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Course Package “FinTech”

Work Package	WP3: Development of Course Materials for the Reformed MA Programmes, Deliverable 3.1
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Document History

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1	13.01.2020	Assoc. Prof. Ph. D. Victoria Cociug	Initial version; fist redaction.
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1. General information about the course

Explanation: Please fill in the table below.

Title of the course (as specified in the reformed curriculum)	FinTech
Name of the teacher	Assoc. Prof. Ph. D. Victoria Cociug
Novelty of the course (please select as appropriate)	This course is a newly developed course (new in the curriculum)
Year of the course in the curriculum	I
Semester of the course in the curriculum	II
Language of instruction of the course	English
Number of ECTS credits	5

2. Learning outcomes of the course

Explanation: Please specify the learning outcomes of the course.

FinTech course (*here and after*: the course) provides an introduction to the theory and practice of FinTech, as well as, it has been designed to educate students in a systemic approach to understanding disruption in the context of digitalisation to the disruption across an array of dimensions: money, markets, marketplaces, and infrastructure with the ability to identify opportunities for disruption in the financial services sector, and enables them to build better financial services firms with an opportunity to launch new FinTech ventures and harness new technology.

The course gives a broad understanding on the current and emerging technologies around money and payments, markets and consumer experience, and explores key ideas, principles, and frameworks around FinTech. It covers the economic, regulatory, and technological impact of the fintech industry.

Learning outcomes in regarding Blooms-taxonomy is:

Comprehension

- Know history and reasons of development of FinTech.
- Know nature and economic aspects of FinTech.
- Understand principles of functioning of FinTech products.
- Understand the complexity of the payment infrastructure
- Understand the types of money that exists in cyber world,
- Understand the model of lending and crowdfunding
- Understand perspectives and problems of using FinTech

Application

- Describe the changes that influence the financial sector,
- Identify and explain the key payment instruments and how they function,
- Recognize changes in the regulatory frameworks and how they inhibit or promote innovation.

Analysis

- Evaluate the implementation risks in FinTech for providers and customers of financial services
- Analyze factors of evolution of FinTech.

Synthesis

- simulation of a token issue on virtual platforms following their rules
- Design a presentation of the results of case study

After completing the course, students may have the opportunity to work in many roles, at least including:

- FinTech/InsurTech Specialist
- Innovation Department Specialist
- Financial Investigator
- Investment Advisor.

Starting with the idea that FinTech represent a line of business based on using software to provide financial services and it's revolutionising how financial services companies perform their business, this field is experiencing such rapid growth that many financial sector regulators are calling for new regulatory measures aimed at promoting "responsible innovation", generating demand for FinTech specialists. As well, FinTech is transforming the traditional business model creating opportunities for entrepreneurs looking to start businesses as well as for existing companies looking to expand.

3. Syllabus of the course

Explanation: Please provide a detailed syllabus of the course (broken down in weeks) – maximum 2 pages

Topic	Number of week	Subjects	Number of class hours	Including		Individual study, hours
				Lectures	Seminars / practice	
LECTURE 1. INTRODUCTION AND FUNDAMENTALS OF FINTECH AND THE DIGITIZATION OF THE FINANCIAL INDUSTRY	1	1.1. Concept and introduction to financial technologies 1.2. Macro-environmental factors or competitive dynamics that impact FinTech innovation <i>Individual study: Review of the areas of application of technological innovations in finance</i>	2	1	1	4
	2	1.3. Trends in FinTech Industry and Opportunities provided by different areas of the FinTech ecosystem. <i>Individual study: Review of the trends in financial technology innovations</i>	2	1	1	4
LECTURE 2. DISTRIBUTED LEDGER TECHNOLOGIES (DLT)	3	1.2. Types of Distributed Ledger Technologies (DLT) 2.2. Blockchain technology as one type of DLT. <i>Individual study: analysis of the differences and similarities between different types of DLT</i>	2	1	1	6
	4	2.3. Smart contracts 2.4. Consensus algorithm <i>Individual study: Review of the trends in financial technology innovations</i>	2	1	1	6

LECTURE3. DIGITALISATION OF THE MONEY AND PAYMENTS	5	3.1 Payments and Retail Transactions <i>Individual study: Review of the trends in digitalization of the payment</i>	2	1	1	6
	6	3. 2. Cryptocurrencies. Role of tokenization of assets and fiat money <i>Individual study: Study the areas of application of digital tokens and their interplay with fiat money. Study the literature of policy of international policy makers.</i>	2	1	1	6
	7	3.3. Market evolution/ potential areas of application <i>Individual study: Review of the recommended literature. Review of approaches of different countries in regulating AltFi platforms and how this responses has influenced the development of the respective markets</i>	2	1	1	6
	8	3.4. Investment in the cryptocurrency's market <i>individual study: Identifying the investment possibilities in the cryptocurrency markets</i>				
LECTURE 4. LENDING AND CROWDFUNDING	9	4.1.Lending and Personal Finance <i>individual study:identifying the possibilities of lending on online platforms for individuals</i>	2	1	1	6
	10	4.2.FinTech Business Applications. ICO. 4.3.Crowd-Funding and Business Financing <i>individual study:identifyingthe possibilities of lending and/or crowdfunding on online platforms for business</i>	2	1	1	6
LECTURE 5. FINTECH INNOVATIONS AT BANKS	11	5.1. The decline of the role of traditional banks due to open banking 5.2. Banking Infrastructure, Tools, and Logistics <i>Individual study: Review of the</i>	2	1	1	4

		<i>recommended literature</i>				
	12	5.3. Shell banks, shadow banking and FinTech 3.4.Pricing and costs of shadow banks and Fintech <i>individual study: Analysis the experience of banks that implement Fin Tech</i>	2	1	1	6
	13	5.5.Opportunities and Risks. <i>individual study: Analysis of the types of risks and their management possibilities</i>	2	1	1	6
	14	5.6. Potential challenges for banking supervisors and banks. Basel III+ and regulatory responses. <i>Individual study: Review of the recommended literature. Study the topic of challenges in supervision of FinTech developments in banks</i>				
LECTURE 6. Infrastructure and Regtech	15	6.1. Legal Framework conditions and RegTech <i>Individual study: Review of the legal responses on FinTech in different countries</i>	2	1	1	6
	16	6.2. Impact of fintech innovations on financial industry and markets 6.3. Impact of fintech regulation on innovation <i>Individual study: Study the practice of different countries of how regulatory response has impacted the development of FinTech industry and economic indicators in the respective market.</i>	2	1	1	6
Total			32	16	16	66

4. Teaching methodology of the course

Explanation: Please explain the teaching methodology and pedagogical approaches of the course – maximum ½ page

Course involves utilisation of *student-centred learning approach*, including *Problem-based learning, discussion, seminars, essay/reports, lectures, debate, panels, brainstorming etc.*

Lecture and discussion method

During the theoretical classes, teaching will focus on oral discussions and power point presentation based on information by topics according to the curricula, which includes principles, concepts, ideas and all theoretical knowledge about a given topic in Fintech.

The seminars classes involves analyses of theoretical concepts and approaches, some discussions, question, and answer period to allow students to be involved actively and provides an opportunity to monitor students learning.

During the discussions, students demonstrate how far do they agree with a view and substantiate their answer with appropriate reasons. At the end of theoretical topics, presentations it is included a multiple choice small test quiz with answers.

Activity from teacher to students

- Students solve case studies, issues simulations, answer questions, formulate questions of their own, discuss, explain, debate, or *brainstorm* during seminar classes.
- Students work in teams (4-6 people, organizing in team by themselves) on problems and projects under conditions that assure both positive interdependence and individual responsibility. It is mandatory for each student to be involved in the writing of the report.

Teaching resources: textbooks, lecture notes, projector, computer, etc.

- All lectures are on Moodle platform. Materials for student's individual work are sent to group student's mail.
- Each week professor has two hours for individual students' consultation. At the beginning of the course, students are informed about lecturer's office hours, which depend from the lecturer's schedule of lectures/seminars and are specified for each academic year.
- Students can find different manuals, course books, presentations etc.

5. Labour market relevance of the course

Explanation: Please explain the labour market relevance of the course (linked to findings of WP1) – maximum ½ page

Starting with the idea that FinTech represent a line of business based on using software to provide financial services and it's revolutionising how financial services companies perform their business, this field is experiencing such rapid growth that many financial sector companies generating demand for FinTech specialists. As well, FinTech is transforming the traditional business model creating opportunities for entrepreneurs looking to start businesses as well as for existing companies looking to expand.

The employment area of students who have studied the course Fintech is vast and can be divided into areas:

Bank:

- in the payments department
- in the financial analytics department
- in the microcredit department
- in the storage and data analysis department, necessary for risk identification and assessment
- Innovation department

Microcredit and crowdfunding companies:

- Analytical department
- Risk management department

Financial market regulators

Private companies

After completing the course, students may have the opportunity to work in many roles, at least including:

- Innovation Department Specialist
- Financial Investigator
- Investment Advisor.
- Finance Analyst
- Business Analyst
- Fintech Consultant
- Product Manager
- Data Analytic
- Trading Technologist
- Account Manager (Fintech)

6. Assessment and grading

Explanation: Please explain the form of assessment of the course – maximum ½ page

Practical modality of final assessment: writing paper (descriptive and/or multiple choice test and/or case study solving etc.), oral examination by choosing task cards, etc.

The final grade consist of two components:

Current performance(formative assessment)- 60%;

Examination mark(final evaluation) – 40%.

7. References

Explanation: Please provide the main references and recommended reading for the course – maximum 1 page

1. Bank of International Settlements (BIS), *FinTech credit*. Market structure, business models and financial stability implications., 2017, available: http://www.bis.org/publ/cgfs_fsb1.pdf
2. BIS, Committee on Payments and Market Infrastructures, *Digital Currencies*, November, 25, 2015, available: <https://www.bis.org/cpmi/publ/d137.pdf>
3. BUCHAK, Greg, and others, *Fintech, regulatory arbitrage, and the rise of shadow banks*, Federal Reserve Bank of New York Staff Reports, no. 580, October 2012;
4. DORFLEITNER, G., *FinTech in Germany*, Springer International Publishing AG, 2017.
5. Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (Text with EEA relevance)
6. Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC (Text with EEA relevance)
7. European Banking Authority (EBA), *Discussion Paper on the EBA's approach to financial technology (FinTech)*, August, 4, 2017, available: <https://www.eba.europa.eu/documents/10180/1919160/EBA+Discussion+Paper+on+Fintech+%28EBA-DP-2017-02%29.pdf>
8. EBA, *Opinion of the European Banking Authority on lending-based crowdfunding*, 26 February 2015, available: <http://www.eba.europa.eu/documents/10180/983359/EBA-Op-2015-03+%28EBA+Opinion+on+lending+based+Crowdfunding%29.pdf>

9. ECB, *Virtual currency schemes – a further analysis*, February 2015, available: <https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemesen.pdf> ;
10. HUANG, Wenqian, *Central Counterparty Capitalization and Misaligned Incentives*, January 26, 2017, available: https://www.ecbforum.eu/uploads/originals/2017/yes/files/EFCB_2017_Wenqian%20Huang_PAPER.pdf ;
11. *IOSCO Research Report on Financial Technologies (Fintech)*, International Organization of Securities Commissions , February, 2017
12. Law on payment services and electronic money no. 114 of 18.05.2012 Published: Monitorul Oficial al Republicii Moldova no.193-197/661 of 14.09.2012
13. Office of the Comptroller of the Currency (OCC), *Supporting Responsible Innovation in the Federal Banking System: An OCC Perspective*”, March 2016 ,available: <https://www.occ.gov/publications/publications-by-type/other-publications-reports/pub-responsible-innovation-banking-system-occ-perspective.pdf>.
14. Regulation on the activity of non-bank electronic money issuers and non-bank payment service providers, approved by the DCA of the NBM no. 123 of June 27, 2013
15. Regulation (EC) No 924/2009 of the European Parliament and of the Council of 16 September 2009 on cross-border payments in the Community and repealing Regulation (EC) No 2560/2001
16. Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012
17. TOBIAS, ADRIAN, ASHCRAFT, ADAM B., *Shadow banking: A review of the literature*."In Banking Crises, Palgrave Macmillan UK, 2016;

8. Course assignments

Explanation: Please provide two assignments for the course (e.g. group work, project, essay, case study, homework).

8.1 Assignment 1

Elaborate a comparative analysis of regulatory responses of authorities in different countries (at least 5) and or supranational regulatory bodies.

8.2 Assignment 2

Elaborate an insight of development of venture funding in the context of FinTech development.

To case study

- Find the project needed to be developed
- Find the ICO platform
- Study the platform's criteria for ICO
- Write the White Papers and Road Map based on this criteria
- Analyze the efficiency of ICO using the evaluation indicators

Annex: Presentation slides

Explanation: Please provide presentation slides for your course (this can be done in a separate document, e.g. Power Point (Minimum: 25 slides))