

Mechanics and Mathematical Modeling

South Ural State University

Degree or qualification is awarded: **Bachelor's Degree**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **131 500 rubles**

Programme webpage at the university website:

<https://www.susu.ru/en/education/bachelors-specialist-degree-programs/010303-mechanics-and-mathematical-modelling>

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Graduates are specialists in the field of building mathematical models applicable to fluid, gas and plasma mechanics, and that can be used in computer science. They are able to develop mathematical models and computer software and then use them in solving problems of fluid, gas and plasma mechanics.

Students learn:

- mathematical disciplines: mathematical analysis, algebra, geometry, differential equations;
- special disciplines: continuum mechanics, mathematical models applied to continuum mechanics;
- computing disciplines: programming languages, algorithms and data structures, operating systems, modelling in Mathcad, MATLAB, etc., high-performance computing in supercomputer systems, computer graphics, the use of computer technology in continuum mechanics and etc.

Future graduate occupations: mathematician, mathematical modelling specialist, physicist.

Graduates have all the necessary knowledge to do large-scale research. Students who have graduated with a bachelor's degree in this area can successfully enter the master's program of Moscow State University, SUSU and other universities. The overwhelming majority of graduate students of the department of computational mechanics are employed at All-Russian Scientific Research Institute of Technical Physics and Makeyev Rocket Design Bureau as junior research assistants with subsequent career growth to the position of a team leader in 3-5 years.

Specializations within this programme

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