



# Faculty of Mining and Geology

# Geology

at Faculty of Mining and Geology, 7 Đušina, 11000 Belgrade, [www.rgf.bg.ac.rs](http://www.rgf.bg.ac.rs)

ECTS: 180/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: PHD

## Study program content

Program lasts for three years. Students attend seven courses, field and laboratory activity and seminar during the first three semesters. Students are able to select courses among the wide range of electives that cover specializations in regional and dynamic geology, paleontology, mineralogy and crystallography, petrology and geochemistry, as well as economic geology.

Scientific research and compilation of a doctoral thesis are the obligations that students have in the period from third to sixth semester. Program is characterized by clear vertical passing, since the doctoral students are able to select specializations that represent the direct continuation of the modules existing at master academic studies of geology at the Faculty of Mining and Geology. The selection of appropriate specialty at the doctoral studies is the matter of discussion and agreement between student and his mentor.

## Study program goals

The goal of doctoral studies in Geology is to educate personnel capable of conducting high quality and original scientific research. The study program focuses on education of doctors who will, during their careers, conduct successful research in numerous specializations. These researchers will be competent in various areas such as neotectonic and erosion, palinspastic reconstruction, geohazards, reconstruction of the development of life and paleo-ecosystems, research in state of crystalline matter, determination of the age and genesis of different rock formations, environmental protection, as well as in research of origin, prospection, exploitation and conservation of mineral resources.

Students will develop the ability to create proposals and conduct multidisciplinary scientific research, to communicate and correspond, to present results of scientific research, as well as to establish and develop international scientific collaboration.

## Study program outcomes

Graduate students of the doctoral studies in Geology will be qualified to solve independently complex theoretical and practical geophysical problems from different specialties of geology, that are covered by curriculum of studies; to organize technical and scientific researches in those areas; to create project proposals for national and international scientific founds independently; to participate or manage national and international scientific projects (bilateral projects, projects under EU framework, projects of International Geological Correlation Program, UNESCO projects of Geo-inheritance, etc.); to understand and use the newest knowledge in field of studies; to develop creative capabilities and respect the ethical code in scientific research; to gain satisfying level of written and oral communication; to present scientific research results at national and international scientific conferences and to publish those results in leading scientific journals.

Doctors of Geology will be capable to follow continuously modern trends in their scientific field, by using information technologies and by connecting the knowledge from their field to achievements from other scientific disciplines.

## Admission requirements

Completed Undergraduate and Master academic studies in corresponding or related scientific field, with total amount of 300 ECTS credits, at least.

## Contact

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# Geophysics

at Faculty of Mining and Geology, 7 Đušina, 11000 Belgrade, [www.rgf.bg.ac.rs](http://www.rgf.bg.ac.rs)

ECTS: 180/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: PHD

## Study program content

The study program is carried out within the scientific field of Geological Engineering. Studies are conducted during the three academic years (six semesters). The study program consists of compulsory and elective courses. Significant part of the program is dedicated to scientific research. The candidate selects courses according to the doctoral thesis theme, including mandatory consultations with the supervisor and the relevant professor. Major part of the research, conducted during the studies in the scope of compulsory and elective courses, project of doctoral thesis, seminars and scientific research, is related to the compilation of a doctoral thesis.

## Study program goals

The goals of doctoral study program in Geophysics are to educate candidates capable for original scientific research of high quality (independently and in the research team) and the presentation of scientific results, as well as to enable students to achieve the high-level knowledge in geophysics. Study program is created to enable student to specialize in certain field of geophysics, by selecting topics for the scientific research and courses and by the compilation of a doctoral thesis. Candidates will be qualified for the scientific work at the research institutes and commercial companies, as well as for the educational work at the universities.

## Study program outcomes

Doctoral study program in Geophysics is created to enable students to achieve knowledge, skills, general and specific capabilities and competences that will qualify them to solve theoretical and practical geophysical problems independently; to organize and realize technical and scientific projects; to develop new technologies and methods, using the newest knowledge in geophysics; to develop critical and creative way of thinking and to work independently; to respect the ethical code and to give a contribution to the development of geophysics and science in general. Candidate is qualified to conduct

all phases of scientific research in geophysics, to plan and write research proposal, to present the proposal to potential investors, to plan and conduct field and laboratory work and theoretical research, as well as to present final research results in the form of reports, scientific papers, patents or new technical solutions. That way, student is qualified to participate in international scientific projects, to present scientific research results at scientific conferences and to publish those results in scientific journals and other publications. Student achieves competences such as: thorough knowledge and understanding of geophysics, especially in the field connected to the doctoral thesis; capability to solve different problems using scientific methods, applied in geophysics; capability to connect knowledge from different scientific fields (geology, mathematics, physics, etc.) and apply that knowledge; capability to follow modern achievements in geophysics and other fields of science; capability to apply knowledge in geophysics in different areas and to use and develop information technologies.

## Admission requirements

Completed Undergraduate and Master academic studies in corresponding or related scientific field, with total amount of 300 ECTS credits, at least.

## Contact

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# Hydrogeology

at Faculty of Mining and Geology, 7 Đušina, 11000 Belgrade, [www.rgf.bg.ac.rs](http://www.rgf.bg.ac.rs)

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## Study program content

The study program is carried out within the scientific field of Mining/Geological Engineering. Studies are conducted in the course of three academic years (six semesters). Curriculum of the Hydrogeology study program is carried out in cooperation with other study programs at the Faculty of Mining and Geology.

The study program includes compulsory and elective courses, with study research work, that presents significant part of the program. Individual courses are conducted during one semester.

The candidate selects courses in accordance with the doctoral thesis, with mandatory consultation with the supervisor and the relevant professor. Major part of the study research, which is conducted during the studies in the framework of compulsory and elective courses, the project of doctoral thesis, seminars and scientific research, is related to the doctoral thesis.

## Study program goals

Education of personnel, who are competent for conducting original scientific research of high quality in the field of hydrogeology, represents the clear objective in contributing to the overall advancement of knowledge and progress in general. The study program focuses on educating the doctors who will, during their careers, lead a successful research in many specialties of hydrogeology and develop a sense to create proposals for oral and written communication of high quality, presentation of scientific results and the establishment and development of international scientific cooperation.

## Study program outcomes

Future doctors will be qualified to understand and use the newest knowledge in the area of hydrogeology, to develop their creative abilities and to respect the ethical code during scientific researches, to gain satisfying level of written and oral communication, to present scientific research results at national and international

scientific conferences and to publish those results in leading scientific journals, to solve complex theoretical and practical problems from different areas of hydrogeology, that are covered by curriculum of studies and to develop suggestions for scientific and technical researches in those areas for national and international scientific founs, independently or in team, to participate or manage national and international scientific projects under EU framework, UNESCO projects, etc. Doctor of hydrogeology is qualified to impose new approaches in specific field of hydrogeology, to write scientific papers and projects and participate in academic and other types of studies.

## Admission requirements

Completed Undergraduate and Master academic studies in corresponding or related scientific field, with total amount of 300 ECTS credits, at least.

## Contact

Head of the study program:

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# Mining Engineering

at Faculty of Mining and Geology, 7 Đušina, 11000 Belgrade, [www.rgf.bg.ac.rs](http://www.rgf.bg.ac.rs)

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## Study program content

This program comprises selectable study areas, i.e. courses, which students are free to choose immediately after enrolment and which are related to specific scientific areas of Mining Engineering. Study Program Mining Engineering has clear vertical passing-through property, since it is direct continuation of Mining Engineering Master academic study program. Study program clearly identifies overall number of ECTS credits for courses and research work, which are directly related to completion of doctoral thesis, as well as number of credits for thesis itself. Student is free to choose any combination of courses. This selection is subject of discussion with the mentor.

## Study program goals

The goal of doctoral studies in Mining Engineering is to educate students capable for conducting high quality and original scientific research, which will contribute to overall progress of knowledge including advances within Mining Engineering scientific area. Study program is directed toward education of doctoral students which will, during their careers, perform research within areas of mineral deposits exploitation, technological processes of mineral processing, mechanization and automation of mining machinery, petroleum engineering, energy, environmental protection and safety. Basic goal of education process at these doctoral studies is to provide students with a comprehensive and complex knowledge within certain specialty, through research within selected courses and close cooperation with the mentor. Students will develop the ability to conduct multidisciplinary scientific research, to communicate and correspond, to present results of scientific research, as well as to establish and develop international scientific collaboration.

## Study program outcomes

It is expected that graduates of the Mining Engineering doctoral studies will be qualified to demonstrate systematic understanding within areas such as mineral deposits exploitation

technologies, technological processes in mineral processing, mechanization and automation of mining machines, petroleum engineering, energy, environmental protection and safety. Students will engross methods and skills, which are standard in contemporary mining engineering.

Graduate students will be qualified to solve complex practical and theoretical problems within various specialties of Mining Engineering, to organize scientific and development research, to participate in international scientific projects, to understand and to apply latest achievements, to develop creative skills and to comply with research ethical code, to possess proper level of written and verbal communication, to present scientific research results at international scientific conferences and to publish papers in scientific journals.

Doctors of Mining Engineering will be qualified to continuously follow new trends within their field, as well as to apply the information technologies and to combine knowledge with achievements in the other scientific disciplines. In this manner, graduate students will be capable to significantly contribute to enlargement of knowledge pool and development of mining and science in general, as well as to provide contribution to scientific, technological and cultural progress of society within their academic and professional context.

## Admission requirements

Completed Undergraduate and Master academic studies in corresponding or related scientific field, with total amount of 300 ECTS credits, at least.

## Contact

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