Area of study:

# 11.04.03 Design Engineering and Technology of Electronic Devices Program

# Microelectromechanical Systems

Degree: Master

Program length and study mode:

2 years, intramural Language: Russian

Credits: 120

Start date: September 1, 2020

Location: Taganrog

Entry requirements: bachelor or

specialist's degree

#### Program overview:

### **Program structure:**

- Unit 1. Natural-humanitarian and design-technological courses
- Unit 2. Practical training and research work
- Unit 3. State final certification

## Typical units of study may include:

- Mathematical modeling of devices and systems
- CAD in electronics
- Commercialization of research and development results
- Foreign language for research work
- Basics of research
- Ensuring information security in information networks
- MEMS
- Design of thermal MEMS
- High density technology for smart sensor manufacturing
- Circuit design of electronic tools
- Interdisciplinary project

#### Research areas:

- development of design methods and the creation of promising multi-axis integrated micro- and nanomechanical gyroscopes and accelerometers for the orientation and navigation of moving objects;
- development of ultra-large integrated circuits using computeraided design systems;
- development and study of the physical and technological foundations of creating solar cells using laser and plasma technologies;
- development of mathematical models, algorithms and software to optimize the production of sapphire products for micro- and nanoelectronics.

#### Careers:

Research institutes, research and production enterprises, educational institutions, public authorities.

#### Get in touch:

- Aleksandr V. Sayenko
- Candidate of Technical Sciences
- 8 (8634) 37-16-03
- avsaenko@sfedu.ru
- http://vk.com/joinkes

