players.

### **Topic 5. FinTech: Traditional & non-Traditional Institutions**

Risks of FinTech for traditional financial institutions. Strategies of adaptation of traditional institutions to FinTech. Models of coexistence of traditional and non-traditional financial institutions. Legal regulation and self-regulation of FinTech.

### **Topic 6. Prospects for Using Innovative Financial Technologies in Different Countries**

Local models of evolution of financial markets. Local models of regulation of FinTech. FinTech: global and local dimensions

## **A SAMPLE PLAN OF TUTORIALS**

### **Tutorial 1. Nature of FinTech**

The discussion on the choice of a national FinTech market for future analysis

### **Tutorial 2. Technological Basis of FinTech**

We discuss the technological level of FinTech in different country with examples of FinTech companies and concrete financial technologies

### **Tutorial 3. Cryptocurrencies**

We analyze practical cases of different cryptocurrencies and their regulation in different countries

### **Tutorial 4. FinTech Market Players**

The discussion of different business strategies used by FinTech market players

### **Tutorial 5. FinTech: Traditional & non-Traditional Institutions**

Discussion of strategies of coexistence of FinTech and traditional financial institutions

### **Tutorial 6. Prospects for Using Innovative Financial Technologies in Different Countries**

Analysis of the general situation of FinTech in different countries.

## Assessment Methods and Criteria

## Assessment Methods

Types of Assessment	Forms of Assessment	Modules			
		1	2	3	4
Formative Assessment	Test				
	Essay				
	Report/Presentation			*	
	Project			*	
	In-class Participation			*	
	Other (write appropriate control forms for the course)			*	
Interim Assessment (if required)	Assignment (e.g. written assignment)				
Summative Assessment	Exam			*	

## Assessment Criteria

### In-class Participation

Grades	Assessment Criteria
«Excellent» (8-10)	A critical analysis which demonstrates original thinking and shows strong evidence of preparatory research and broad background knowledge.
«Good» (6-7)	Shows strong evidence of preparatory research and broad background knowledge. Excellent oral expression.
«Satisfactory»(4-5)	Satisfactory overall, showing a fair knowledge of the topic, a reasonable standard of expression. Some hesitation in answering follow-up questions and/or gives incomplete or partly irrelevant answers.
«Fail» (0-2)	Limited evidence of relevant knowledge and an attempt to address the topic. Unable to offer relevant information or opinion in answer to follow-up questions.

### Project Work

Grades	Assessment Criteria
«Excellent» (8-10)	A well-structured, analytical presentation of project work. Shows strong evidence and broad background knowledge. In a group presentation all members contribute equally and each contribution builds on the previous one clearly; Answers to follow-up questions reveal a good range and depth of knowledge beyond that covered in the presentation and show confidence in discussion.
«Good» (6-7)	Clearly organized analysis, showing evidence of a good overall knowledge of the topic. The presenter of the project work highlights key points and responds to follow up questions appropriately. In group presentations there is evidence that the group has met to discuss the topic and is presenting the results of that discussion, in an order previously agreed.
«Satisfactory»(4-5)	Takes a very basic approach to the topic, using broadly appropriate material but lacking focus. The presentation of project work is largely unstructured, and some points are irrelevant to the topic. Knowledge of the topic is limited and there may be evidence of basic misunderstanding. In a group presentation, most of the work is done by one or two students and the individual contributions do not add up.
«Fail» (0-2)	Fails to demonstrate any appropriate knowledge.

### Written Assignments (Essay, Test/Quiz, Written Exam, etc.)

Grades	Assessment Criteria
«Excellent» (8-10)	Has a clear argument, which addresses the topic and responds effectively to all aspects of the task. Fully satisfies all the requirements of the task; rare minor errors occur.
«Good» (6-7)	Responds to most aspects of the topic with a clear, explicit argument. Covers the requirements of the task; may produce occasional errors.
«Satisfactory» (4-5)	Generally addresses the task; the format may be inappropriate in places; display little evidence of (depending on the assignment): independent thought and critical judgement include a partial superficial coverage of the key issues, lack critical analysis, may make frequent errors.
«Fail» (0-2)	Fails to demonstrate any appropriate knowledge.