HSE ISSEK
INTRODUCTION

ABOUT HSE UNIVERSITY

Rapid growth over two decades into a well-renowned research university: now consistently ranked as one of Russia's top universities, as a leader in Russian higher education.

Offers outstanding educational programmes from bachelor to doctoral studies, with top departments and research centres in a number of fields.

One of the preeminent economics and social sciences universities in Eastern Europe and Eurasia; dedicated to maintaining the highest academic standards.

Distinguished by its international presence and cooperation. HSE faculty, researchers, and ,students represent over 100countries.

Newly-adopted structural reforms support HSE University's drive to internationalize and conduct groundbreaking research. HSE cooperates with over 400 universities worldwide through bi- and multilateral projects, as well as international associations and network memberships.

Ranked among the top 100 universities worldwide inPolitics & International Studies, Sociology, History, Economics & Econometrics in the QS — World University Rankings by Subject.

RANKED IN 45 SUBJECT RANKING

QS, ARWU, THE: Top 100 in 16 subject categories (2nd among Russian universities)

THE ONLY RUSSIAN UNIVERSITY IN THE TOP 100

of THE Young University Rankings 2022

SSEK

4

CAMPUSES

51 000+

STUDENTS

100 000+

ALUMNI

7 000+

FACULTY &
RESEARCHERS

312

DEGREE
PROGRAMMES

227

LARGE–SCALE OPEN
ONLINE COURSES

4

RESEARCH PROJECTS
PER YEAR

51 000+

PUBLICATIONS IN
LEADING JOURNALS

100 000+

INTERNATIONAL
LABORATORIES

1st

PLACE IN FORBES
RANKING OF RUSSIAN
UNIVERSITIES
(2021)

1st

PLACE IN RUSSIA IN THE
HEADHUNTER RECRUTING
PLATFORM RANKING OF
UNIVERSITIES THAT TRAIN
THE MOST SUCCESSFUL
PROFESSIONALS (2022)

2nd

PLACE IN RUSSIA BY LEVEL
OF GRADUATE SALARIES
ACCORDING TO SUPERJOB
RANKING (2021)

ISSEK–HSE INSTITUTE FOR STATISTICAL STUDIES AND ECONOMICS OF KNOWLEDGE

Founded in 2002, HSE Institute for Statistical Studies and Economics of Knowledge (ISSEK) is Russia's leading research centre and think tank in the field of science, technology, and innovation (STI) measurement, policy studies, and foresight. In 2014, ISSEK was granted the status of HSE Centre for Advanced Studies in STI.

The largest HSE research unit, ISSEK involves almost 200 scholars full time, including more than 60 doctorate holders. Each year, around 60 HSE undergraduate and postgraduate students undergo internships and take part in research activities at the Institute. About a third of the ISSEK staff are young researchers and research assistants under 30 years of age.

ISSEK includes 19 research centres; and its 2 international laboratories—the Laboratory of Economics of Innovation and the Laboratory for Science and Technology Studies—are headed by prominent foreign scholars. Its International Advisory Board (IAB), involving leading scientists from the UK, Germany, Canada, China, Korea, US, Japan, and other countries, has been operating since 2011.

500+
RESEARCH PROJECTS

350+
ARTICLES IN LEADING SCIENTIFIC JOURNALS

170 000+
PAID DOWNLOADS OF BOOK CHAPTERS EDITED BY ISSEK STAFF

- Leading centre of excellence in STI
- Largest HSE research unit
- iFORA–unique big data analysis system

- 19 research centres
- 2 international laboratories
- International Advisory Board

- ≈200 staff members
- 60+ doctorate holders +
- 4 new PhDs defended (2021)
- 10+ invited foreign professors
- 60+ research assistants annually
- 80% of young scholars (below 39 y.o.) published in journals indexed in Scopus/WoS

RESEARCH AREAS

The Institute carries out a wide range of basic and applied interdisciplinary research as well as empirical studies (statistical, sociological and expert surveys) in such areas as: measurement of STI, education and digital economy; foresight, technology roadmapping and monitoring of global technology trends; behaviour patterns of innovation systems actors (companies, universities, research organisations, highly qualified R&D personnel, knowledge−intensive business services and creative industries, the general public); design and evaluation of STI policy tools including national, regional and cluster policies, etc.

ISSEK commercializes its research outcomes by conducting a large number of applied research projects (over 500 projects in 2002—2022) and providing policy advice in the field of STI for the federal and regional authorities, development institutions, large companies, R&D organisations and universities.

ISSEK is a also a part of the University's strategic development programme 'Priority 2030', and of the recently established Human Capital Multidisciplinary Research Centre, and of the Artificial Intelligence Research Centre.

MEASUREMENT
Advanced methodologies and tools for statistical measurement of science, technology and innovation and its socio−economic impacts

FORESIGHT
Foresight for sustainable economic growth, social welfare, and competitiveness of industries, regions, companies

POLICY ANALYSIS
Design and evaluation of impact−oriented policies for innovation−driven growth: theory, toolkit, empirical studies, practical recommendations

DIGITAL ECONOMY
Foresight for sustainable economic growth, social welfare, and competitiveness of industries, regions, companies

RESEARCH INFRASTRUCTURE

The research infrastructure of ISSEK consists of information and analytical systems, databases of technological trends, statistical indicators of STI, foresight cases and methods, and database of experts (includes about 10 000 leading Russian and foreign experts).

In recent years, ISSEK has promoted and implemented, in many research projects, the intelligent FOResight Analytics system — iFORA, developed in-house by ISSEK IT-specialists.

iFORA uses advanced semantic analysis, machine learning and artificial intelligence algorithms to integrate diverse information sources (including scientific articles, patents, grants, media, and analytical reports, among others) with the aim of generating and exploring new knowledge, especially that concerning emerging and evolving trends. Providing a new evidence base, such big data analysis makes valuable contributions to foresight and policy analysis.

DATABASES

Statistical data, quantitative and qualitative data from multiple empirical studies (economics of education, innovative behaviour of enterprises and population, science and technology (S&T) labour force, etc.)

FORESIGHT STUDIES DATABASE

Trends (5 000+), wild cards, weak signals, Russian and foreign experts (10 000+)

KNOWLEDGE SHARING PLATFORM ('KNOWLEDGE BASE')

Access to the obtained research results, planning and monitoring of publications

DATABASE ON METHODS OF S&T AND SOCIO-ECONOMIC FORECASTING

A detailed description of each method, stages of its implementation, advantages and disadvantages, the possibility of combination with other methods, cases of application

FREE ANALYTICAL NETWORK (FAN)

A functional node of the IPChain Platform for IPR protection and legal exchange of socio-economic data (accompanied by smart contracts) for research and educational purposes, as well as for commercial use

IFORA (INTELLIGENT FORESIGHT ANALYTICS SYSTEM)

A unique big data system based on cutting-edge technologies in mathematical statistics, machine learning and semantic analysis

INTELLIGENT FORESIGHT ANALYTICS SYSTEM iFORA

750+ million
SOURCES

- Research grants & reports
- International conferences
- Clinical trials
- Job vacancies
- Professional media
- Research articles
- Patents
- Analytical reports
- Legal documents
- Experts database

≈ 30 000
DOCUMENTS UPLOADED DAILY

Functional modules

- Trends
- Markets
- Education and skills
- Benchmarking and risk assessment
- Forecasts
- Policy analysis
- Networks
- Project management

iFORA is based on a modular approach and allows combining specialized modules for specific tasks

Technologies

- Computational Linguistics and Natural Language Processing
- Machine Learning and Artificial Intelligence
- Big Data Analysis and Data Mining
- Supercomputer Data Cluster

Languages

- English
- Russian
- Chinese
- Other Cyrillic & Roman languages

Clients

- Companies
- Public agencies
- Universities
- Research centres

In 2020, iFORA® was featured in Nature as an effective decision support tool (Nature, 2020, Vol. 583)

In 2018, the OECD noted iFORA® as a successful initiative in the field of digitization of science (OECD Science, Technology and Innovation Outlook 2018)

RESEARCH OUTPUTS

Steady increase in publication activity of the ISSEK staff over recent years. Over 350 articles were published in high-ranked academic journals.

ISSEK publishes 'Foresight and STI Governance' (in Russian and English), an academic journal indexed in Scopus (Q1) and Web of Science and taking leading positions in the Russian Science Citation Index.

ISSEK, in cooperation with the Springer Nature, is responsible for a series of English-language monographs 'Science, Technology and Innovation Studies'.

A series of annual statistical databooks ('Indicators of Science', 'Indicators of Innovation Activity', 'Indicators of the Digital Economy', 'Indicators of Education') have become ISSEK's branded analytical products within the expert and policy maker communities.

The results of ISSEK research projects are continuously being translated into analytical reports, methodological guidelines, newsletters, information bulletins, and other materials that receive wide media coverage.

1st
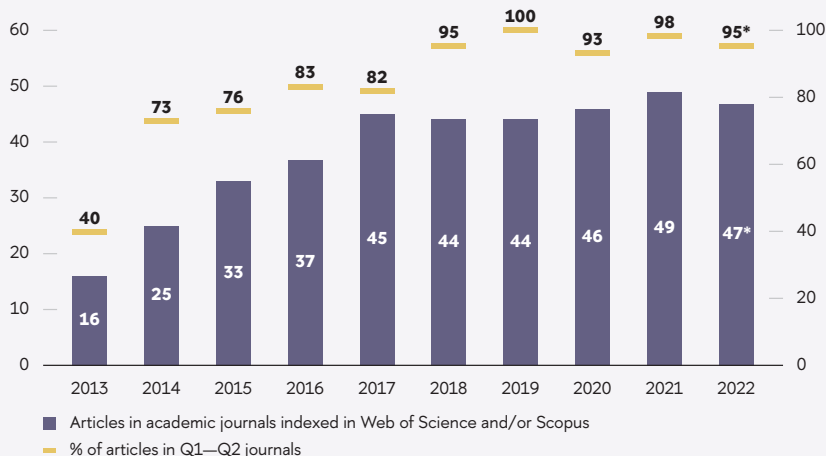AMONG HSE UNITS BY THE MEDIAN SNIP OF SCOPUS-INDEXED PUBLICATIONS

2nd
AMONG HSE UNITS BY THE NUMBER OF HIGHLY CITED PAPERS

among top-10
MOST CITED HSE AUTHORS

100+
REGISTERED IP ITEMS

Articles in academic journals indexed in Web of Science and/or Scopus:

Year	Articles	% of articles in Q1—Q2 journals
2013	16	40
2014	25	73
2015	33	76
2016	37	83
2017	45	82
2018	44	95
2019	44	100
2020	46	93
2021	49	98
2022	47*	95*

■ Articles in academic journals indexed in Web of Science and/or Scopus
— % of articles in Q1—Q2 journals
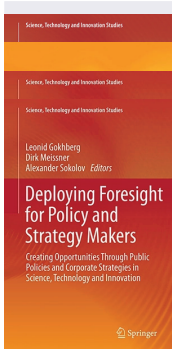
*AS OF OCTOBER 2022

PUBLICATIONS

FORESIGHT AND STI GOVERNANCE JOURNAL

Published quarterly since 2007 in Russian and since 2014 in English

Indexed in Scopus (Q1) and Web of Science

HSE–SPRINGER NATURE BOOK SERIES 'SCIENCE, TECHNOLOGY AND INNOVATION STUDIES'

> 170 000 paid downloads

EDITING OF INTERNATIONAL JOURNALS

14 scholars are editors/ editorial board members at leading STI journals

HSE WORKING PAPERS 'SCIENCE, TECHNOLOGY AND INNOVATION'

Indexed in SSRN; Over a half published in international scientific journals

Contributions to international reports

OBAL INNOVATION INDEX

WIPO / INSEAD / Cornell University

OECD STI SCOREBOARD

OECD STI OUTLOOK

2014, 2016, 2018, 2021

OOECD FRASCATI

MANUAL

2015

OECD OSLO MANUAL

2018

UNESCO SCIENCE REPORT

2010, 2016, 2021

UNCTAD CREATIVE

ECONOMY OUTLOOK

2022

BRICS INNOVATIVE

COMPETITIVENESS

REPORT

2018, 2020, 2023

HSE data books

URL: WWW.HSE.RU/EN/PRIMARYDATA/

Information bulletins

45+

IN 2021 (230+ IN TOTAL)

4 series:

SCIENCE, TECHNOLOGY & INNOVATION, DIGITAL ECONOMY, IFORA–EXPRESS, HUMAN CAPITAL

URL: WWW.HSE.RU/EN/PRIMARYDATA/

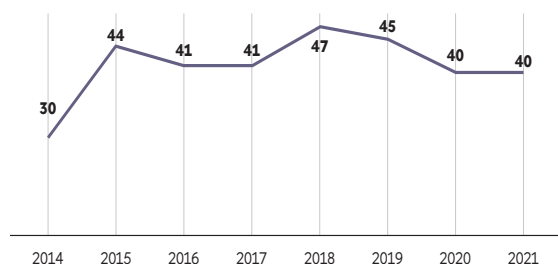# MASTER'S PROGRAMME 'SCIENCE, TECHNOLOGY AND INNOVATION MANAGEMENT AND POLICY'

Since 2014, ISSEK has been implementing the English–language Master's Programme 'STI Management and Policy'.

The Master's Programme has double degree rogrammes with Seoul National University (Republic of Korea), Technical University of Berlin (Germany), University of Maastricht (Netherlands) and Politechnico de Torino (Italy), as well as international student exchanges with Seoul National University (Republic of Korea).
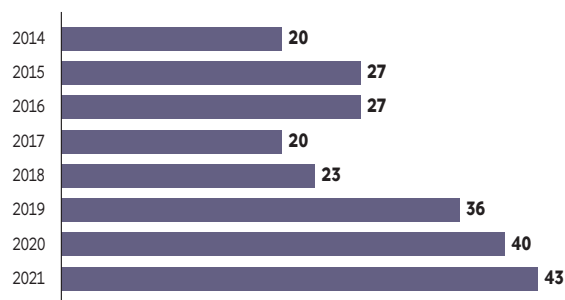
ISSEK regularly conducts short–term training courses in STI measurement, policy and foresight for employees of leading universities, enterprises, and government agencies, including from other countries (e.g. Vietnam, CIS countries).

EFMD
ACCREDITED

Enrollment (number of students)

2014	2015	2016	2017	2018	2019	2020	2021
30	44	41	41	47	45	40	40

Foreign students, %

Year	%
2014	20
2015	27
2016	27
2017	20
2018	23
2019	36
2020	40
2021	43

Graduates

252

PEOPLE

Partner universities

UNIVERSITY OF MAASTRICHT
(THE NETHERLANDS)

TECHNICAL UNIVERSITY
OF BERLIN (GERMANY)

SEOUL NATIONAL UNIVERSITY
(REPUBLIC OF KOREA)

POLYTECHNIC UNIVERSITY
OF TURIN (ITALY)

INTERNATIONAL CO-OPERATION

ISSEK is strongly integrated into the global academic community: it has partnerships with international organisations (OECD, Eurostat, UNESCO, UNIDO, UNCTAD, APEC, BRICS, ITU, etc.), leading universities and research centres in more than 20 countries.

ISSEK staff members frequently participate in international research networks and collaborations.

The leading researchers of the Institute are members of expert groups and committees of international organisations. They have been involved in the development of statistical standards (such as the OECD Frascati Manual and the OECD/Eurostat Oslo Manual) and in the preparation of analytical reports (the OECD's STI Outlook, UNESCO's Science Report, the Global Innovation Index, etc.).

ISSEK hosts many international academic and expert events including the annual International Conference on Foresight and STI Policy, which OECD lists among major events to promote futures research methodology and best practices.

UNESCO Chair on Future Studies

SINCE SEPTEMBER 2021

Partners: 18 organisations from Europe, Asia, Africa & Latin America

Key planned activities: methodologies, research, short-term training, institutional development, knowledge dissemination

Global Innovation Index Academic Network

Partners: 9 academic institutions from Brazil, China, Colombia, Egypt, France, Mexico, Nigeria, USA and Russia

Expert and research networks in Asia

Asian STI Think Tanks Network (ASTN)
Asia–Pacific Futures Network (APFN)
Asia–Pacific Research and Training Network on STI Policy (ARTNET)

Collaboration with BRICS

CHINA

BRAZIL

INDIA

SOUTH AFRICA

CO-OPERATION OPPORTUNITIES

Research areas

- Measurement of STI
- STI Policy
- Foresight
- Innovation studies
- Big data analysis
- Digital economy
- Creative industries

Institutional initiatives

- UNESCO Chair on Future Studies
  unescofutures.hse.ru/en/
- Human Capital Multidisciplinary Research
  Centre ncmu.hse.ru/en/
- National Centre for Socio–Economic
  and S&T Foresight
- Artificial Intelligence Research Centre
- HSE Global Cities Innovation Index
  gcii.hse.ru/en/

Academic and expert events

- Annual International Academic Conferences
  on STI Policy and Foresight
  (April and November)
- Annual International Academic Conference
  and Young Researchers Forum on Creative
  Economy (November)
- International workshops
- Lectures and master classes for students

Publications

- Joint research papers
- Special issues in academic journals
- Analytical reports and policy papers
- Contributions to book series

Competence building

- Advanced training programmes
- Academic exchange/Visiting researchers
- Postdocs

Contacts

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- www.youtube.com/channel/UCWOINOl4OACwU3jPVpv1VA
- t.me/iFORA_knows_how

MASTER'S PROGRAMME 'SCIENCE, TECHNOLOGY AND INNOVATION MANAGEMENT AND POLICY'
www.hse.ru/en/ma/sti/

HSE–SPRINGER NATURE BOOK SERIES 'SCIENCE, TECHNOLOGY AND INNOVATION STUDIES'
www.springer.com/series/13398

FORESIGHT AND STI GOVERNANCE JOURNAL
foresight–journal.hse.ru/en/