

Cognitive Sciences and Technologies: From Neuron to Cognition

National Research University – Higher School of Economics

Degree or qualification is awarded: **MSc in Psychology**

Language of study: **English**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **195 000 - 390 000 RUB per year**

Programme webpage at the university website: <http://www.hse.ru/ma/cogito/>

Programme curator: **Anna Shestakova**

Tel.: **+79119925519**

E-mail: a.shestakova@hse.ru

How do memories, emotions, cognition, and consciousness actually work?

This programme trains students in advanced and combined cognitive psychology, neuroscience, and modeling. Focusing on contemporary research on the specific molecular, physiological, and cognitive mechanisms underlying behavior, the programme combines English-taught lectures by world-class scientists with practical training at leading laboratories in Moscow and Europe.

Students develop a clear view of recent advances in cognitive science and neuroscience in connection to linguistics, biology, psychology, and other related disciplines. Using its affiliation with research laboratories in Moscow, the programme places an emphasis on conducting individual and group research projects, so that students acquire the skills necessary for leading multidisciplinary projects.

Graduates go on to work in scientific, medical, and diagnostic centers, researching human brain analysis and developing cognitive technologies. Others use the knowledge they gained from the programme to develop web applications and interfaces or work with big data.

Programme content

Both modern cognitive psychology and cognitive neuroscience are addressed in this programme.

Modern cognitive psychology is an experimental discipline that studies the origins and functioning of the mind, brain, and intelligence. Courses in this MSc programme focus on perception, the control of attention and motor responses, the formation of mental representations, the dynamics of memory retrieval, learning, cognitive development and cognitive breakdown, the mechanisms of reasoning, language, and problem solving.

Cognitive neuroscience examines the neural systems underlying complex behaviours like emotions, language, attention, and memory, integrating both psychology and neuroscience. Methods employed in cognitive neuroscience include experimental paradigms from psychophysics and cognitive psychology, neurology and psychiatry, electrophysiological studies of neural systems and, increasingly, cognitive genomics and behavioural genetics. Recent breakthroughs in brain imaging technology allow cognitive neuroscientists to see a live human brain at work using state-of-the-art methods like functional magnetic resonance imaging (fMRI), magneto and electroencephalography (MEG, EEG), or near-infrared spectroscopy (NIRS), to name a few.

Selected courses offered: Visual Perception and Attention, Cognitive Linguistics, Qualitative and Quantitative Research Methods in Psychology, Computer Modelling, Theory and Methodology of Modern Psychology

Partner universities:

1. École normale supérieure (France)
2. Center for Functionally Integrative Neuroscience, Aarhus University (Denmark)

Specializations within this programme