

Area of study:

**11.04.02 Information and  
Communication Technologies and  
Systems**

Program:

**Next Generation Information and  
Communication Systems and  
Technology**

Degree: master

Program length and study mode: 2 years,  
intramural

Language: Russian

Credits: 120

Start date: September 1, 2020

Location: Taganrog

Entry requirements: basic knowledge of  
information technology and electronics

**Program overview:**

Training in development of modern  
infocommunication systems and next  
generation networks, including 5G networks.

Experience: computer modeling, design and  
optimization of radio engineering and  
communication systems and devices.

Skills: automated measurements using personal  
and industrial computers; programming of  
embedded systems and microcontroller devices.

**Program structure:**

Module 1. Basic courses - 25 credits;

Module 2. Signal transmission and processing  
systems and devices - 27 credits;

Module 3. Embedded systems - 22 credits;

Module 4. Next generation networks - 28  
credits;

Module 5. Pre-graduation practical training and  
graduation thesis defense - 18 credits.

**Typical units of study may include:**

- Foreign language;
- Research methods and commercialization of  
scientific results;
- Mathematical modeling of devices and  
systems;
- Security in information networks;
- CAD in electronics

**Special courses:**

- Modern methods and measuring instruments

**Careers:**

engineers, researchers in companies in the  
field of telecommunication equipment  
development, infocommunication systems  
design, information technology, IT  
management, network administration and  
radio electronics

**Get in touch:**

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in radio engineering and communications;

- Microcontroller devices and systems on a chip;
- Modern algorithms for processing spatial-temporal signals in communication systems;
- Communication networks;
- Optical and wired communications tools, switching systems and devices.

**Research areas:**

Methods, algorithms, software and hardware for processing spatial-temporal signals in information and communication systems;

Methods and algorithms for processing two-dimensional signals in image reconstruction;

Methods and algorithms of digital signal processing for solving problems of image detection and recognition.