



AEROSPACE STRUCTURES AND MATERIALS

IN ENGLISH

MASTER'S PROGRAMME DEGREE



PROGRAM ADVANTAGES

- ✓ At the end of the program, Master`s degree students acquire in-depth scientific and engineering knowledge and skills in working with new types of technological and test equipment.
- ✓ In the course of the program, undergraduates gain knowledge in the field of aerospace materials science and the introduction of effective materials of perspective designs into aerospace practice.
- ✓ They study aerospace materials based on the priorities of Russian inventions, including the use of torus-like carbon nanoparticles-astralenes, sulfo-graphenes and nanoporous carbon nanofibers, capable of realizing resonant amplification of external electromagnetic fields and having anomalous nonlinearity of reflection coefficient in a wide spectral frequency band.
- ✓ Informational technology, mathematical, semi-natural and field modeling, interactive lectures are used in the studying process.
- ✓ Laboratory and research work of graduate students is carried out in specialized educational and scientific laboratories supplied with modern equipment.
- ✓ RUDN University`s broad and stable international relations help students have internships in foreign partner universities.
- ✓ There are great opportunities to participate in Russian and international scientific conferences and forums, attend trainings on topics relevant to students.
- ✓ The daily practice of international communication skills, communication with foreign students let the students make friends and connections around the world.



STUDYING PROCCCESS

120 educational credits.

Lectures, seminars, laboratory works, independent work, practice.



COMPUTER TECHNOLOGY IN TECHNICAL SYSTEMS

- Classification of types of computer technology.
- Production processes as objects of integrated automation.
- Typical formalized tasks for modeling, analysis and synthesis of control systems for technical systems.
- Openness and type-designs of software and hardware automation based on standard interfaces and protocols.
- Computer analysis of the dynamic properties of an object.
- Test features of large software systems.



AEROSPACE DESIGN

- Methods for constructing solar cells into a battery.
- Types of connecting elements.
- Types of solar plantations.
- Construction of solar plantations.
- Solar panel.
- Solar power supply.
- Solar house.
- Autonomous and reserve power supply systems.



COMPOSITE MATERIALS FOR THE AEROSPACE INDUSTRY

- Problems of space materials science.
- Spacecraft operating conditions.
- Classification of the orbits of spacecraft.
- Description of outer space factors for each class of orbits.
- Opportunities for designing a new generation of spacecraft.
- Problems introducing new materials.
- Adaptive properties of nanomaterials.
- Self-organizing structures.



STUDENTS FEEDBACK



GOLIZADEH MAMAGANI ALI, IRAN



For my master degree, I study in two universities (KNTU, RUDN). Each university added to my knowledge in their own way. Thanks to the RUDN university, I meet students from all parts of the world, study and live with them for one year. I have gained a lot in terms of intercultural, multinational relations. However, I had some problems, language barriers troubled me, some courses seem difficult when they are not so relevant to my previous education. In the end, this one year is one of my best years in my life. I really happy to meet the excellent people, professors, university staff and students.



FARSHAD SHAGAYEG, IRAN



Rudn teaches me how to communicate with so many students in different cultures, how to make friend with them, I also find 2 Russian best friends, we also keep in touch yet.

Our courses name was Aerospace structure and Materials. We have great teachers and professors in this field, we learned so many things from them.



HASEMI ABDOLHOSSAIN, IRAN



My course it's some kind of like a duel between two university, in Iran and in Russia, because of that our group was sent to Russia.

As everyone knows Russia has the best marks in our filed Aerospace engineering, and I'm also glad that to tell everyone that I'm study in Russia in that specific filed in RUDN university.

Our courses name was Aerospace structure and Materials. We have great teachers and professors in this field, we learned so many things from them.





HEAD OF THE PROGRAMME



SVETLANA VIKTOROVNA AGASIEVA



Candidate of Technical Sciences, Associate Professor of the Department of Mechanics and Mechatronics, Academy of Engineering

Thesis: “Development of an operational technology for thermal testing in order to assess the reliability of radio signal mixers based on a resonant tunnel diode”

FIELDS OF SCIENTIFIC INTERESTS:

nanotechnology, microelectronics, heterostructures, nanotransistors, semiconductors, biosensors, radiothermography.

Author of scientific articles in peer-reviewed Russian and foreign scientific journals (Higher Attestation Commission, SCOPUS, Web of Science).

Co-author of the book “Improving the reliability and quality of GIS and MIS microwave” (in 3 parts).

Member of the editorial board of the journal “Nanotechnology: Development, Application - XXI Century”.

Repeatedly received grants from Russian research foundations.
Accredited and included in the Federal Register of Scientific and Technical Experts.