



# HSE MASSIVE OPEN ONLINE COURSES (MOOCS) 2014–2015

Moscow  
November 2015



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# FROM THE RECTOR



The advent of online education can be compared to the transition from hand copied books in medieval monasteries to mass printing. Today eLearning stands a good chance to produce a revolution, and its significance can be compared to the invention of the printing machine ... Online education gives an opportunity to study under the guidance of the best domestic and foreign professors, and at a minimum cost. It's up to the student to choose the teacher they like, which is rarely possible at their home university. It stretches the horizons of education immensely.



**Yaroslav Kuzminov**  
HSE Rector

# INTRODUCTION

This report contains information on the first results of the project of the National Research University Higher School of Economics dedicated to the development of Massive Open Online Courses (MOOCs). From February 2014 to September 2015 HSE has launched 25 MOOCs on open education platforms, including 21 on the Coursera global education platform and 4 on the Russian National Open Education Platform.

At the moment HSE continues to work consistently and extensively on the development of eLearning technologies to support and re-launch the existing courses. This report, however, includes data analysis only for online courses held from February 2014 to September 2015.

We expect that this report will open the way to regular presentations of HSE achievements in the field of eLearning.

# ACKNOWLEDGEMENTS

We express our deepest gratitude to the Chairman of HSE Supervisory Council Mr. Herman Gref for the support, which Sberbank provided during the launch of HSE MOOCs project on Coursera platform and continues to provide annually.

We would like to kindly thank all those who, though not being official members of our team, contributed a lot to our efforts to make our courses even more relevant and exciting. We are very grateful to our voluntary participants and experts: Tatiana Golubeva, Anna Skaya, Dirk Meissner, Margaret Sullivan, Khou Kun, Michael Johnston, Samuel McClure, Brian Knutson and Sebastian Horn.

We also want to express our great appreciation for gracious and patient support, consultations and kind assistance provided by the Coursera team — Inessa Roman, Nikhil Kumar, Elaine Chow, and to all members of the Coursera technical support team.

Supported by Sberbank



# MOOCs and Higher School of Economics

Massive Open Online Courses (MOOCs) is an educational technology allowing tens of thousands of learners to take an online course simultaneously. Today the audience of leading educational providers includes millions of users (for example, the audience of Coursera is 15 million people). The world's top universities offer their MOOCs delivered by their best faculty members, the most esteemed specialists and researchers in their area.

## Coursera

HSE hosted its first massive open online courses on the Coursera in 2014. Collaborating with the world's top universities, Coursera is currently the most popular, widely used and reputable project in the field of open education. HSE launching online courses on Coursera is consistent with the University's social mission:

- Providing wide access to high-quality core courses in economics, sociology and management; making real the idea of equal access to good education irrespective of the place of birth and residence;
- Raising the prestige of Russian education worldwide, promotion of the HSE University brand;
- Responding to the demand in Russian-taught courses for Coursera Russian-speaking learners, expanding the sphere of influence of the Russian language and supporting education and study in Russian.

So far HSE has developed and launched 21 courses on Coursera. These courses can be subdivided into two launches by academic year — 2013/2014 and 2014/2015. These are mainly core courses in economics, mathematics and humanities. Both launches of courses were delivered as sessions, which implied fixed start and end dates for the course and deadlines for completing assignments. In the second half of 2014 Coursera introduced some major updates to the technological platform. First of all, these updates concerned the access mode for the courses, and new courses are now delivered in a new on-demand format. Learners can start the course at any moment and take as much time as they need to complete it. There have been some changes in the assessment system as well, and now learners can take tests practically as many times as they want. In 2015, two HSE courses were converted into on-demand mode: Introduction to Neuroeconomics: How the Brain Makes Decisions delivered by Professor Vasily Klucharev, and Financial Markets and Institutions delivered by Tenured Professor Nikolay Berzon. Introduction to Machine Learning, a course co-developed by HSE University and Yandex School of Data Analysis will start in January 2016. As at October 1, 2015, about 500,000 learners from 195 countries were enrolled in HSE courses on Coursera.

## National Open Education Platform

In 2015, HSE together with 7 other leading Russian universities: National Research Nuclear University “MEPhI”, Ural Federal University, Lomonosov Moscow State University, National University of Science and Technology MISiS, ITMO University, Saint Petersburg University and St. Petersburg Polytechnic University initiated a project aimed to create a National Open Education Platform. The project began in December 2014, when the Council for Open Education was set up at the initiative of the Ministry of Education and Science of the Russian Federation. Along with representatives of the above-mentioned universities, representatives of the Federal Service for Supervision in Education and Science and the Ministry of Education and Science became members of the Council, chaired by Dmitry Livanov, the Minister of Education and Science.

In April 2015, 8 leading universities established the National Open Education Platform Association to develop an eLearning platform in Russia. The platform is used for publishing online courses created by the members of the Association, facilitates the adoption of international standards, formulates its own requirements to the quality of online courses and collaborates with providers of higher educational programmes, which are implemented using online courses hosted on the platform. Development of the National Platform is financed by eight universities: each member of the Association is expected to invest 50 million roubles in the project during three years. Each course undergoes an internal expertise at a university, and a review by the Association to ensure compliance with the “Requirements and Recommendations for Online Courses on the National Open Education Platform”, co-developed by members of the Association. Upon successful completion of the course, learners get a course certificate, and credits for the course can be counted towards the students’ curriculum at any university in Russia. In the future students will be able to master a major part of their university programme online by taking courses on this platform. Courses in Demography, General Sociology, Organisational Behaviour and Organisation Theory were the first HSE courses on the platform. By the end of academic year 2015/2016 at least 10 HSE courses will be launched on the National Open Education Platform.



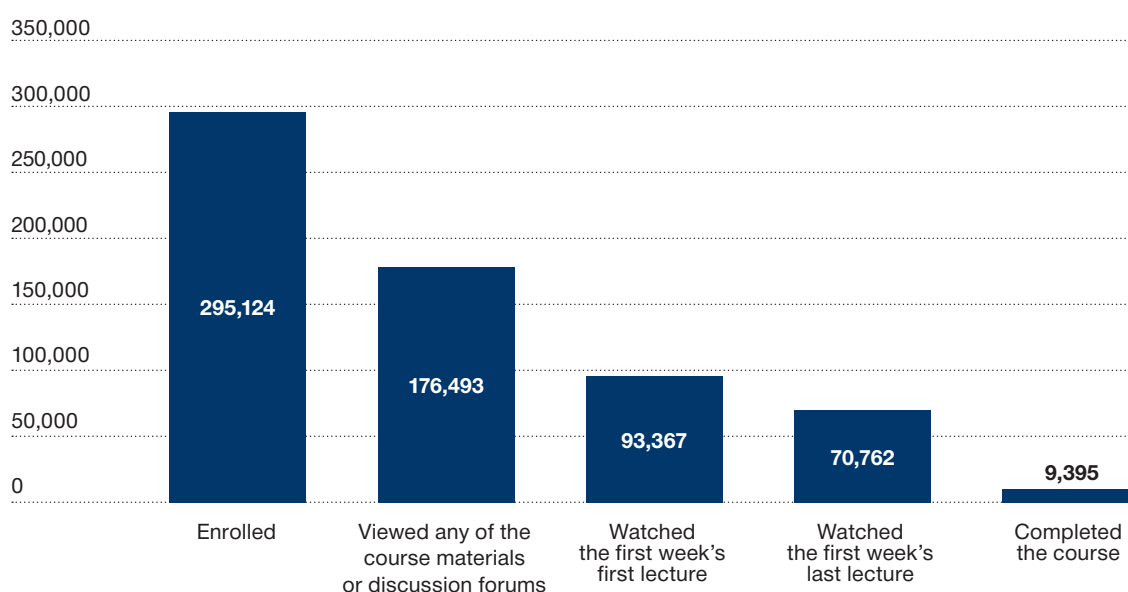
# HSE ONLINE COURSES IN FIGURES

## Analytics for the First Launch MOOCs on Coursera

The first launch is represented by 11 courses in 2013/2014 academic year (23.02.2014–25.09.2014):

- 1) History of Economic Thought
- 2) Microeconomics Principles
- 3) Industrial Organisation
- 4) Core Concepts in Data Analysis
- 5) Public Economics
- 6) Fundamentals of Corporate Finance
- 7) Introduction to Neuroeconomics: How the Brain Makes Decisions
- 8) Introduction to LaTeX
- 9) Macroeconomics
- 10) Understanding Russians: Contexts of Intercultural Communication
- 11) Financial Markets and Institutions

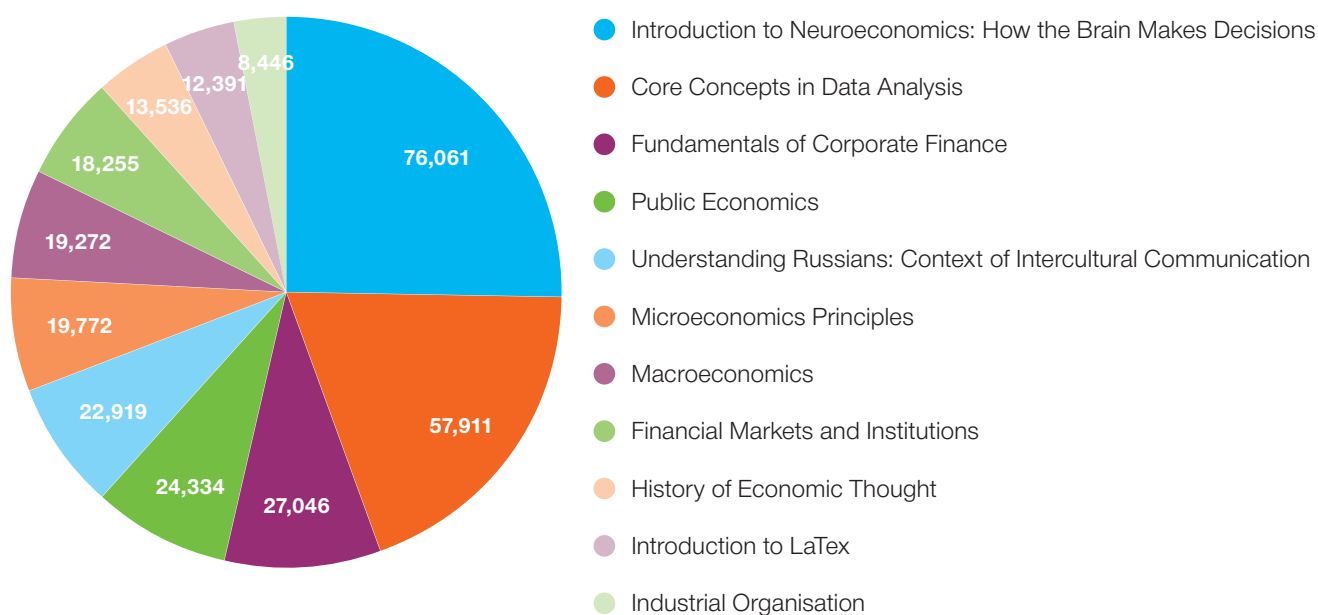
Four of these courses are delivered in English (*Core Concepts in Data Analysis*, *Public Economics*, *Introduction to Neuroeconomics: How the Brain Makes Decisions*, *Understanding Russians: Contexts of Intercultural Communication*), the other 7 are taught in Russian. During the first launch, 295,124 learners enrolled in HSE courses, 176,493 of them were active users (viewed any of the course materials or discussion forums), and 9,395 learners received a course certificate. For general information on the activity of users in the courses of the first launch, please see Figure 1.



**Figure 1.** Activity of users of the first launch courses



The largest number of learners enrolled in the English-taught courses *Introduction to Neuroeconomics: How the Brain Makes Decisions* and *Core Concepts in Data Analysis*, 76,061 and 57,911 learners, respectively. For information on the sign-up rates for other courses, please see Figure 2.



**Figure 2.** Users enrolled in the first launch courses

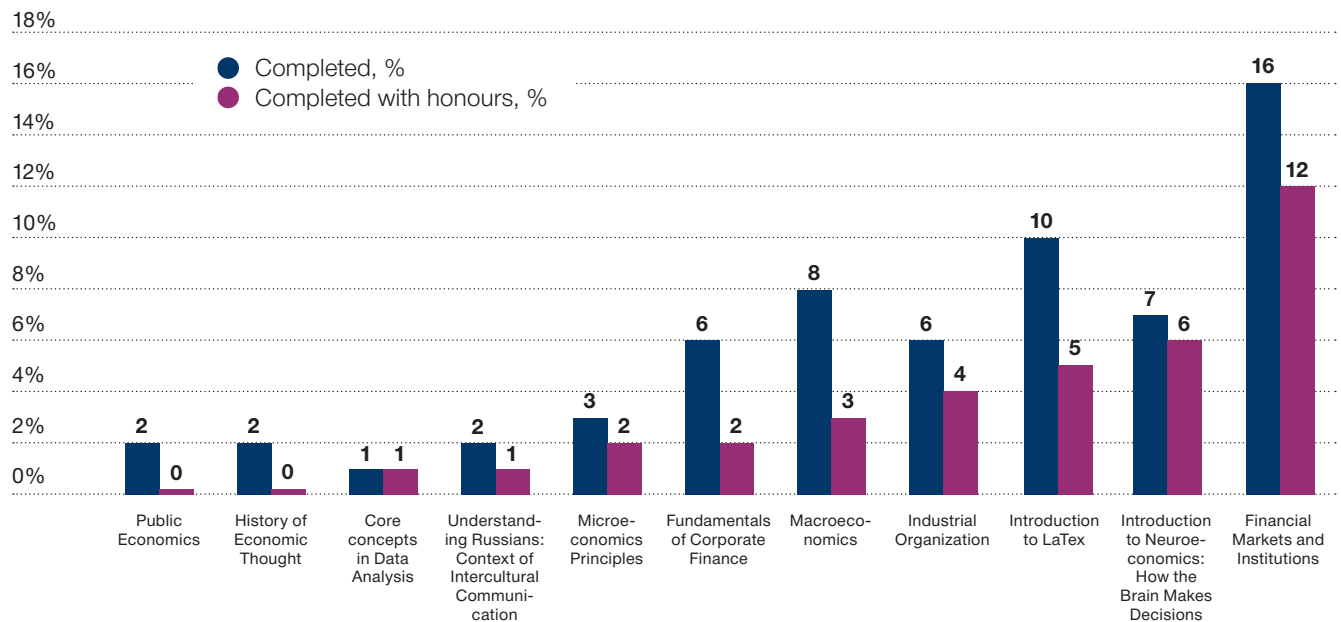
The largest share of learners who completed the course and got a certificate was fixed in *Financial Markets and Institutions* (16%) and *Introduction to LaTeX* (10%). Only 1% of learners successfully completed *Core Concepts in Data Analysis*. This is the lowest value for the first launch courses.

For more information on the number of users who enrolled, viewed any of the course materials or discussion forums and completed the first launch courses, please see Table 1.

**Table 1.** Activity of users of the first launch courses

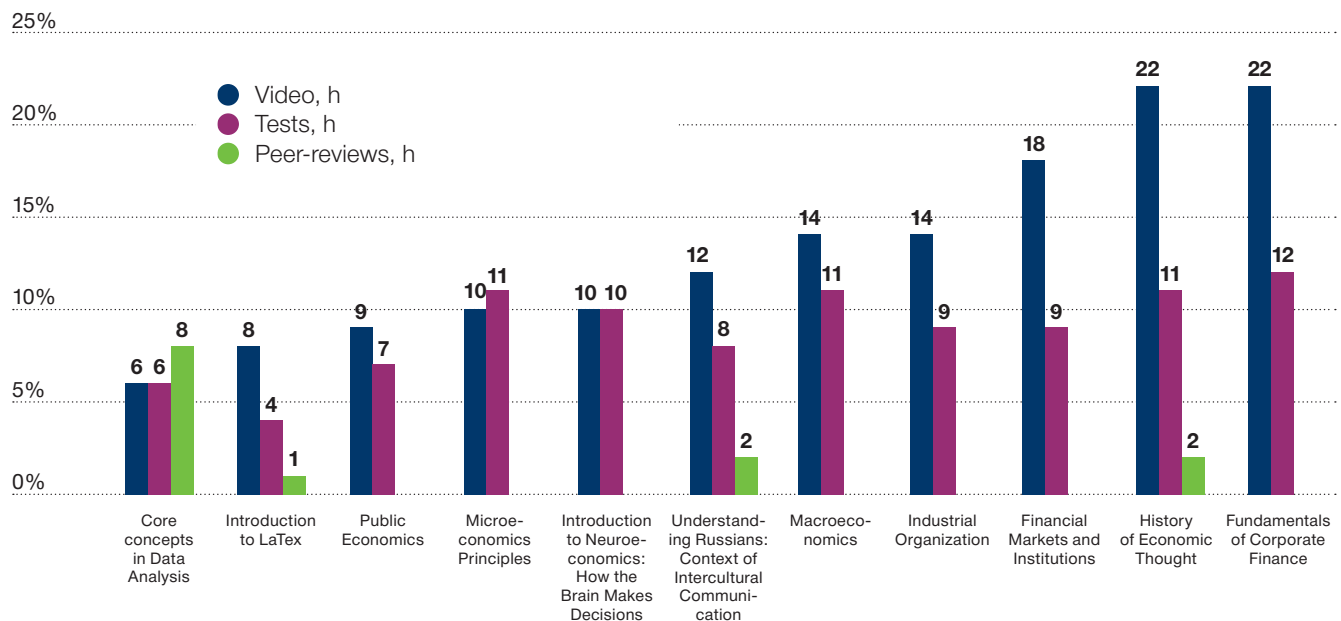
Course title	Sign-ups					Share of completers to active users, %
	Enrollments, users	Viewed any of the course materials or discussion forums, users	Watched the first week's first lecture, users	Watched the first week's last lecture, users	Completed the course, users	
Introduction to LaTeX	12,391	7,640	4,135	2,522	761	10
History of Economic Thought	13,536	8,719	4,815	3,092	137	2
Macroeconomics	19,272	10,805	6,026	4,490	812	8
Fundamentals of Corporate Finance	27,046	16,621	8,032	5,499	940	6
Microeconomics Principles	19,772	11,327	6,052	5,081	383	3
Industrial Organization	8,446	4,401	2,321	1,370	276	6
Financial Markets and Institutions	18,255	12,335	8,046	6,319	1,984	16
Core Concepts in Data Analysis	57,911	36,019	18,154	15,272	399	1
Introduction to Neuroeconomics: How the Brain Makes Decisions	76,061	44,857	23,752	19,457	3,214	7
Public Economics	24,334	12,827	5,831	3,968	296	2
Understanding Russians: Contexts of Intercultural Communication	18,100	10,942	6,203	3,692	193	2

The largest share of learners who received a certificate 'with honours' (12%) was in *Financial Markets and Institutions*. The lowest number of such certificates was awarded to learners of *History of Economic Thought* (0.3%) and *Public Economics* (0.4%). Please see Figure 3 for more information on certificates 'with honours' awarded to learners.



**Figure 3.** Certificates 'with honours' awarded to learners enrolled in the courses of the first launch

In total, courses of the first launch included 8,650 minutes of video, 98 tests and 13 assignments for peer review. Please see Figure 4 for more information on the produced course content.



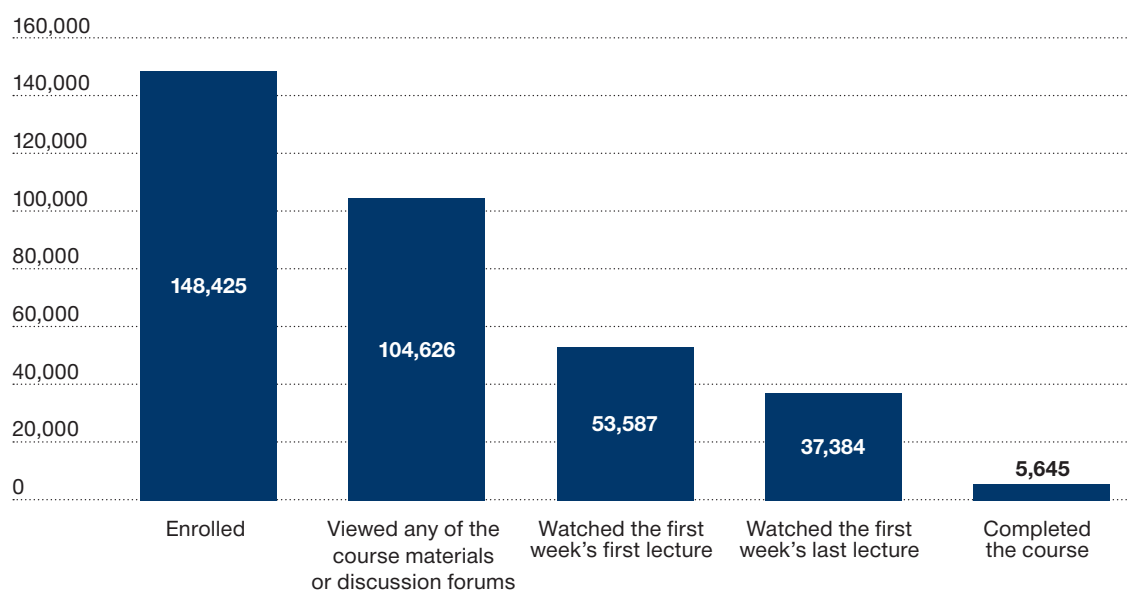
**Figure 4.** Quantitative characteristics of the content of first launch courses

## Analytics for the Second Launch of MOOCs on Coursera

The second launch is represented by 10 courses held in the academic year 2014/2015 (29.09.2014–17.09.2015):

- 1) Econometrics
- 2) Philosophy of Culture
- 3) Economics of Transition and Emerging Markets
- 4) Institutional Economics
- 5) Introduction to the Russian Tax Law
- 6) Linear Algebra
- 7) Comparative Politics
- 8) History and Theory of Media
- 9) Game Theory
- 10) Economics for Non-Economists

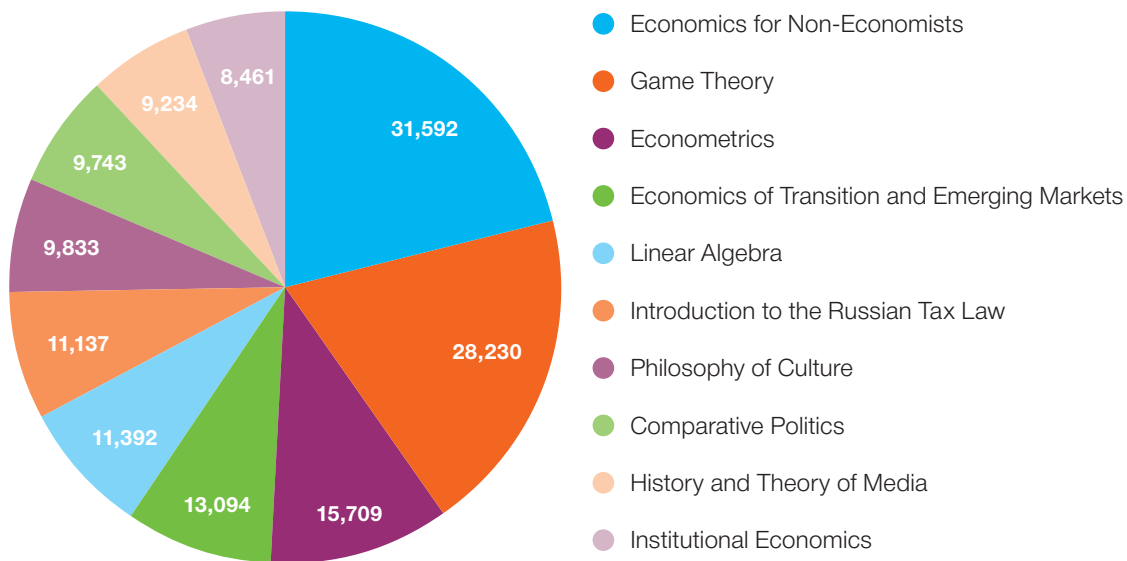
In the second launch, there were 9 Russian-taught courses and 1 course in English — *Economics of Transition and Emerging Markets*. During the second launch, 148,425 learners enrolled for HSE courses, and 104,626 among them were active users and viewed any of the course materials or discussion forums. 5,645 learners got course certificates. Please see Figure 5 for more information on the activity of users on the courses of the second launch.



**Figure 5.** Activity of users on the courses of the second launch



The largest number of users enrolled in *Economics for Non-Economists* and *Game Theory*: 31,592 and 28,230 learners, respectively. Please see Figure 6 for information on other second launch courses.



**Figure 6.** Users enrolled in the second launch courses

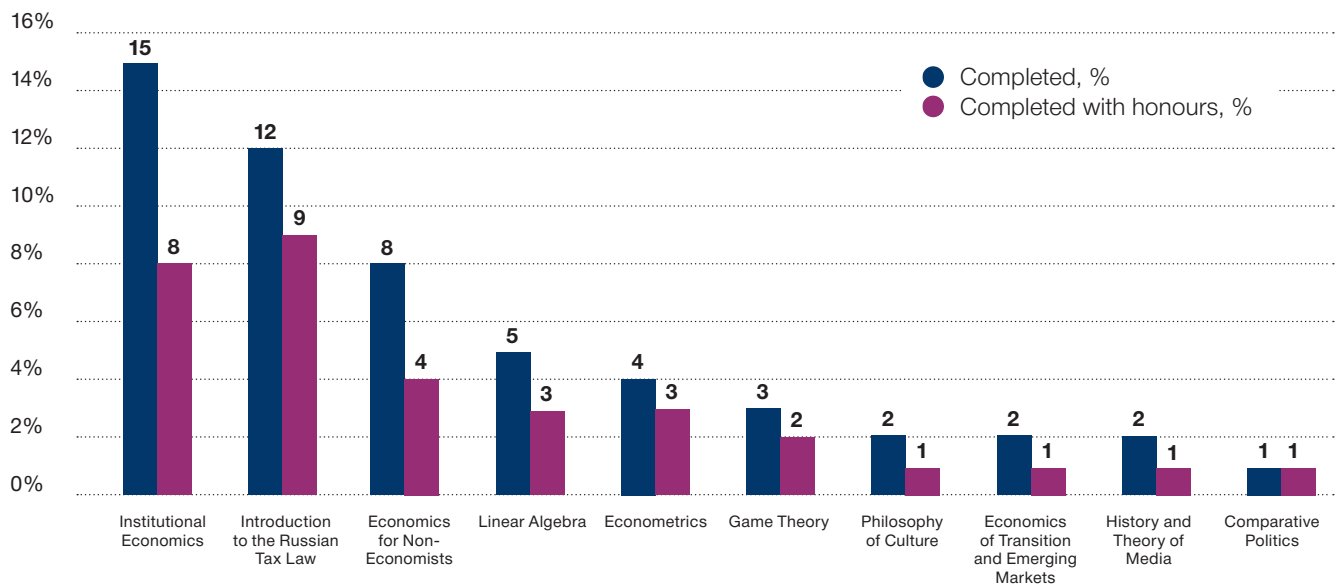
The largest share of learners who completed the course with a certificate was fixed in *Institutional Economics* (15%) and *Introduction to the Russian Tax Law* (12%).

Please see Table 2 for more information on the number of learners who enrolled, viewed any of the course materials or discussion forums and completed the courses of the second launch.

**Table 2.** Activity of users on the courses of the second launch

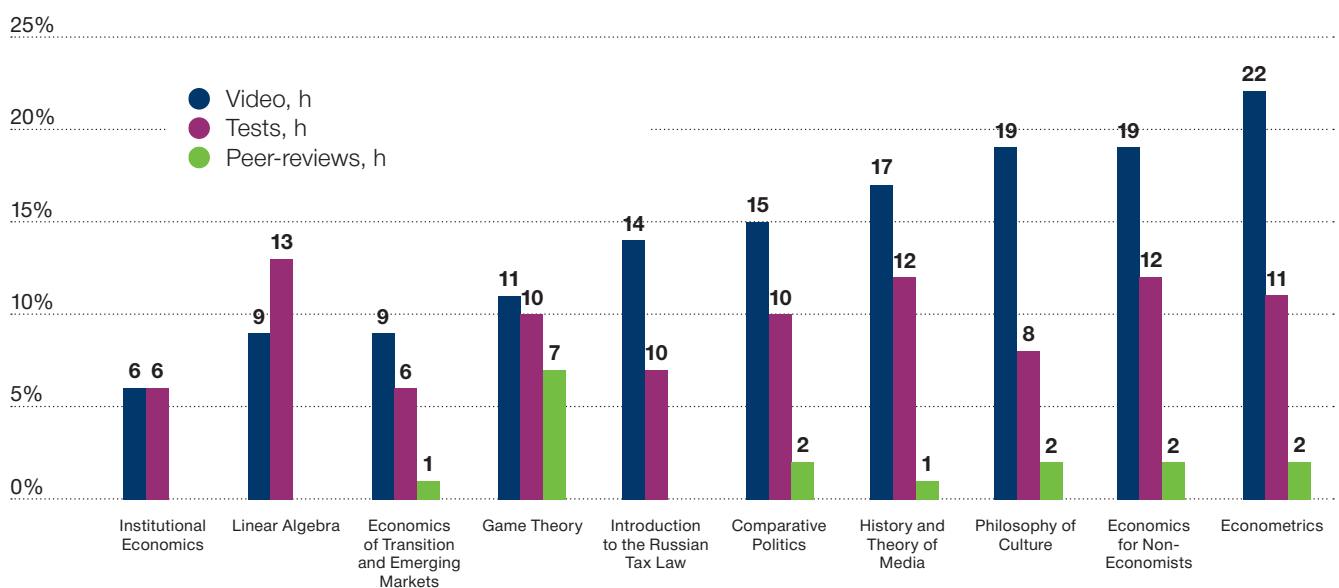
Course title	Sign-ups					Share of completers to active users, %
	Enrollments, users	Viewed any of the course materials or discussion forums, users	Watched the first week's first lecture, users	Watched the first week's last lecture, users	Completed the course, users	
Introduction to the Russian Tax Law	11,137	7,164	3,340	2,197	894	12
Institutional Economics	8,461	6,144	3,500	2,523	905	15
History and Theory of Media	9,234	6,494	3,265	2,041	100	2
Linear Algebra	11,392	7,873	3,868	2,656	390	5
Comparative Politics	9,743	5,918	2,845	1,556	88	1
Game Theory	28,230	20,792	11,596	9,330	639	3
Philosophy of Culture	9,833	6,996	2,957	1,723	171	2
Econometrics	15,709	10,119	4,523	2,413	410	4
Economics for Non-Economists	31,592	24,268	13,540	10,423	1,860	8
Economics of Transition and Emerging Markets	13,094	8,858	4,153	2,522	188	2

The largest share of learners who received certificates ‘with honours’ was in *Institutional Economics* and *Introduction to the Russian Tax Law* (8% and 9%). Please see Figure 7 for more information on the number of certificates ‘with honours’ awarded to learners of the second launch courses.



**Figure 7.** Certificates ‘with honours’ awarded to learners of the second launch courses

Courses of the second launch included 8,400 minutes of video, 94 tests and 16 peer-reviews. Please see Figure 8 for more information on the produced course content.



**Figure 8.** Quantitative characteristics of content of the second launch courses





## HSE Courses Learner Profile<sup>1</sup>

Learners of the first and second launch of courses were represented mainly by entry-level learners (33% and 37% in the first and second launch, respectively) or zero level learners (30% and 35%). The number of learners who described their training level as ‘average’ is slightly lower — 28% and 20%. The breakdown of learners by their training background level is given in Figure 9.

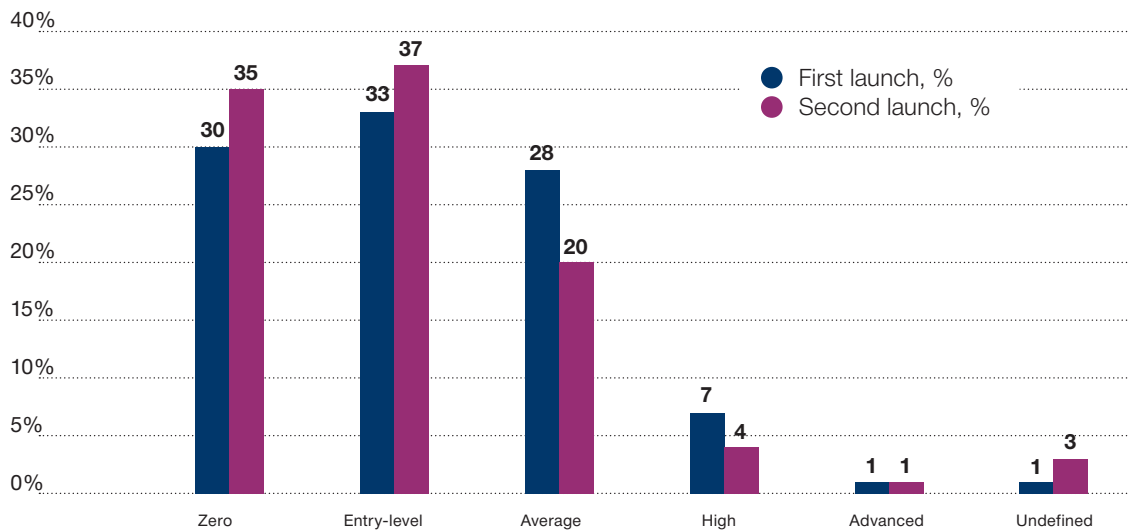


Figure 9. Breakdown of learners by their training background

More than a half of learners in both launches had previously attempted courses on Coursera. For more than a third of learners HSE course was the first one. 4% and 7% of learners in the first and second launch, respectively, were familiar with other MOOC platforms and had taken online courses before (please see Figure 10 for more information).

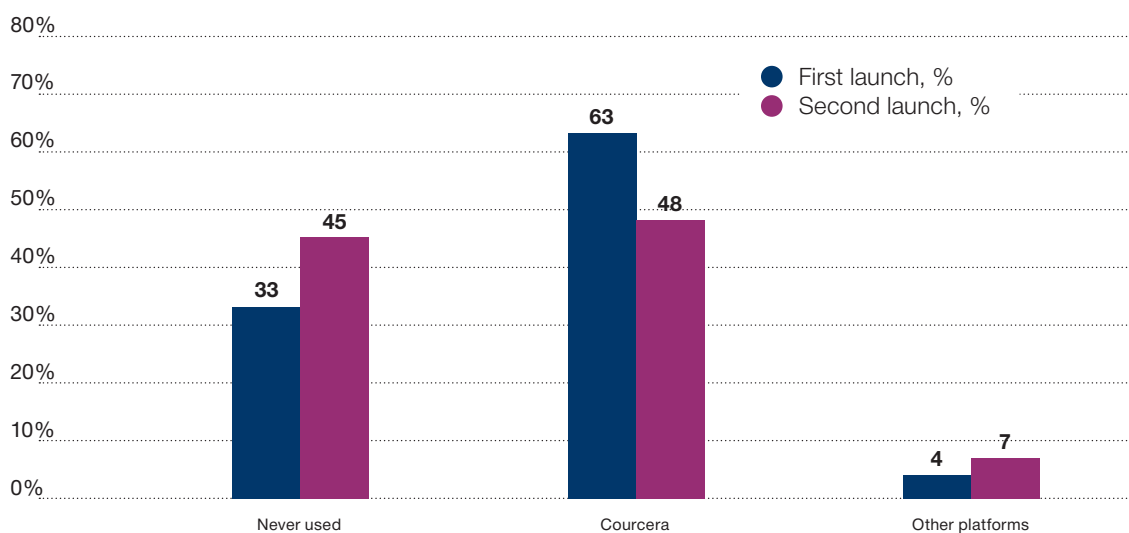


Figure 10. Learners' experience at other eLearning platforms

<sup>1</sup> This section is based on the information contained in the reports of HSE Centre for Institutional Research.

A vast majority of HSE online course participants on Coursera hold a degree certificate. About half of learners indicated that they have a bachelor's or specialist's degree, and a third of learners have a master's degree. Please see Figure 11 for the breakdown of learners by their level of education.

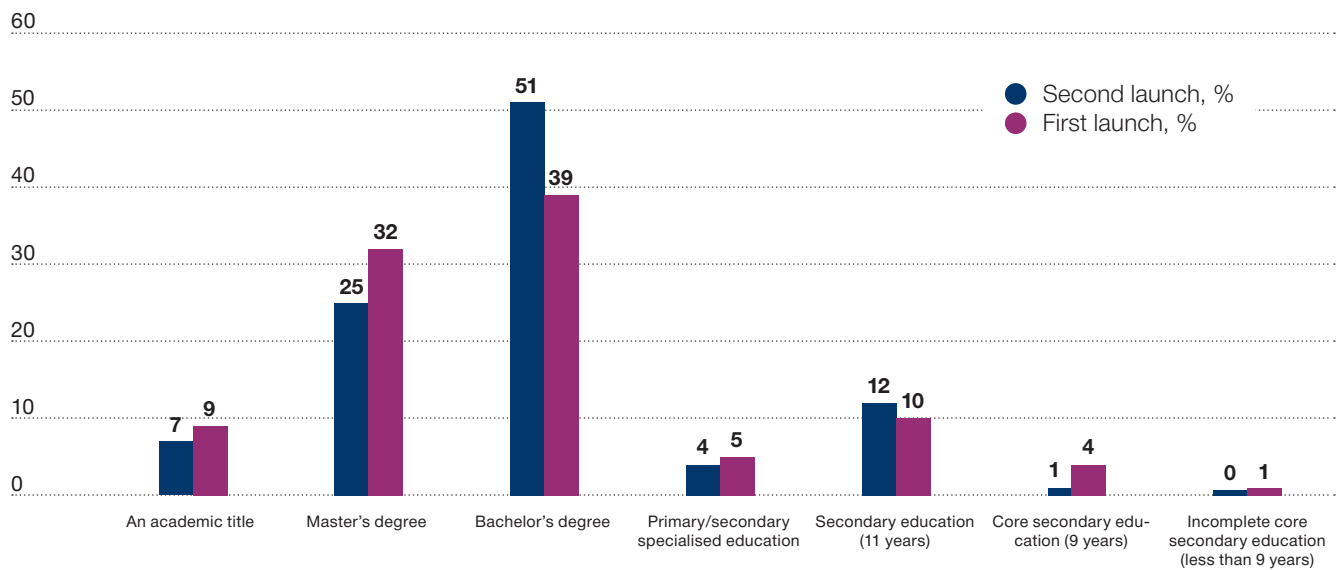


Figure 11. Learners' level of education

More than a half of learners of online courses work full-time. 24% and 23% of learners in the first and second launch of courses, respectively, are university students. Please see Figure 12 for more information on learners' occupational profiles.

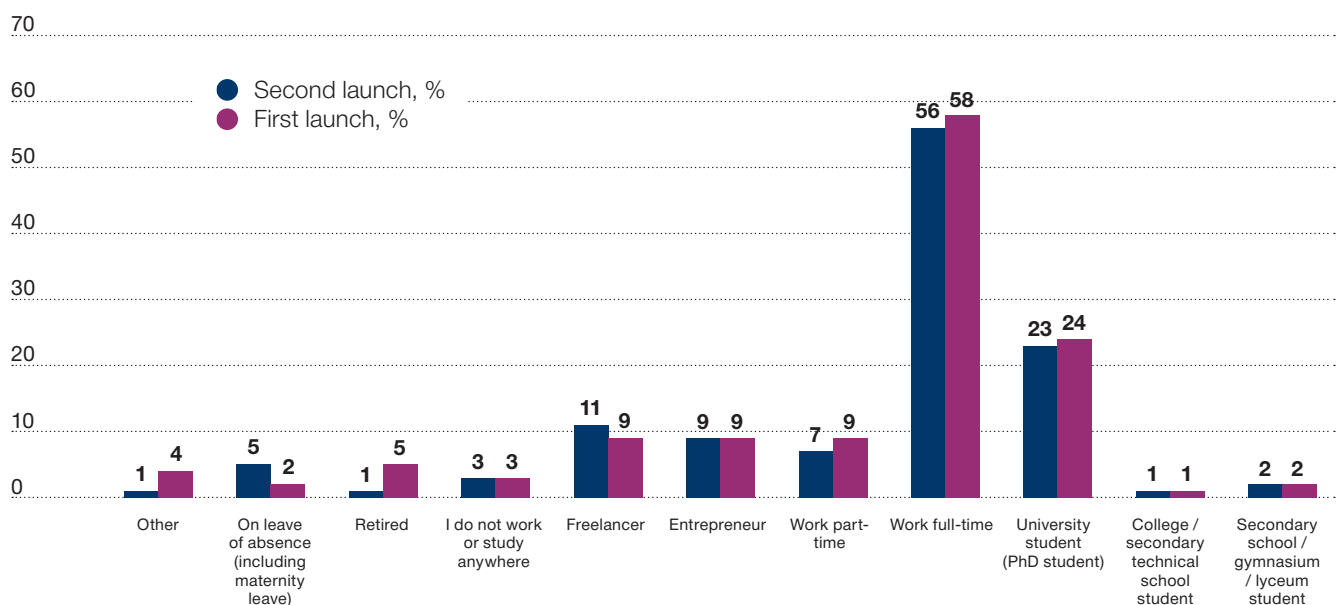
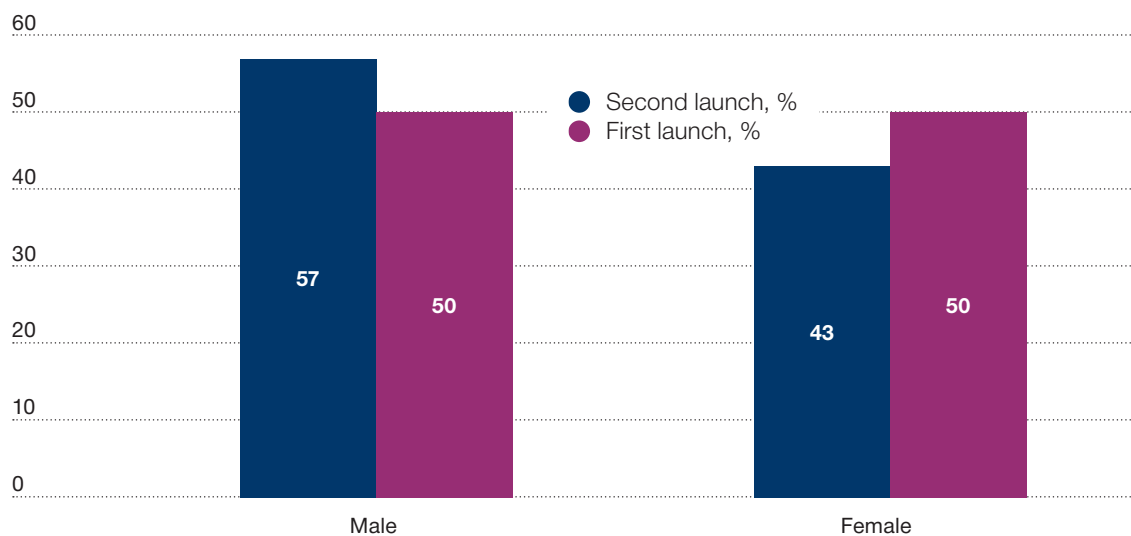


Figure 12. Learners' occupational profiles

In the first launch of courses there was a tendency in favor of male learners compared to female (57% and 43%, respectively). In the second launch, the gender breakdown of learners was equal (see Figure 13).



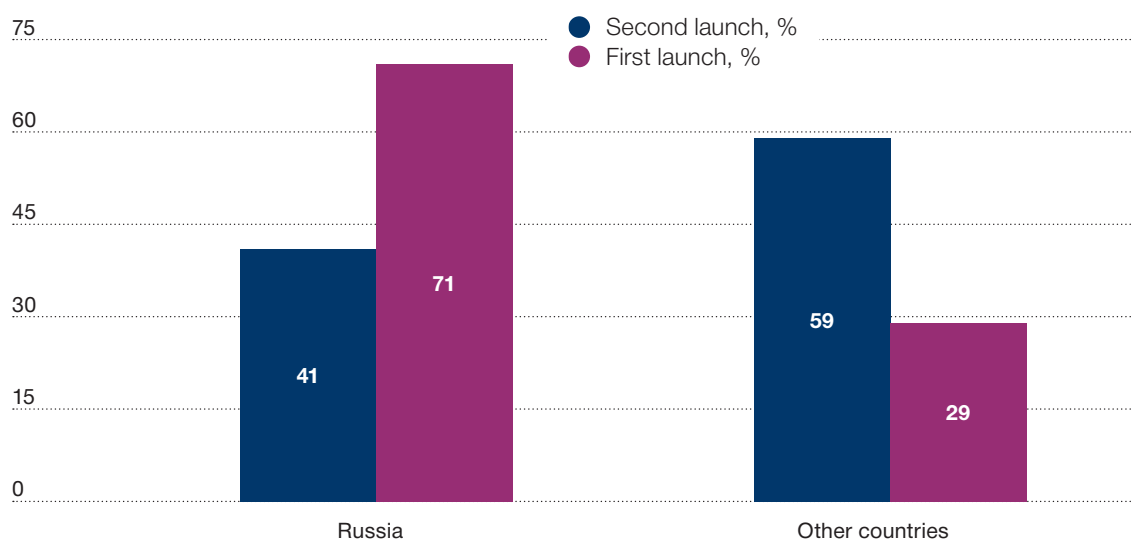
**Figure 13.** Gender Distribution

On average, the second launch learners are slightly younger than those of the first launch. The age of most learners is 25 years.

**Table 3.** Breakdown of learners by age

Characteristics	First launch	Second launch
Arithmetic mean	32	29
Median	29	27
Mode	25	25

Learners from countries outside Russia prevailed among users of the first launch courses (59%), whereas learners of the second launch were predominantly Russian (71%). HSE courses in the first launch were more often selected by learners from the following countries: USA (11%), Ukraine (6%), India (4%), UK (2%), Canada (2%), Spain (2%), Germany (2%), Brazil (2%), Belarus (2%). The second launch course participants came mostly from: Ukraine (13%), Belarus (4%), Kazakhstan (2%), USA (1%).



**Figure 14.** Learners from Russia and other countries







# Success Indicators

## Student satisfaction rates

According to surveys held by the HSE Centre for Institutional Research, 55% of learners were fully satisfied with the courses. The faculty members' competence level got the highest satisfaction rate (about 80% of respondents gave the teachers the highest score on a five-grade scale). Most respondents (90%) are ready to recommend the courses to their friends if the courses are re-launched. 84% noted that they plan to review the course materials in future. 73% of learners expressed their willingness to take part in HSE educational programmes.

## HSE brand awareness

The information on the HSE brand visibility is based on the survey data provided by the survey participants and is extrapolated by Coursera to all registered users. Data collection began in the end of 2014, therefore, the information on the learners' awareness about the HSE brand is available for 9 courses out of 21. Information is available for 98,480 active course users (or 21% of total sign-ups). The survey results showed that 8% of learners are officially associated with HSE, 24% are familiar with HSE, 39% have heard of HSE. 29% of course participants learned about HSE for the first time thanks to Coursera courses (see Figure 15).

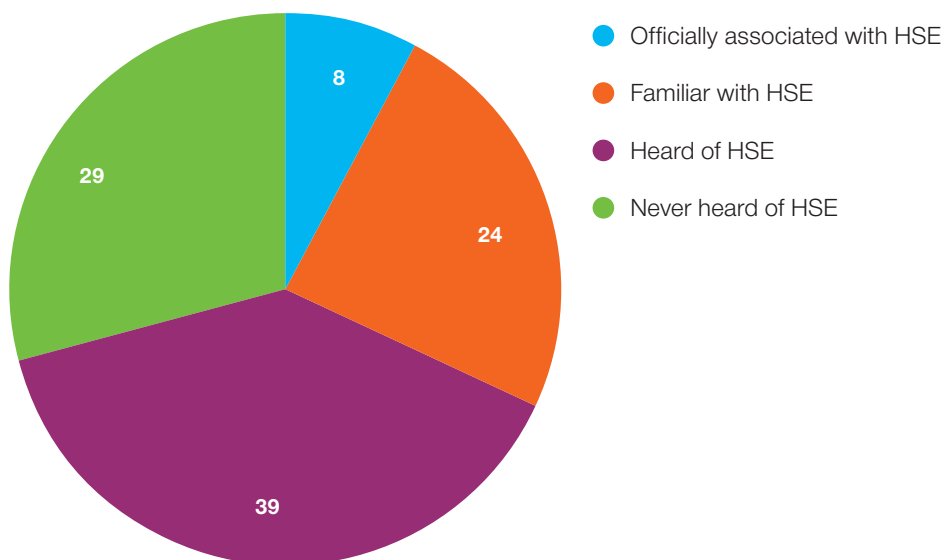
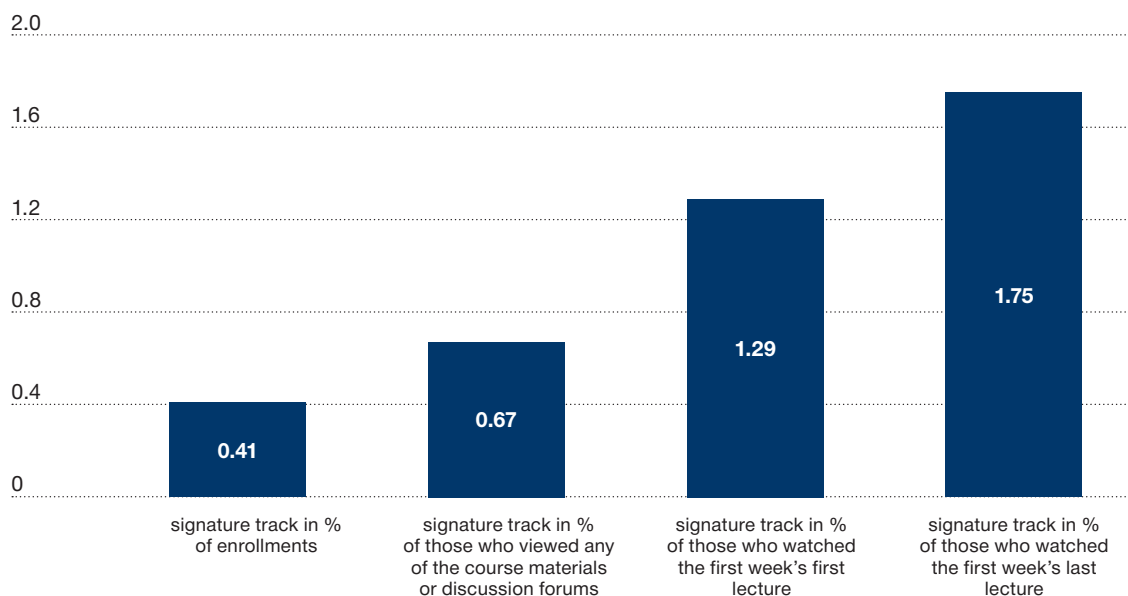


Figure 15. Learners' awareness about HSE brand, %

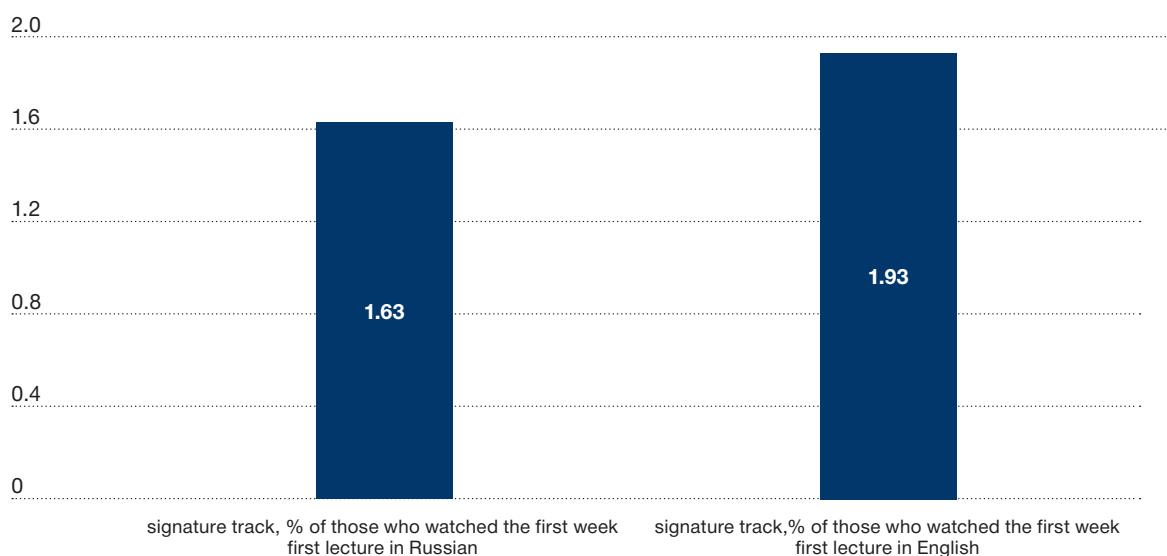
## Signature Track Certificates

One of the important success indicators of a course is how valuable the course certificate is for a course participant, in other words, a learner's readiness to purchase a signature track certificate. Figure 16 shows the proportion between the number of learners who purchased a signature track certificate to the total number of learners enrolled in the course, to those who viewed any of the course materials or discussion forums, to those who watched the first week's first lecture and those who watched the first week's last lecture.



**Figure 16.** Share of learners who purchased a signature track certificate

The share of learners who purchased a signature track certificate is somewhat higher for HSE English-taught courses as compared with Russian-taught courses (1.6% and 1.9%, respectively, please see Figure 17). HSE courses in English are accessible to a relatively larger audience but, at the same time, are facing a stronger competition with other global courses.



**Figure 17.** Share of learners who purchased signature track certificates for Russian and English-taught courses

$$= \frac{\sum (y_i - \bar{y}) \cdot (x_i - \bar{x})}{\sum (x_i - \bar{x})^2}$$

$$\sum y_i x_i - (\bar{y} - \hat{\beta}_1 \bar{x}) \cdot \sum x_i - \hat{\beta}_1 \sum x_i^2 = 0$$

$$- \bar{y} \cdot \sum x_i + \hat{\beta}_1 \bar{x} \cdot \sum x_i - \hat{\beta}_1 \sum x_i^2 = 0$$

$$\bar{x} \cdot \sum x_i - \sum x_i^2 = \bar{y} \cdot \sum x_i - \sum y_i x_i$$

$$\frac{\sum x_i - \sum y_i x_i}{\bar{x} \cdot \sum x_i - \sum x_i^2} = \frac{\sum y_i x_i - \sum \bar{y} x_i}{\sum x_i^2 - \sum \bar{x} x_i} =$$

$$\frac{(y_i - \bar{y}) x_i}{(x_i - \bar{x}) x_i} = \frac{\sum (x_i - \bar{x})}{\sum (x_i - \bar{x})^2}$$

$$\frac{x_i - \sum \bar{x} \cdot (y_i - \bar{y})}{x_i - \sum \bar{x} \cdot (x_i - \bar{x})} = \frac{\sum \bar{x} (x_i - \bar{x})}{\sum \bar{x} (x_i - \bar{x})}$$

# Course Catalogue

## Introduction to the Russian Tax Law

### Teacher:



A. Kozyrin,  
Professor, Doctor of Laws

### Assistants:

A. Denisova,  
A. Guseynova,  
V. Denisov

Fundamental knowledge of tax regulations is necessary for future lawyers, economists and entrepreneurs. The course covers fundamental provisions of the legislation concerning tax obligations and tax payments, the organization and execution of tax control, tax violations and tax liabilities, procedures used to challenge actions of tax authorities and officials.

**Link to course page:** <https://www.coursera.org/course/taxlaw>

## Introduction to LaTeX

### Teacher:



D. Fedorovych,  
Senior Lecturer

### Assistants:

N. Kotova,  
A. Andreeva,  
Zh. Gonotskaya

LaTeX is a system designed for the production of technical and scientific documentation. Learners of this course master how to create math documents in LaTeX, work with tables and graphs, make bibliographic reference lists, etc. Russian-speaking learners will especially benefit from this course because it tackles the specifics of work with Cyrillic scripts in LaTeX.

**Link to course page:** <https://www.coursera.org/course/latex>

## Institutional Economics

### Teacher:



M. Yudkevich, Associate  
Professor, Candidate of Sciences  
(PhD) in Economics

### Assistants:

E. Podkolzina,  
A. Panova,  
I. Prakhov,  
T. Natkhov,  
M. Ostrovnaya,  
A. Balsevich

The course focuses on the study of institutions and understanding their role in shaping the economy and society, contemplates the sphere of economic analysis called Institutional Economics. The course looks at such matters as what institutions are all about, what role institutions play in economic processes, how they influence the well-being of people, companies and countries, examines certain instruments which are used in the study of institutions. The course studies the institute of property rights and contracts, considers historical examples and contemporary cases and shows that institutions are equally important both for the prosperity of entire nations and for handling the most elementary transactions between individual citizens.

**Link to course page:** <https://www.coursera.org/course/instec>



## History and Theory of Media

### Teacher:



I. Kiriya,  
Professor, Doctor of Philological  
Sciences

### Assistants:

V. Chumakova,  
O. Dovbysh

Learners will get acquainted with the theoretical legacy in the media sphere. The course describes principal approaches to the theoretical analysis of media and logics of media systems development in contemporary societies. The course demonstrates the role of media in the shaping of national states, capitalist economy and the nation's involvement in politics. The course also covers theoretical approaches to the study of media and communications. Macro- and micro-social media theories are presented from the viewpoint of studying media institutions; materials published in media, communication channels and media effects.

**Link to course page:** <https://www.coursera.org/course/media>

## History of Economic Thought

### Teacher:



V. Avtonomov,  
Tenured Professor,  
Doctor of Economic Sciences

### Teacher:



O. Ananyin,  
Tenured Professor, Candidate  
of Sciences (PhD) in Economics

### Teacher:



N. Makasheva,  
Professor, Doctor of Economic  
Sciences

### Assistant: A. Gusev

The course summarizes the ideas of distinguished economic thinkers: Adam Smith and Karl Marx, Leon Walras and Joseph Schumpeter, Thorstein Veblen and Nikolai Kondratiev, John M. Keynes and others. Among the key economic concepts considered by the course are: wealth and poverty, money and markets, inflation and unemployment, individual decisions and state policy. The course outlines the intellectual background of ideas which shaped and continue to shape contemporary societies.

**Link to course page:** <https://www.coursera.org/course/historyofec>

## Linear Algebra

### Teacher:



I. Khovanskaya,  
Candidate of Sciences (PhD)  
in Differential Equations, Dynamic  
Systems and Optimal Control

### Assistants:

I. Telpukhovsky,  
B. Bychkov

The course introduces the concepts of linearity and vector space, finite-dimensional space, linear functional, linear operator. Learners learn to use matrices, find suitable bases for linear operators (diagonalize a matrix, if possible, find a Jordan basis for small dimension spaces). The Perron-Frobenius theorem is studied along with its application to the page indexing on the Internet. The course tackles quadratic forms and their reduction to the principal axis.

**Link to course page:** <https://www.coursera.org/course/linalg>

## Macroeconomics

### Teacher:



O. Zamulin,  
Professor, PhD in Economics

### Assistants:

E. Malkov

This basic course touches upon all essential points of macroeconomics. The course examines matters dedicated to the analysis of the general balance in labour markets, borrowed funds, financial, capital and commodity markets, as well as global capital flows. The long-term economic growth, which is achieved through the accumulation of capital capacities and technical progress, will be reviewed. The course also covers the nature of short-term fluctuations accompanying the long-term growth pattern, such as the financial crisis and global recession in 2008–2009.

**Link to course page:** <https://www.coursera.org/course/macroecon>

## Fundamentals of Corporate Finance

### Teacher:



I. Ivashkovskaya,  
Tenured Professor,  
Doctor of Economic Sciences,

### Assistants:

M. Kokoreva,  
A. Ulugova

### Teacher:



S. Stepanov,  
Associate Professor,  
PhD in Economics

The course is devoted to new methods of company valuation which have not been a common practice in Russia before. The new methodology is focused on the goal to maximize its fundamental value. The course is based on concepts of the modern financial theory and goes far beyond the interpretation of corporate financial reports. The course covers principles and models of the financial analysis of companies and the assessment of the company's strategic decisions from the viewpoint of their influence on the company's fundamental value.

**Link to course page:** <https://www.coursera.org/course/corpfina>

## Microeconomics Principles

### Teacher:



K. Sonin,  
Professor, Candidate  
of Sciences (PhD) in Physics  
and Mathematics

### Assistants:

I. Vakutova,  
Yu. Zhestkova,  
P. Martynov

Microeconomic Principles is a basic course which describes core instruments of economic analysis which allow learners to study the most important regular patterns in the behaviour of people and firms. In the framework of this course, learners will see how preferences of people, their budget constraints, as well as productive capacities of firms, create the balance of supply and demand in the market. The course will also cover concepts of oligopolistic competition, risk and tenders.

**Link to course page:** <https://www.coursera.org/course/microeconomic>

## Comparative Politics

### Teacher:



M. Ilyin,  
Tenured Professor,  
Doctor of Political Sciences

### Assistants:

A. Akhiev,  
A. Samorodova

### Teacher:



M. Mironyuk,  
Associate Professor,  
Candidate of Sciences (PhD)  
in Political Sciences

The course covers issues related to the government structure, resilience of political regimes in face of external changes, modern methods of power distribution (division of powers); crises and changes, revolutions and reforms, pre-conditions of civil wars and revolutions; role of political parties in the realization of the political representation in modern democracies, elections as the most important instrument of democracy. The course also covers issues related to the global political developments.

**Link to course page:** <https://www.coursera.org/course/compol>

## Game Theory

### Teacher:



D. Dagaev,  
Associate Professor,  
Candidate of Sciences (PhD)  
in Physics and Mathematics

### Assistants:

N. Kotova,  
Zh. Gonotskaya

Game Theory studies decision-making principles in the context of strategic interactions of several agents — people, companies or governments. This course could be of interest to those who want to explore how companies compete against one another, and learn if there is a guaranteed strategy to win the checkers game, if there is any sense in threats during negotiations, and who is worth having a parliamentary coalition with.

**Link to course page:** <https://www.coursera.org/course/gt>

## Industrial Organization

### Teacher:



S. Avdasheva,  
Tenured Professor,  
Doctor of Economic Sciences

### Assistants:

G. Yusupova

The course is devoted to mechanisms of competition which is contemplated in the context of the strategic collaboration of vendors, including the oligopolistic competition and decisions of the entrenched vendor who faces risks on the part of new players eager to enter the market, as well as the influence of the policy of vendors and the government on the configuration of the market structure.

**Link to course page:** <https://www.coursera.org/course/industorg>

## Philosophy of Culture

### Teacher:



A. Dobrokhotoy,  
Tenured Professor,  
Doctor of Philosophy

### Assistants:

E. Bobyleva,  
P. Arakcheeva

The course gives an understanding of the subject matter of philosophy of culture and its basic conceptual mechanism. The purpose of the course is to explore the specifics of philosophy of culture as an illustrative model; review the development of the cultural reflection diachronically; teach learners how to reveal multi-level patterns in the empirical materials of cultures and bring diverse elements of cultures to the status of generalized construction allowing theoretical modelling.

**Link to course page:** <https://www.coursera.org/course/philculture>

## Financial Markets and Institutions

### Teacher:



N. Berzon,  
Tenured Professor,  
Doctor of Economic Sciences

### Assistants:

S. Volodin,  
A. Petrikova

The course covers global changes which transform financial markets, involve new institutions in financial transactions, boost the emergence of new financial instruments, change approaches to the regulation of financial markets. The course describes in detail how financial markets and financial institutions operate, how companies raise capital for their development, and how to invest in the financial markets.

**Link to course page:** <https://www.coursera.org/learn/financial-markets-and-institutions>

## Econometrics

### Teacher:



B. Demeshev,  
Senior Lecturer

### Assistants:

I. Stankevich,  
A. Tikhonova,  
A. Zubanov

The course studies linear regression models in detail, reviews the most frequent deviations from the assumptions of the classic linear regression, looks into basic models (logit and probit) for quality dependent variables. Along with the theoretical basis, the course includes work with real data using R statistical set.

**Link to course page:** <https://www.coursera.org/course/econometrics>

## Economics for Non-economists

### Teacher:



I. Kim,  
Associate Professor, Candidate  
of Sciences (PhD) in Economics

### Assistants:

M. Kalinina,  
D. Dvoryashin

This introductory course includes topics from two parts of theoretical economics that are most important and most relevant to everyday life: microeconomics and macroeconomics. The purpose of the course is to develop basic economic competences and to cultivate an 'economic mode of thinking' among non-economist learners in the framework of a short course and show them how economics can be used in real life.

**Link to course page:** <https://www.coursera.org/course/ecnonec>

## Economics of Transition and Emerging Markets

### Teacher:



M. Dambrowski,  
Professor, PhD in Economics

### Assistants:

I. Zaitseva

This course concentrates on challenges faced by transition and emerging-market economies, i.e. middle- and low-income countries. It covers Key economic and political challenges related to transition from the centrally planned economy to market system, history of market reforms in Central and Eastern Europe, former Soviet Union, Asia, Middle East, Africa and Latin America, the contemporary role of emerging-market economies in the global economy.

**Link to course page:** <https://www.coursera.org/course/etem>

## Core Concepts in Data Analysis

### Teacher:



B. Mirkin,  
Tenured Professor, Doctor  
of Technical Sciences

### Assistant:

E. Chernyak

This is an unconventional course in modern Data Analysis, Machine Learning and Data Mining. Learn both theory and application for basic methods that have been invented either for developing new concepts — principal components or clusters, or for finding interesting correlations — regression and classification. This is preceded by a thorough analysis of 1D and 2D data.

**Link to course page:** <https://www.coursera.org/course/datan>



## Introduction to Neuroeconomics: How the Brain Makes Decisions

### Teacher:



V. Klucharev,  
Professor, Candidate of Sciences  
(PhD) in Biology

### Assistants:

Lin Yang

Economics, psychology, and neuroscience are converging today into a unified discipline of Neuroeconomics with the ultimate aim of providing a single, general theory of human decision making. Neuroeconomics provides economists, psychologists and social scientists with a deeper understanding of how they make their own decisions, and how others decide.

**Link to course page:** <https://www.coursera.org/learn/neuroeconomics>

## Public Economics

### Teacher:



L. Polishchuk,  
Professor, Candidate of Sciences  
(PhD) in Economics

### Assistants:

G. Syunyaev,  
A. Yarkin,  
D. Shestakov

This course is a brief introduction into public economics theory. It covers main economic functions of government, including taxation, regulation, and social service delivery, and touches upon economic, social, political and administrative aspects of government's involvement in economy.

**Link to course page:** <https://www.coursera.org/course/publiceconom>

## Understanding Russians: Contexts of Intercultural Communication

### Teacher:



M. Bergelson,  
Professor, Doctor of Philological  
Sciences

### Assistants:

Yu. Badryzlova

The main focus of this course is to look at the interrelations between different types of contexts (cultural, institutional, professional, social, interpersonal and others) within the intercultural communication process using Russian–Western communication as an example.

**Link to course page:** <https://www.coursera.org/course/russians>







## Future Outlook

As its **immediate objective**, HSE sees the development of on-campus blended learning scheme to support a new model of the educational process. Transition to this new learning model at the undergraduate level implies general courses for first year students and minors in the second and third years, which are jointly studied by students from different programmes in large blocks. HSE's decentralized campus and the limited number of large lecture rooms may cause logistical problems when holding classes for the second and third year students. Transition to a blended learning format when lectures are studied online and seminars are dedicated to discussions and practical work can be a good solution in this situation.

In 2016 HSE is planning to launch at least 10 new courses on the National Open Education Platform and at least 20 new courses on Coursera, as well as specializations (sets of specialized courses) — two in Finance and one in Computer Science.

**Another promising line of development** related to eLearning that is actively promoted by HSE is the psychometric<sup>1</sup> support of online courses. This is a set of services used to measure various characteristics of learners, course content and their interactions, analyze the collected data, interpret and visualize the results.

The purpose of such monitoring is to optimize eLearning process and to improve learner's academic results through, for example:

- 1) revealing any particular characteristics of individuals or groups of learners to take them into account in the educational process;
- 2) identifying learners who need more assistance and offering them prompt help;
- 3) evaluating difficulty, accessibility and other parameters of various parts of online courses to make improvements on the basis of this information;
- 4) identifying any unknown factors or clarifying the discovered factors which influence academic results.

In addition to solving applied tasks, psychometric support focuses on finding links between analytical data and theories of education in order to not only predict an event, but also understand why it occurred. In the long view, course optimization based on new knowledge will allow to tap the full potential of eLearning.

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<sup>1</sup> Psychometrics is a field of study concerned with high-accuracy measurements, data analysis and mathematical modelling of teaching and psychological processes.

# Contacts of HSE eLearning Office

[elearning.hse.ru/en](http://elearning.hse.ru/en)

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