## Program name

Master’s degree program  
**Solid State Electronics Materials and Components**

## Key facts

The program is aimed at students wishing to master the modern methodology for solving applied and scientific problems in the field of electronics and nanoelectronics.

## Program length

2 years

## Starting date

September, 1st

## Language of instruction

Russian

## Prerequisites

- Higher professional education (bachelor’s, specialist’s or master’s degree)
- Entrance exam in General Physics
- Preference is given to students who have publications in this or related areas, as well as to students, previously participated in creative contests and (or) olympiads of the corresponding field of study

## Tuition fee per year

181 856 roubles (~ 2,448 USD)

## Program leader/team

Head of Department  
Head of master’s degree program:  
Aleksey Levitskiy, Cand. Sc. (Physics and Mathematics), assistant professor  
Head of the Department of Instrumentation and Nanoelectronics, School of Engineering Physics and Radio Electronics, Siberian Federal University

## Qualification

Master of Science

## Skills/ objectives

- Ability and skill of formulating the goals and objectives of scientific research in accordance with the trends and prospects of the development of electronics and nanoelectronics, as well as related fields of science and technology;
- Ability to make a reasonable choice of theoretical and experimental methods and means of solving the formulated problems;
- Skills in the design of processes for the production of materials and components of solid-state electronics using automated systems.
- Ability to develop technological documentation for the designed components of solid-state electronics, devices and systems of electronic technology.
- Skills in designing components of solid-state electronics, devices and systems of electronic equipment, taking into account the specified requirements.

## Curriculum

Project management in technical systems;  
Philosophical problems of science and technology;  
Professional English;  
Business English;  
Research Seminar;  
Electronic device marking;  
Instrumental and technological modeling of micro- and nanoelectronic devices;  
Testing and diagnostics of electronic devices;  
Elements and circuitry of integrated circuits;  
Organization and planning of the experiment;  
Computer technologies in scientific research;
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<thead>
<tr>
<th><strong>Contacts</strong></th>
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<tbody>
<tr>
<td>E-mail: <a href="mailto:ALevitskiy@sfu-kras.ru">ALevitskiy@sfu-kras.ru</a></td>
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<td>Tel: +7 (391) 249-73-80</td>
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<td>Address: 28/12, ul. Kirenskogo, Room Б-317</td>
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</tbody>
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Fundamentals of IPI technologies;
Electronic component base design and technology;
Certification and standardization of electronic devices;
Micro- and nanotechnology;
Nanocomposites;
Integrated circuit design technologies;
Integral sensors;
Search for scientific and technical solutions in radio electronics and intellectual property;
Methods and tools for studying materials and structures of micro- and nanoelectronics;

*Elective courses:*
Fundamentals of Microwave Electronics;
Distributed Interaction Microelectronic Devices;
Contemporary aspects of modern electronics and nanoelectronics; Contemporary issues of technology for the production of electronic devices;