

# Summary of Degree Programme 'Prototyping Future Cities'

## Field of Studies

07.04.04 Urban Studies and Development

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## Approved by

Protocol No. 08 of the Academic Council of the Higher School of Economics dated 30.09.2016. The change in the name of the program is approved by the Protocol No. 09 of the Scientific Council of the Higher School of Economics HSE dated 29.09.2017.

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## HSE University Educational Standard

[Образовательный стандарт НИУ ВШЭ по направлению подготовки Градостроительство](#) (PDF, 435 Kb)

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## Last Update

29.08.2019, Protocol No. 5 of the Academic Council of the Faculty of Urban and Regional Development.

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## Network Programme

No

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## Length of Studies, Mode of Studies, Credit Load

**2 years** <sup>□</sup>

Full-time, 120

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## Language of Instruction

ENG

Instruction in English

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## Track(s)

None

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## Degree Level

Master

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## Double-degree Programme

No

# Competitive Advantages

The competitive advantage of the master's program is a new focus on the study of urban reality, associated with the active introduction of modern technologies in the urban environment, which leads to the emergence of new forms of social interaction in the city, urban economy and city management.

The relevance of the program is due to the current need to form professionals who are ready to initiate changes in cities, taking into account the development and implementation of technologies and respond to the challenges of a modern city, such as:

- High rates of urbanization;
- Changing of the climate;
- The widespread adoption of information technology;
- Development of a service economy;
- The emergence of forms of self-sufficiency of the city (self-sufficiency);
- The emergence of new forms of city governance;
- The emergence of new forms of urban life on the scale of megacities that are experiencing the growth of local production and the emergence of new forms of self-government that exist in the face of environmental changes, the development of information technologies and the economics of services requires a deep and lengthy study.

Such a study will contribute to the successful integration of cities into the information society of the 21st century, their effective transformation and ability to adapt. The master's program "Prototyping Future Cities" seeks through research and project activities to study these issues and to form professionals capable of managing the development of cities in the information age.

# Professional Activities and Competencies of Programme Graduates

The master program aims to train its students in the following:

- a) The capacity to understand and evaluate the functions of a city from the starting points of data and rational information.
- b) The capacity to create physical prototypes of whichever technology with the starting point of digital fabrication and its various components and implementations.
- c) The ability to analyze and evaluate the economical and social environment of a city and manipulate that in a positive manner.
- d) The capacity to develop urban projects of transformation through physical designs and/or international platforms
- e) The ability to work in teams of international and multi-disciplinary members.

Through this process, one could synthesize a Skill Framework that the students will have after finishing the Masters in City and Technology course. These skills can fit into the following categories:

1. Digital fabrication of almost anything
2. City structure and management
3. Social environment knowledge
4. Urban regeneration projects
5. International collaboration

This Framework is made out of several layers of knowledge that even individually can capacitate the alumni to

develop projects and work in organizations in an innovative manner. Undoubtedly, the merger of all these layers into one single person will convert this individual in an agent of change and innovation in the urban culture of cities and corporations.

## Programme Modules

The structure of the curriculum corresponds to a simple and clear diagram that is repeated in all semesters and developed in five fundamental layers

**Technology:** Students should learn to manufacture almost anything, including the computer, including electronics, programming, manufacturing, energy, water, information, mobility and all urban systems.

**Design:** students will develop projects following the Studio-Lab model so that they must shape their ideas by confronting them with the relationship.

**Culture:** students should learn to reflect, read, discuss and interpret history, the present and the future of cities

**Socioeconomics:** students should learn to understand urban phenomenon through information, which can be represented on maps, and help interpret and project it

**Management:** students must learn to transfer their projects to the city, by giving it an eco-economic and legal form, and inserting it through rational processes in society.

With these five layers, developed in a laboratory environment, students should learn to work in all layers and systems of the city and at all scales, through the development of prototypes.

The final work will be developed from the work done previously, will have a marked practical aspect, and could potentially serve to continue developing it in the future, in a professional manner, once the program is finished.

## Options for Students with Disabilities

This degree programme of HSE University is adapted for students with special educational needs (SEN) and disabilities. Special assistive technology and teaching aids are used for collective and individual learning of students with SEN and disabilities. The specific adaptive features of the programme are listed in each subject's full syllabus and are available to students through the online Learning Management System.

## Programme Documentation

All documents of the degree programme are stored electronically on this website. Curricula, calendar plans, and syllabi are developed and approved electronically in corporate information systems. Their current versions are automatically published on the website of the degree programme. Up-to-date teaching and learning guides, assessment tools, and other relevant documents are stored on the website of the degree programme in accordance with the local regulatory acts of HSE University.

I hereby confirm that the degree programme documents posted on this website are fully up-to-date.

Vice Rector Sergey Yu. Roshchin

