

**ANNOTATION  
OF MAIN EDUCATIONAL PROGRAM OF MASTER EDUCATION**

**Direction of study: 54.04.01 "Design"**

**Name of the program: 54.04.01 Communication design (international double degree program touch in English)**

Educational institute – Institute of Metallurgy, Machine building and Transport

Educational department – department of Engineering graphics and Design

Head of MEP – Ivanov Vladimir M., doctor of physical and mathematical sciences, professor

***Aim and concept of the program***

Aim of the special preparation of master students in accordance with Master program "Communication design" is the formation of a special knowledge, skillset and understanding within the students, which include the multitude of technologies, mediums, tools and approaches, needed to create artefacts and communication systems based on a complex development process with the goal to produce information materials for different channels.

Master program "Communication design" is focused on preparing graduates, whose objects of professional activity are information systems, channels and mediums, as well as graphic artefacts, that enable the function of communication. Learning is aimed at developments of skills of strategic and critical thinking of students through theoretical preparation and project work.

Master program is oriented at continuing bachelor education in the directions of "Graphic design", "Information design", "Industrial design" and other specialities which include artistic training.

***Study conditions***

Normative length of the program is 2,5 years, of which 2 years are studies in SPbPU and 1 semester is an inclusive learning in partner university. Total workload of the program in SPbPU is 120 ECTS. Form of study is full time. Studies can be either free of charge or on the contract basis. In the end of the program the students receive 2 degrees: Master from SPbPU and Master of Arts from Politecnico di Milano (Italy).

Two semesters during the study are spent in partner university (Politecnico di Milano, Italy).

***Study plan***

Name of the discipline	Total workload in ECTS
<b>I semester</b>	
Information technologies	3
Visual art I	3,5
Academic English	2,5
Basics of communication theory	2,5
Design Research	13,5
Research and creative practice	
Human-centered design	3
Infographics	2
<b>II semester</b>	
Selective disciplines: Multimedia technologies / Digital technologies	3,5
Visual art II	2,5
Psychology and pedagogics	2
Academic English	3
Research and creative practice	13,5

Selective disciplines: Design in public space / Environmental design	3
Intellectual property protection	2,5
<b>III semester</b>	
Anthropology of communication	6
Sociology of Media	6
General course of communication	12
Selective disciplines: Generative design / Brand strategy	6
<b>IV semester</b>	
Finalising Master Thesis	6
Design Research	18
Research and creative practice	6
<b>Total workload</b>	<b>120</b>

### *Information technologies*

Work with different software for creation, processing and publishing of graphic materials in digital form. Analyse developing trends in information design. Software for raster and vector graphics processing. Three-dimensional graphics, video-editing and sound-editing. Data visualisation and statistical analysis.

### *Visual art I*

Establish and develop artistic and creative skills of students. Provide theoretical knowledge and practical understanding, necessary for widening the scope of professional capabilities in graphic design. Techniques of graphic. Illustration. Photography. Collage. New media.

### *Academic English*

Ability to write a logical and grammatically correct text devoted to a research work or a project. Understanding of the structure of scientific text and its elements. Analysis of existing sources. Specific requirements for writing scientific texts. Logical connections between elements. Standard schemes of writing research papers. Paragraph structure.

### *Basics of communication theory*

Understanding of common patterns, similarities and differences, levels and forms of communication. Overview of possibilities for practical implementation of social communication, its connection to environment and human behaviour. General models and theories of communication. Description of the structure of communicative act and communicative events in different spheres and types of communication. Connection between communication theory and other sciences. Basics of communicative interaction.

### *Design Research, Research and creative practice*

Teach students the logic of research. Determination of the conceptual foundations of the study. Formulation of the research question. Description logic data collection and argumentation necessary research. Skills to collect and analyze qualitative data. Development of a research reflexivity.

### *Human-centered design*

Study, design and evaluation of new user interfaces and interactive systems with attention to human factors on cognitive and senso-motor level, to technological limitations and economic considerations. Methods of user definition and stages of design process. Developing personas. Scenarios of user behaviour. Methods of human-centered design. Prototyping.

### *Infographics*

Have an understanding about the special features and tasks of infographics. Master skills of practical work and designing graphic materials. Visual thinking. Types of visualisation. Graphs, point diagrams, working with GoogleMaps and OpenStreetMao. Visualisation of complex connections. Data journalism. Contemporary interactive infographics.

### *Selective discipline: Multimedia technologies*

Learn software platform for the development of animation. Creating and editing animations. Creating and editing video. Creating and editing three-dimensional graphics. The basic concepts of web design and presentation of information on the Internet.

### *Selective discipline: Digital technologies*

Learn additional software for development of digital project. Additional software for creation of new forms of communication: installation, interactive animation, mobile applications.

#### *Visual art II*

Understand the theoretical foundations of graphic design and have skills in areas of drawing, linear&structural arrangement, academic painting, corporate identity and typography.

Basics of Graphic Design. Fundamentals of academic painting. The basics of drawing. Fundamentals of linear structural arrangement. Laws of composition in graphic design. Development of compositions. Typology of corporate identity, basic techniques for creating corporate identity., Fundamentals of design and practical work in the field of typography.

#### *Psychology and pedagogics*

Learn analytical approach to the modern concepts of pedagogy and psychology. Principles of Psychology. The main features and characteristics of the psyche of people, Fundamentals of pedagogy. Basic concepts in education and training. Fundamentals of identity formation. The practice of designing&educational situation.

#### *Selective discipline: Design in public space*

Learn design thinking techniques and design urban environment (space). Concepts and signs of urban life. Trends and changes in urban lifestyles. Influence of urban life to environmental characteristics of the city. The main methods of design thinking and their practical use.

#### *Selective discipline: Environmental design*

Study principles of communication in urban space, understand principles of organization of comfortable urban environment, learn to use non-standard channels of communication. Course is organized in several stages of working on a selected project in urban environment. The following tasks are discussed and solved: system understanding of the problem, research of area under investigation, proposing non-trivial design concepts of the problem.

#### *Intellectual property protection*

Learn the basics of intellectual property, as well as ways to protect intellectual property in Russia and abroad. Introduction to intellectual property. Legal aspects of intellectual property. Basic concepts of intellectual property. Techniques and methods for patent protection of technological developments. The role of intellectual property for innovative companies. Ways to benefit from the ownership of intellectual property. Ways to protect intellectual property in Russia and abroad.

#### *Anthropology of communication*

To learn the basics of modern social anthropology and prepare students for independent research, analysis and interpretation of the data. Fundamentals of anthropology. Modern methods of collecting, processing and analyzing information.

#### *Sociology of Media*

Study the work of contemporary media and periodicals. Basics of contemporary media and periodicals. Arrangement of design department and related services: editorial photo department, marketing department, department and digital printing. Simulation of real editorial office.

#### *General course of communication*

Study graphic design tools and cultivate teamwork skills. Graphic design tools Graphic design in various fields (fonts, photography, advertising, marketing, branding). Project management. Client communication and project team communication. Preparation of presentations.

#### *Selective discipline: Generative design*

Learn TouchDesigner software program to create an interactive and generative graphics (2D and 3D). Tools and environment of TouchDesigner. Development interactive and generative graphics (2D and 3D) in real time. Implementation of video mapping, lighting design and art projects of varying complexity.

#### *Selective discipline: Brand strategy*

To have an idea about the features and objectives of branding; acquire practical skills and design in this field. The history of branding, stages and directions of its development. World icons corporate identity. Typology of corporate identity. The basic techniques of creating a corporate identity. Elements of brand-book.

### ***Research projects of the department in charge of the program***

Master program includes research projects in following directions:

- research and development of new types of communication systems and artefacts
- research and development of new types of human-computer interfaces
- visualisation of information with the help of two and three-dimensional graphics, graphical representation of complex systems
- creation and testing of prototyping systems in communication.

### ***Faculty and teaching personnel***

The Master program is supported by research and teaching personnel that have a degree and PhD which corresponds to the profile of the disciplines of the program and conduct scientific research. The educational process is also supported by invited lecturers from other educational institutions (Politecnico di Milano) and commercial companies.

#### *Leading researchers and teaching personnel of SPbPU*

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| • Ivanov V. M., PhD, professor                 | • Kruzhkov I. E., PhD, docent                          |
| • Burakov P. V., PhD, docent                   | • Laptev V. V., PhD, docent, member of Designers Union |
| • Diodorova T. I., member of Designers Union   | • Orlov P. A., lecturer                                |
| • Zainulin V. K., PhD, docent                  | • Rodionova V. V., member of Photographers Union       |
| • Kruglov A. A., member of Architectural Union | • Sorokina G. G., PhD, docent                          |

### ***Possible places for internship and research work***

Internship is organised in companies in charge of graphic design production, media content generation, development of audio and video advertising, computer graphics and special effects, in design studios, on television (Channel 5, STO) and in leading game design companies and software developers.

### ***Laboratories and equipment***

1. Laboratory of computer graphics and visualisation:
  - High-performance computing system based on high-performance network of computers to handle large flows of graphical information
  - Visualisation system of three-dimensional images
  - System of panoramic images on the basis of Mitsubishi 3000 ANSI projections
  - Stereo image system based on the Christie 2800 ANSI projector
  - Network workstations for the preparation of graphical information
2. Authorized Apple Computer Center(30 Apple computers);
3. Photography and video laboratory powered by modern equipment
4. Video-editing laboratory (4 studios of non-linear editing);
5. E-learning laboratory:
  - video-conferencing equipment (up to 42 participants),
  - servers for displaying electronic resources and manuals;
6. 3 modern computer PC classes.

### ***Information and methodological support***

The program is supplied with teaching and methodological materials in all taught disciplines. The content of the disciplines is represented online. Each student is granted an access to the electronic library system, which contains editions on major disciplines. Library is equipped with printed and electronic volumes of main and additional literature. Additional literature includes special periodical editions.